Arkansas Ground Water Protection and Management Report for 2006

January 2007

STATE OF ARKANSAS

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

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Special thanks to:

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ABSTRACT

The Arkansas Ground Water Protection and Management Report is produced annually by the Arkansas Natural Resources Commission (ANRC) pursuant to the Arkansas Ground Water Protection and Management Act of 1991, 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 2006; including water level, water quality, and water use activities including administration of the Arkansas Water Well Construction Commission program.

This report covers the time period from the Spring of 2005 to the Spring of 2006, which reflects the change in water levels during the 5th worst drought year in recorded Arkansas meteorological history going back to 1895. The US Geological Survey reported a 12 month period that was the driest ever recorded, and at one time there were 26 stream gauges at an all time low. Such a dry precipitation pattern caused ground-water levels to drop significantly due to less than normal recharge and heavier pumping from aquifers. The water-level decline measured for 2005 in the alluvial aquifer was 4.4 feet, approximately 1.1 feet greater than normal. This report confirms greater than normal water-level declines that can be attributed to the drought year 2005. Water-level data for Spring to Fall of 2006 is also provided in appendix E.

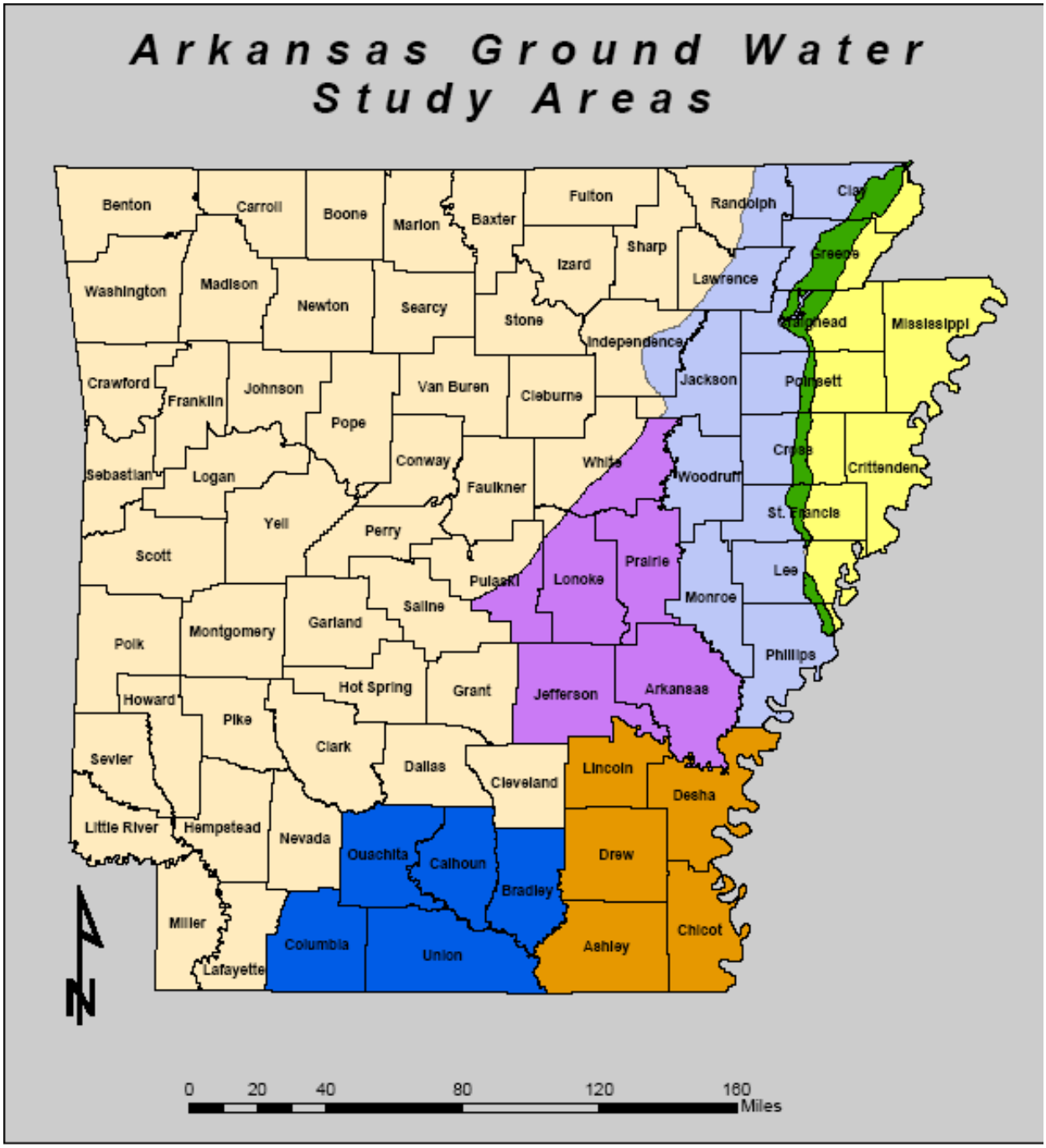
The general trend in Arkansas water-level change is that the ground-water levels have been slowly dropping, with a few areas that have remained constant or have risen slightly. Long-term water-level data collected over a 25-year period indicate a decline of 0.8 feet per year in the Sparta-Memphis aquifer (USGS, 2004-5055), and 0.3 feet per year in the alluvial aquifer over a 24 year period (USGS, 2006-5128). 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 -4.44 feet over the last ten years. There has also been an approximate 10.00 foot decline in the Sparta/Memphis aquifer over the last ten years in this study area.

Data from the alluvial aquifer wells show that of 383 alluvial wells monitored from 1996 to 2006, 333 (86.9%) 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 –7.00 feet, the Grand Prairie Study Area with an average change of –4.44 feet, and the Boeuf-Tensas Study Area with a change of -5.46 feet, respectively. In the Cache Study Area during the last 7 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.4)

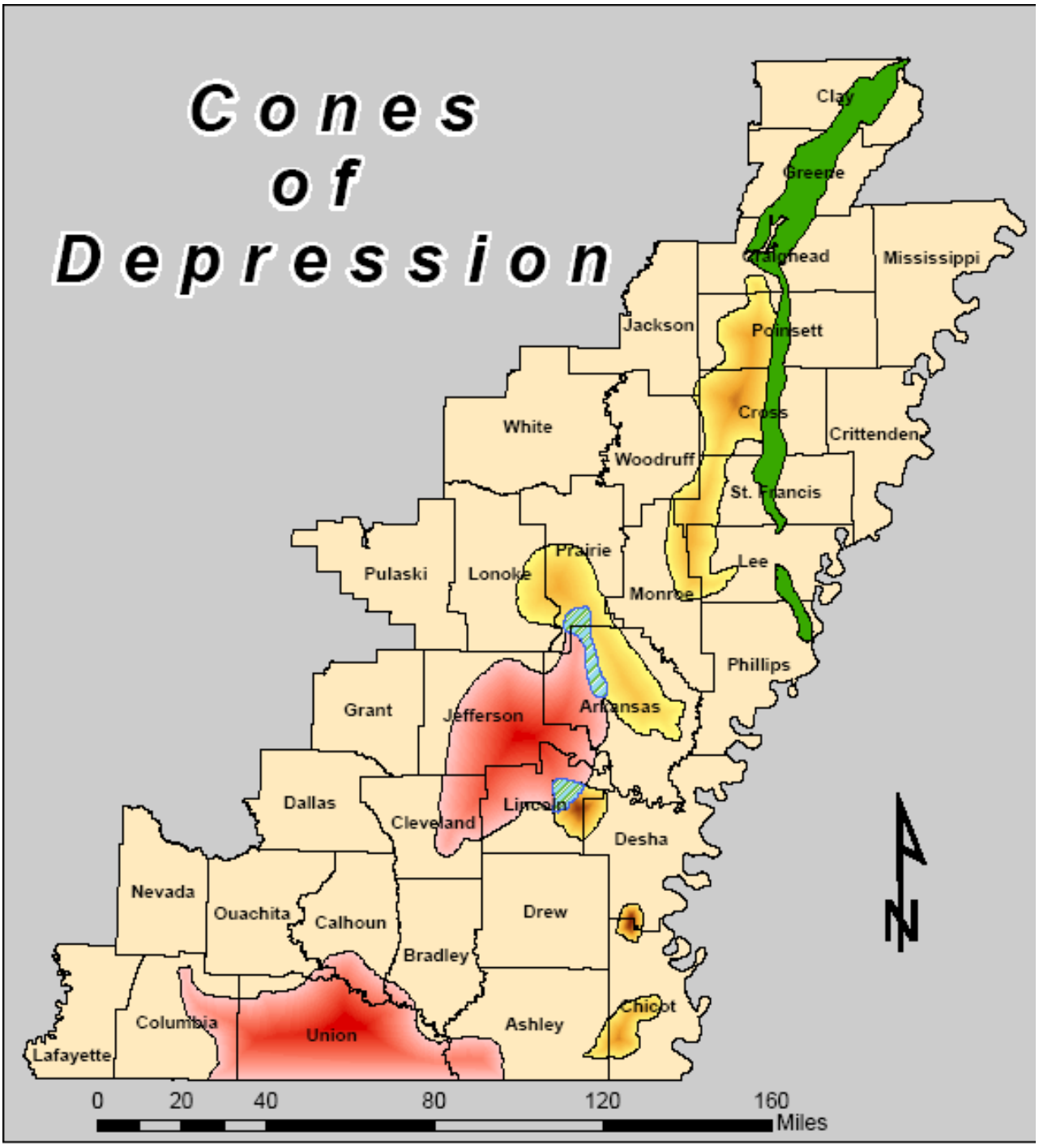
Data from the wells monitored in the Sparta/Memphis aquifer show that of 240 wells monitored from 2001 to 2006, 116 of these (48.3%) show a decline in static water levels. The wells showing the greatest decline in the Sparta/Memphis aquifer are located in the Boeuf-Tenses Study Area with an average change of –3.45 feet during this time.



Legend

- South Arkansas
- Boeuf-Tensas
- St. Francis
- Crowleys Ridge
- Cache
- Grand Prairie
- County Boundaries

Fig. 1



Legend

- Intersection of the Two Cones
- Cones of Depression in the Alluvial Aquifer
- Cones of Depression in the Sparta Aquifer
- County Boundaries
- Crowleys Ridge

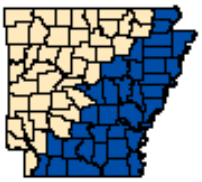


Fig. 2

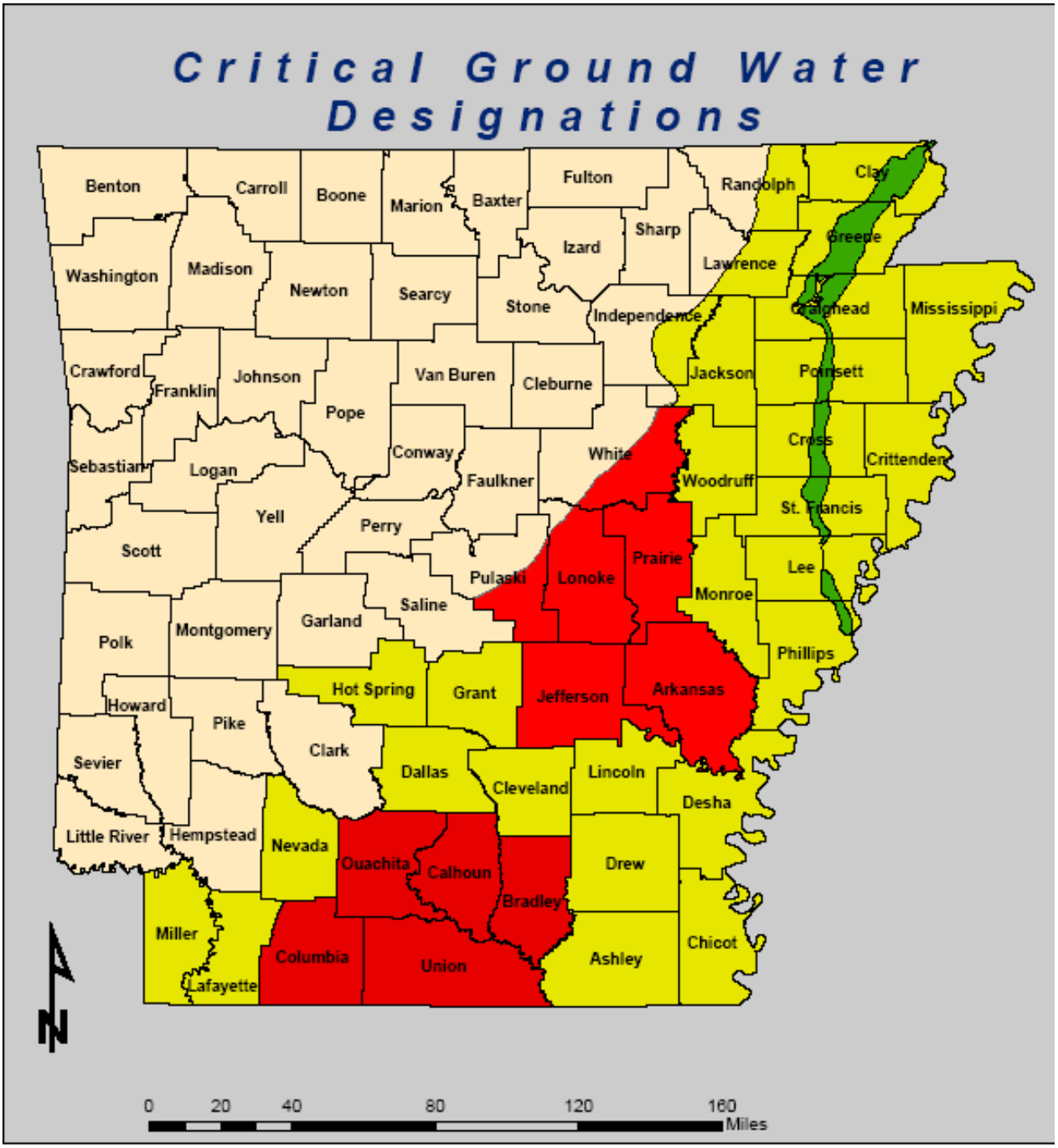
Water quality data collected by the USGS in 2006 showed wells with an increased specific conductance (>/= 1,000 microsiemens/cm) in the alluvial aquifer in Arkansas, Prairie, Craighead, and Chicot Counties. (Schrader, T.P., 2006) An increase in the level of specific conductance indicates an increased 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.

During 2006, the ANRC also directed staff to begin work on statewide water quality standards. This task will build on the State's existing water resources programs and agency infrastructure of Federal and State agencies. Early emphasis is on coordination between agencies and programs, considerations on the variability of water-quality within aquifers over distance, and aquifer classification and water use trends.

As reported last year, 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. 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. With this in mind, the ANRC should continue to promote conservation, education, and the conjunctive use of ground- and surface- water at rates that are sustainable for current and future water use needs.

INTRODUCTION

This annual ground-water report is prepared to provide the State of Arkansas with a comprehensive water-quantity and water-quality document to be utilized in accordance with the Arkansas Water Plan, as a guide for water resources conservation and protection programs. It includes data, analysis, and recommendations for the



Legend

- Crowleys Ridge
- Current Study Areas
- Current Critical Areas
- County Boundary

South Arkansas Study Area for Sparta in 1996

Grand Prairie Study Area for Sparta & Alluvial in 1998

Fig. 3

ground-water protection and management program, water-quality standards activities, the Arkansas Water Well Construction Commission administrative program, and some water use activities.

Each spring approximately 700 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 350 wells that are monitored for water levels in the Sparta/Memphis aquifer. 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 where water-level declines and water quality degradation have been observed historically.

Other programs are focused on the core Nonpoint Source Water-Quality Program, the Section 106 water-quality data management and GIS activities, and the administration of the Arkansas Water Well Construction Commission Program.

This report and all programs described herein are built on a strong cooperative program with other appropriate State, Federal, and local water resources agencies. Some of the programs described in this report are partially funded through federal grants from Region VI of the Environmental Protection Agency.

WATER POLICY

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. 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.

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**.**

GROUND WATER CONSERVATION AND CRITICAL AREAS

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 2004 Arkansas had ground water withdrawals estimated to be 6494.6 million gallons per day (Mgal/d). That is a 70% increase from the amount used in 1985, and a 1136.9% increase since 1945. (Holland, T.W. 2004). In 2004 5868.46 Mgal/d was pumped from the alluvial aquifer. The estimated sustainable yield for the alluvial aquifer is 2,700 Mgal/d, leaving an unmet demand of 3168.46 Mgal/d (54%). 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 2006 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, regional changes in ground-water flow, regional water level declines, reduction of aquifer storage, and decreases in well yields (Ackerman, 1996).

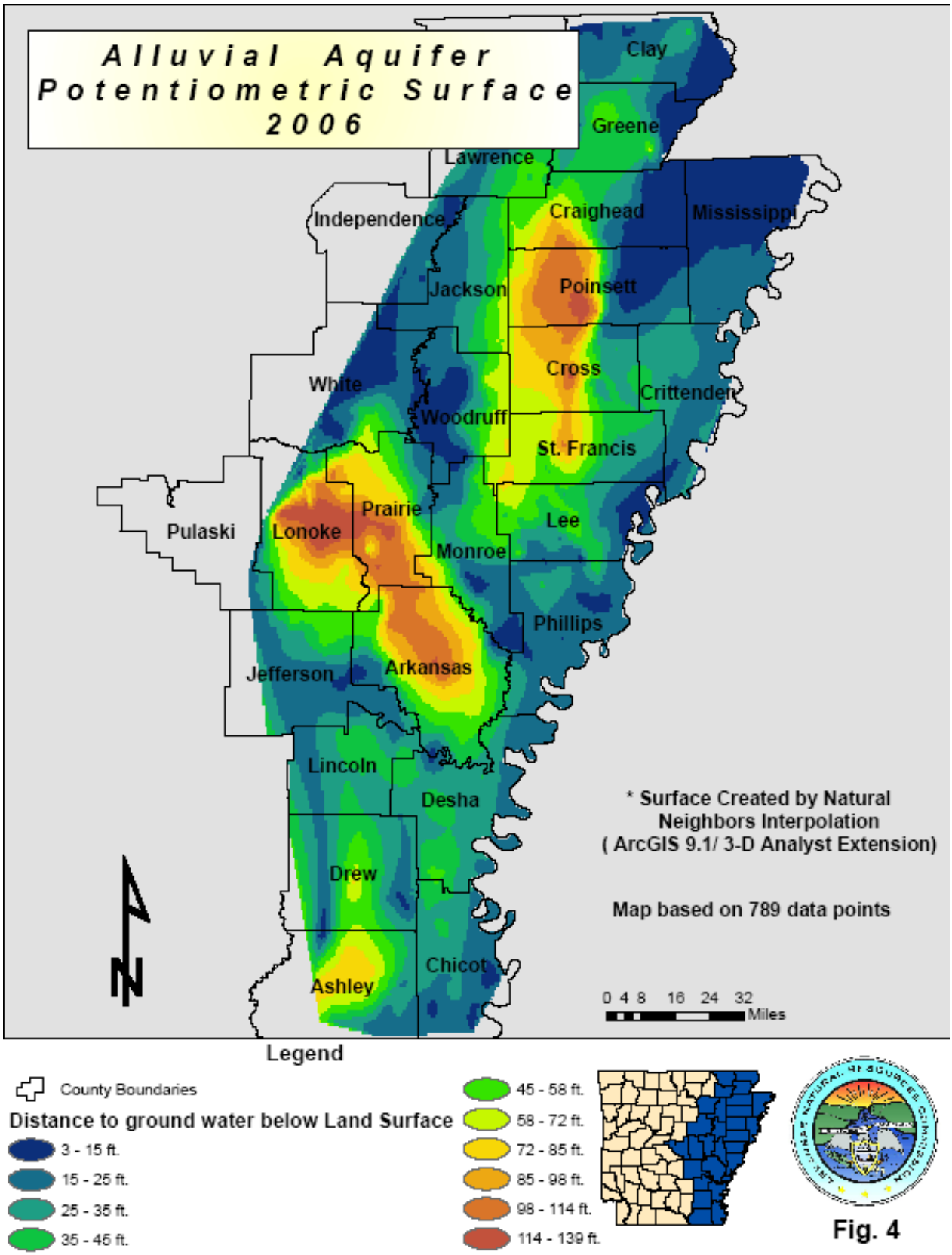
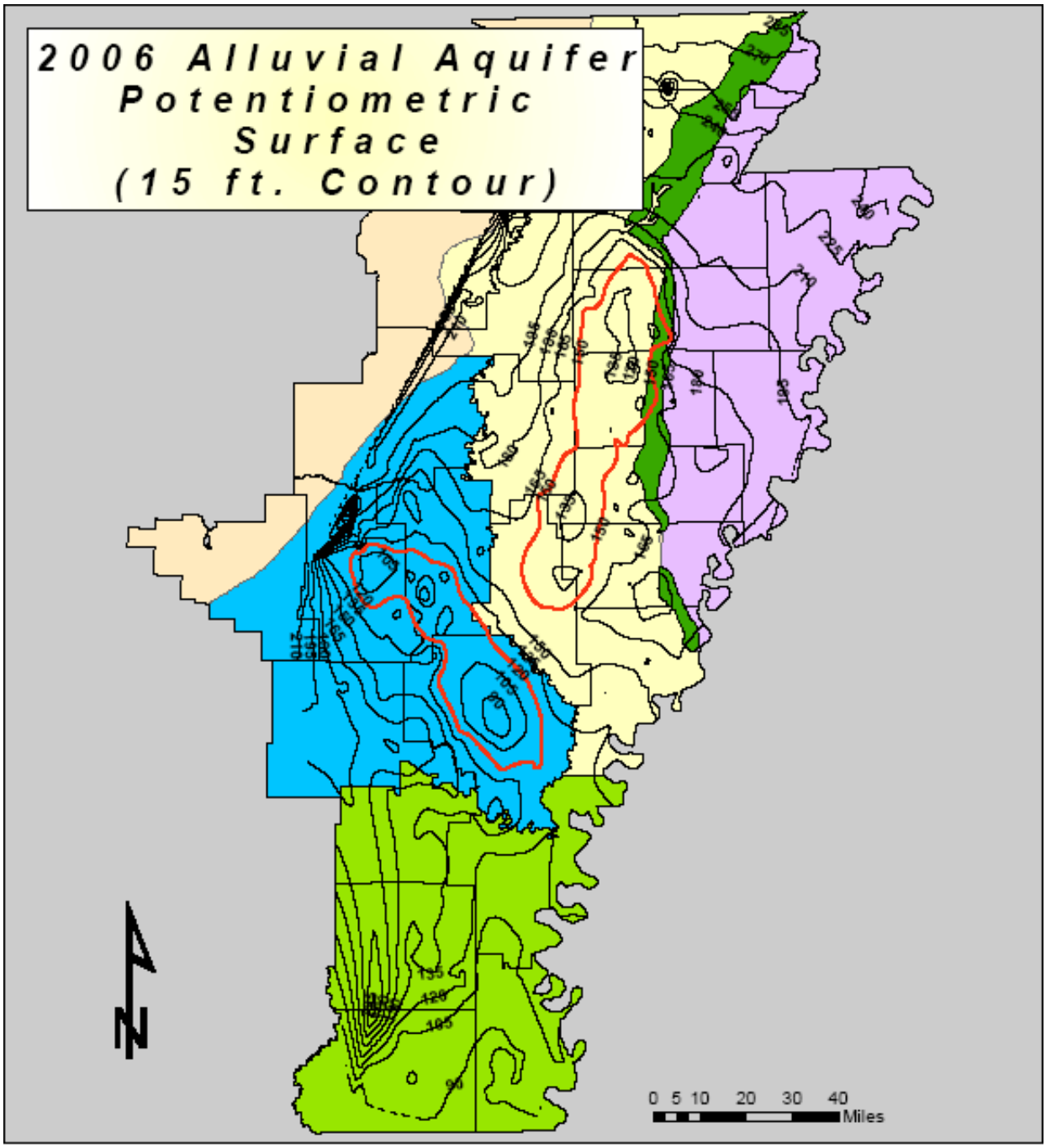

Alluvial Aquifer
Potentiometric Surface
2006
Clay
Greene
Lawrence
Independence
Craighead
Mississippi
Jackson
Poinsett
White
Cross
Crittenden
Woodruff
St. Francis
Prairie
Pulaski
Lonoke
Lee
Monroe
Phillips
Jefferson
Arkansas
Lincoln
Desha
Drew
Chicot
Ashley
* Surface Created by Natural Neighbors Interpolation
(ArcGIS 9.1/ 3-D Analyst Extension)
Map based on 789 data points
0 4 8 16 24 32
Miles
Legend
County Boundaries
Distance to ground water below Land Surface
3 - 15 ft.
15 - 25 ft.
25 - 35 ft.
35 - 45 ft.
45 - 58 ft.
58 - 72 ft.
72 - 85 ft.
85 - 98 ft.
98 - 114 ft.
114 - 139 ft.

Fig. 4



Legend

- Cones of Depression
- 15 ft. WL Alt. Contour Interval
- Crowleys Ridge
- Bouef Tensas Study Area
- St. Francis Study Area
- Grand Prairie Study Area
- Cache Study Area

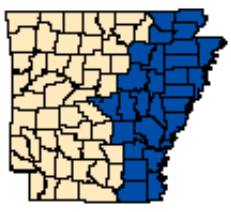


Fig. 5

The alluvial aquifer was adversely impacted from the unusually dry conditions in 2005. The aquifer usually declines about 3 feet per year as a result of pumping during the dry summer months, and rebounds about 2 feet during the more wet recharge months. In 2005 the aquifer declined over 4 feet, so when the approximate 2 foot recharge occurred there was a 2 foot net loss instead of the typical 1 foot loss. A loss of 1 foot across the extent of the aquifer in Arkansas equates to 3,286 billion gallons of water.

There were 668 alluvial aquifer wells monitored for water-level change in both 2005 and 2006, 561 (83.9%) of these had a decline in the static water level. The overall water-level change was -2.14 ft. The 2005 precipitation for Arkansas was approximately 36.21 inches, which is 12.98 inches below the average of 49.19 inches. Of 387 alluvial aquifer wells monitored in both 2001 and 2006, 269 (69.5%) of these had declining static water levels. Over a 10-year period of time from 1996 to 2006, 333 of 383 wells (86.9%) monitored showed declines in the alluvial aquifer. The average change over the entire aquifer during the 2005-2006 monitoring period was -2.14 feet, the 5-year average change was -2.09 feet, and the 10-year average -5.54 feet respectively. The greatest 10-year declines were observed in the Cache Study Area (-7.00 feet) and the Boeuf-Tensas Study Area (-5.46 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.

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 259 water wells in the Sparta/Memphis aquifer throughout the south and east portions of Arkansas in 2005 and 2006. One hundred and seventy-seven of those wells (68.3%) showed declines in the static water level. The average change over the entire aquifer during the 2005-2006 monitoring period was -1.19 feet. During the monitoring period from 2001 to 2006, 240 wells were monitored for water-level change, with 116 of these wells (48.3%) showed a decline in static water levels during this time. 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 41.9 percent of the 2004 withdrawal of 205.7 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 205.7 mgd in 2004, an increase of 48 percent. The most recent significant increase in water use from the Sparta has been for agricultural supply in the Grand Prairie Study Area.

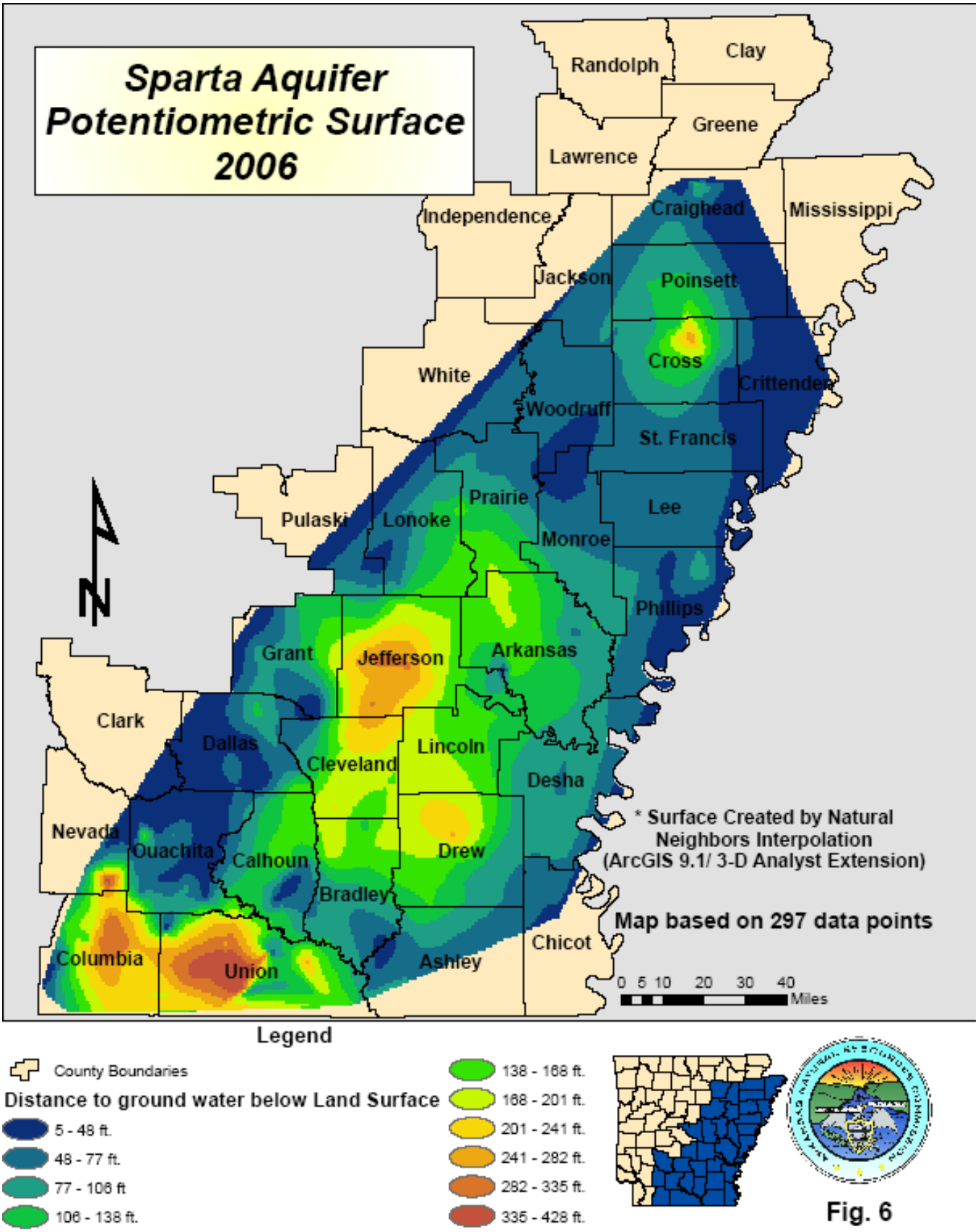
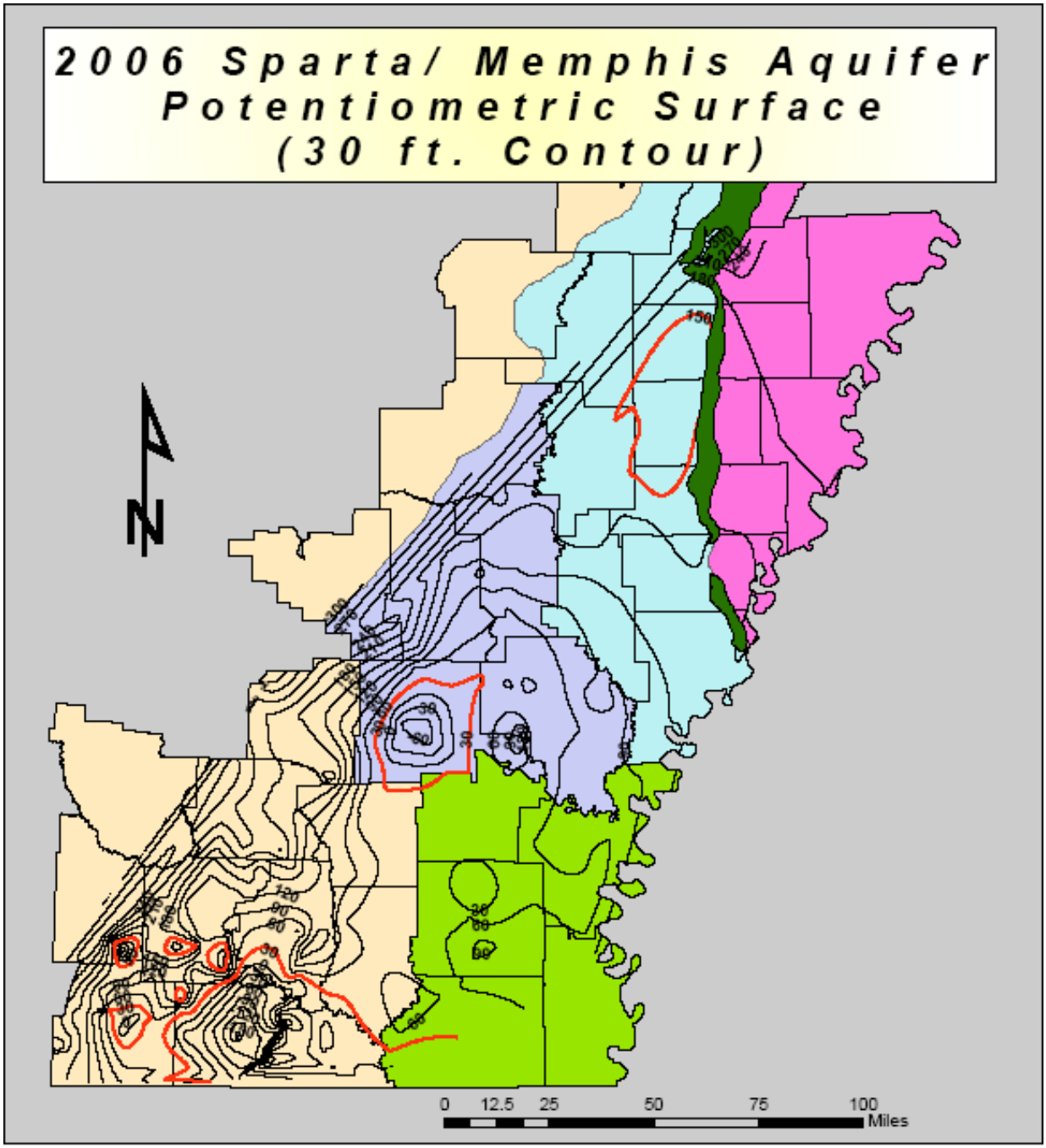

Sparta Aquifer
Potentiometric Surface
2006
Randolph
Clay
Greene
Lawrence
Independence
Craighead
Mississippi
Jackson
Poinsett
White
Cross
Crittenden
Woodruff
St. Francis
Prairie
Lee
Pulaski
Lonoke
Monroe
Phillips
Grant
Jefferson
Arkansas
Clark
Dallas
Lincoln
Cleveland
Desha
Nevada
Ouachita
Calhoun
Drew
Bradley
Chicot
Columbia
Union
Ashley
N
* Surface Created by Natural Neighbors Interpolation (ArcGIS 9.1/ 3-D Analyst Extension)
Map based on 297 data points
0 5 10 20 30 40
Miles
Legend
County Boundaries
Distance to ground water below Land Surface
5 - 48 ft.
48 - 77 ft.
77 - 106 ft
106 - 138 ft.
138 - 168 ft.
168 - 201 ft.
201 - 241 ft.
241 - 282 ft.
282 - 335 ft.
335 - 428 ft.

Fig. 6



Legend

- Cones of Depression
- 30 ft. WL Alt. Contour Interval
- Crowleys Ridge
- Cache Study Area
- Grand Prairie Study Area
- St. Francis Study Area
- Boeuf-Tensas Study Area
- County Boundaries

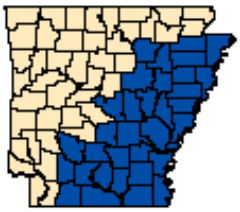


Fig. 7

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. This can be seen in figure 10, a graph of eight wells in the USGS Sparta Recovery Project. 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 39 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

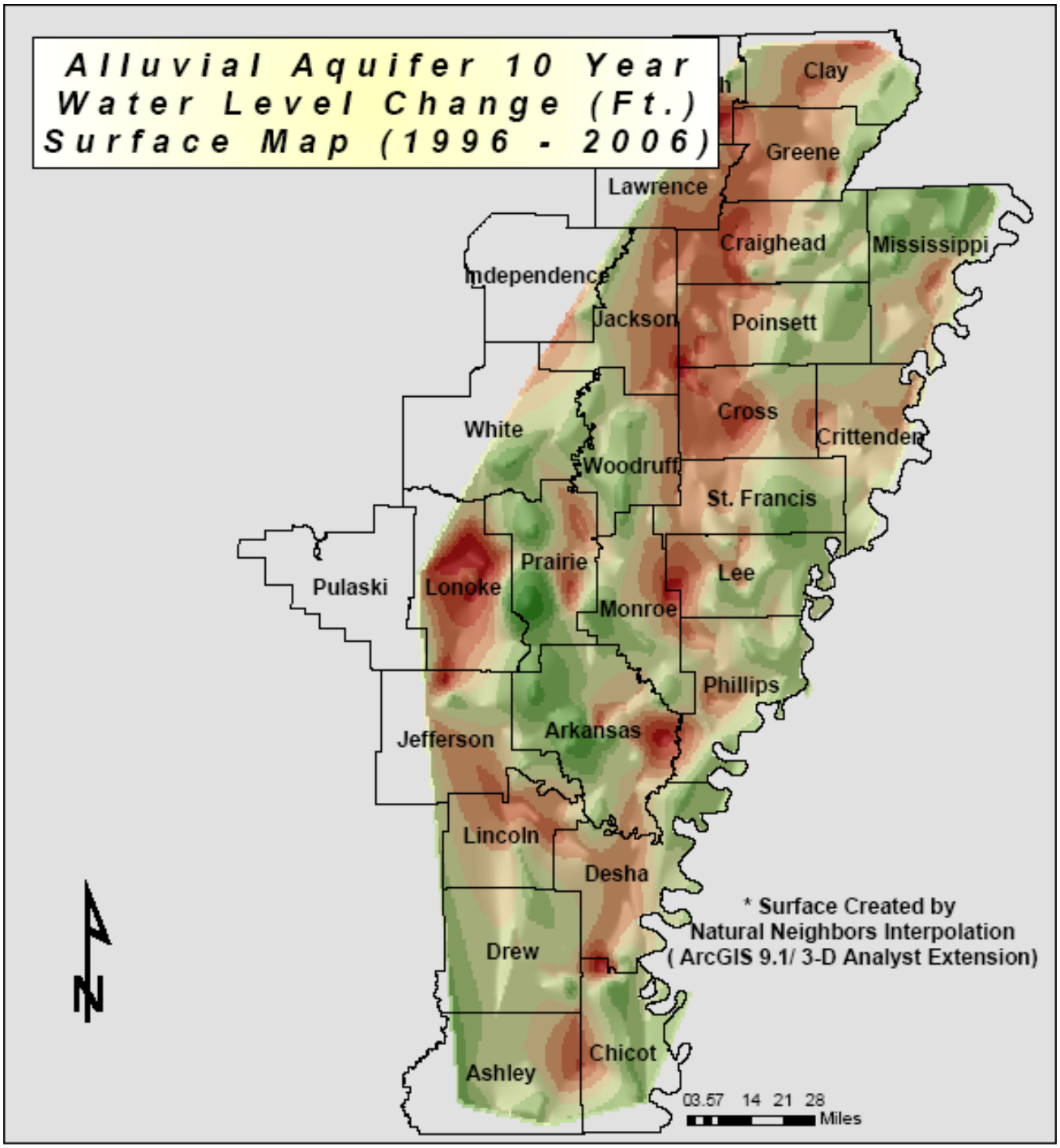

Alluvial Aquifer 10 Year Water Level Change (Ft.) Surface Map (1996 - 2006)
Clay
Greene
Lawrence
Craighead
Mississippi
Independence
Jackson
Poinsett
Cross
White
Crittenden
Woodruff
St. Francis
Prairie
Lee
Pulaski
Lonoke
Monroe
Phillips
Jefferson
Arkansas
Lincoln
Desha
Drew
Chicot
Ashley
* Surface Created by
Natural Neighbors Interpolation
(ArcGIS 9.1/ 3-D Analyst Extension)
N
0 3.5 7 14 21 28
Miles
Legend
County Boundaries
-31 - -17 ft.
-17 - -12 ft.
-12 - -8 ft.
-8 - -6 ft.
-6 - -4 ft.
-4 - -2 ft
-2 - 0 ft.
0 - 4 ft
4 - 13 ft
13 - 30 ft.

Fig. 8

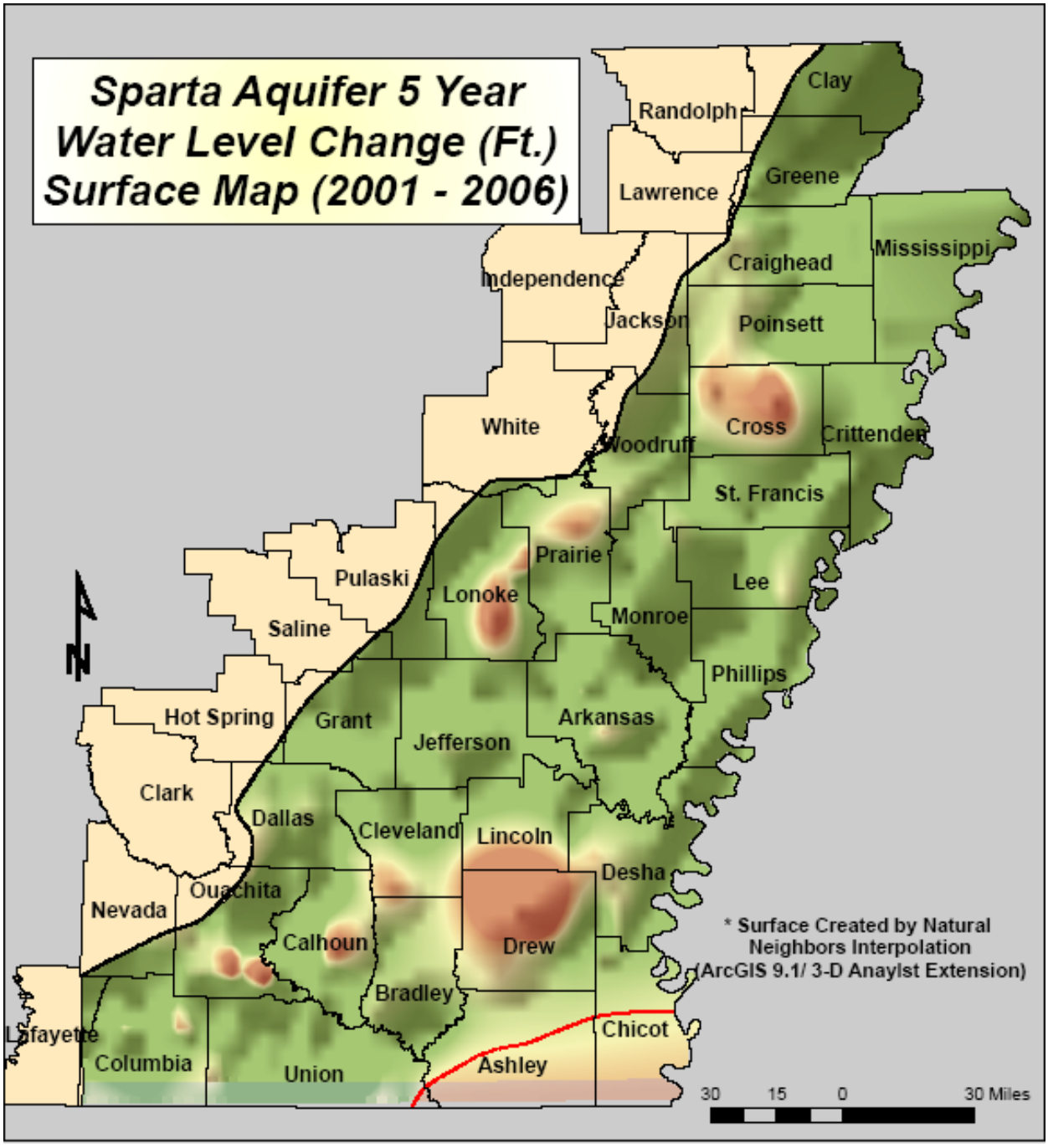

Sparta Aquifer 5 Year
Water Level Change (Ft.)
Surface Map (2001 - 2006)
Clay
Randolph
Greene
Lawrence
Mississippi
Craighead
Independence
Jackson
Poinsett
White
Cross
Crittenden
Woodruff
St. Francis
Prairie
Pulaski
Lonoke
Lee
Monroe
Saline
Phillips
Hot Spring
Grant
Arkansas
Jefferson
Clark
Dallas
Cleveland
Lincoln
Desha
Ouachita
Nevada
Calhoun
Drew
Bradley
Chicot
Lafayette
Columbia
Union
Ashley
N
* Surface Created by Natural
Neighbors Interpolation
(ArcGIS 9.1/ 3-D Anaylst Extension)
30 15 0 30 Miles
Legend
Extent of Sparta/ Memphis
Extent of Data
County Boundaries
-25 ft. - -11 ft.
-11 ft. - -6 ft.
-6 ft. - -5 ft.
-5 ft. - -3 ft.
-3 ft. - 3 ft.
3 ft. - 36 ft.

Fig. 9

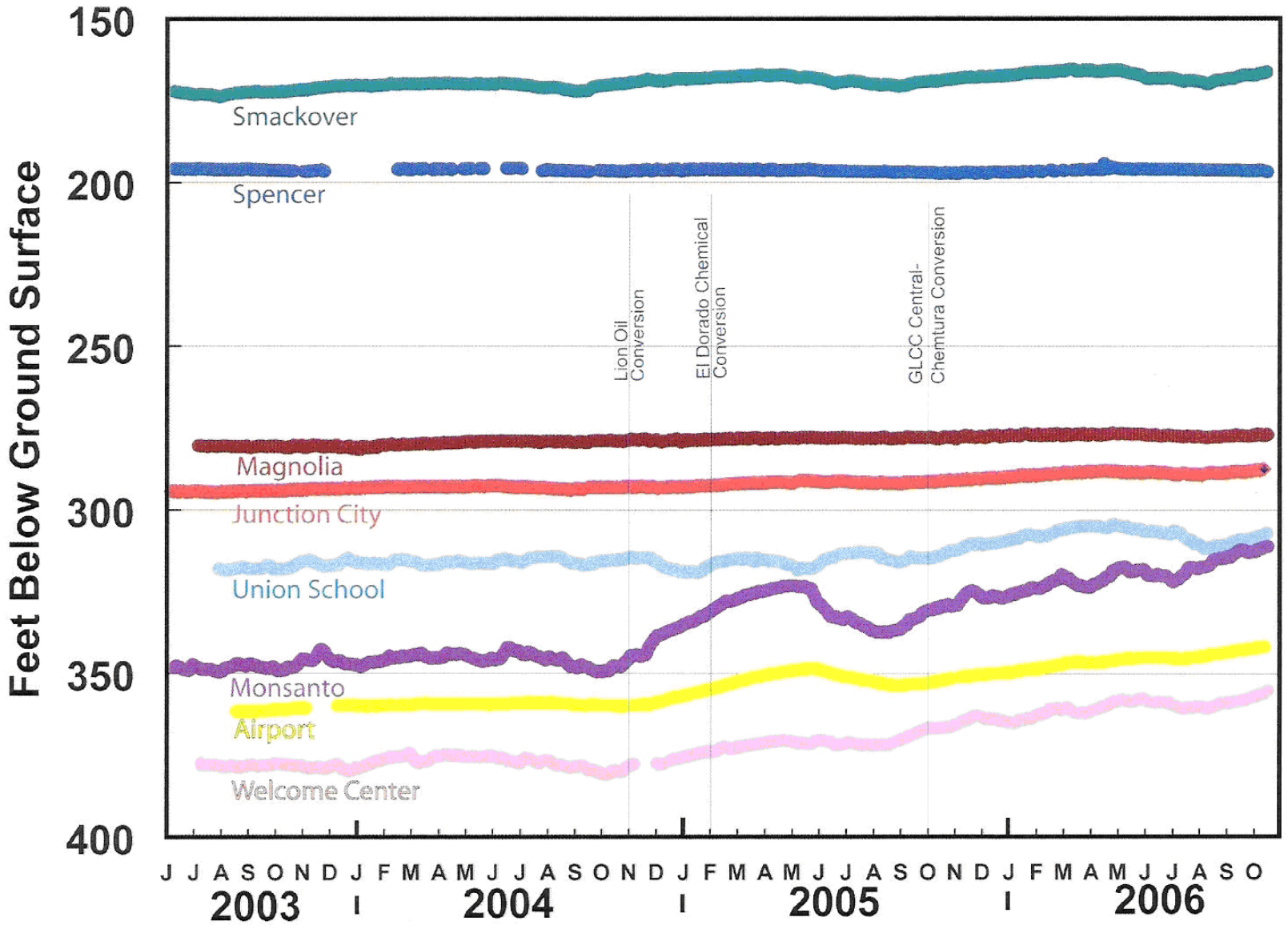
possible. This allows the water level data to be the least affected by summer pumping. Measurements in the alluvial aquifer are obtained each spring and fall by the NRCS and are helpful in evaluating the zones of drawdown that result from seasonal pumping for irrigation of crops. A table of measurements taken in the spring and fall from the same wells is included as Appendix E. 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 2005-2006 monitoring period, the ground-water level showed an average change of +5.82 feet in Union County, -1.90 feet in Ouachita County, -0.37 feet in Calhoun County, +5.60 feet in Bradley County, and -0.21 feet in Columbia County respectively. The South Arkansas Study Area as a whole had an average change of +1.88 feet during the 2005-2006 monitoring period, with 43 of the 90 wells monitored showing declines (Fig.11). In 1998 the average change for Union County was -22.14 feet, in 1999 -4.40 feet, 2000 +0.62 feet, 2001 -1.25 feet, 2002 +3.21 feet, 2003 +1.14 feet, 2004 -0.58 feet, 2005 -1.54 feet, and 2006 +5.82 feet respectively. The diminishing declines in average change seem to indicate that the education, conservation, and development of surface water from the Ouachita River in Union County have made an impact on ground-water levels. The USGS reports that the water levels have risen 4 to 28 feet in seven of the eight monitoring wells they have been monitoring since the summer of 2003. The other well has shown no change during this time. (Scheiderer 2006)

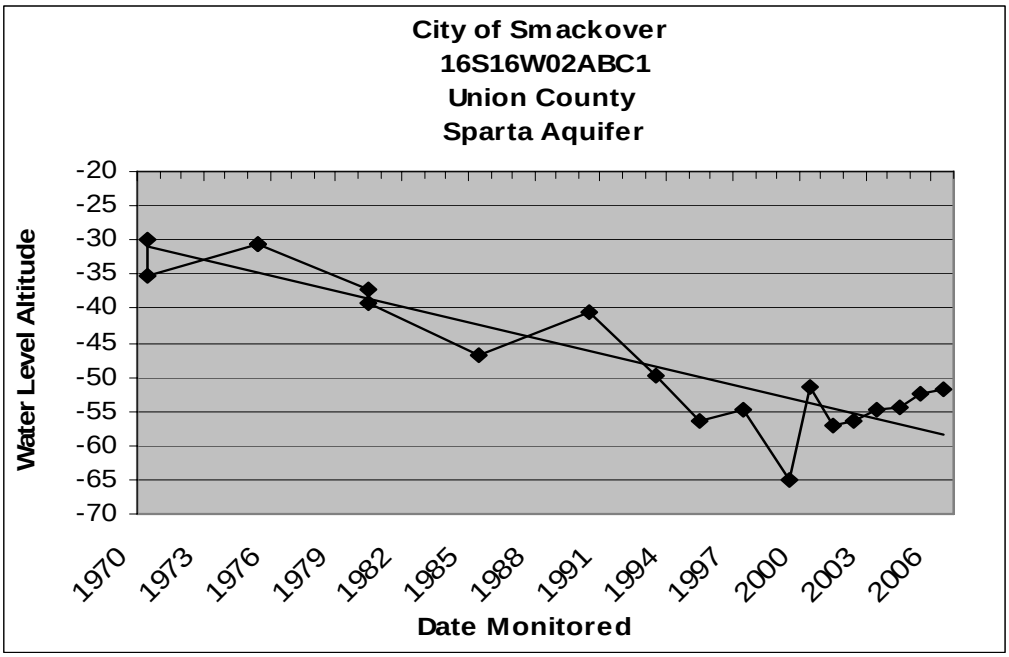
Sparta Recovery Study
(October 2004 – October 2006)



USGS Real Time Wells

During the 5-year monitoring period, from 2001 to 2006, the South Arkansas Study Area had an average change of +5.38 feet. Eighty-five wells were monitored over this time, with 39 of them showing a decline in static water levels. Three of the 5 counties in the study area showed a positive average change in their respective water levels. Ouachita County had an average change of -1.62 feet, Union +12.33 feet, Calhoun -0.14 feet, Bradley +2.92 feet, and Columbia +4.62 feet respectively (Fig. 12).

Though the trend of water level increases in the South Arkansas Study Area in encouraging, many of the wells in the area still show the potentiometric surface below the top of the formation. This criteria alone is enough for the study area to keep the designation of a Critical Ground-Water Area. The USGS ground-water flow models indicate that the withdrawals in Union County must be reduced to 28 percent of the 1997 pumping rate to maintain water levels at or above the top of the Sparta Sand. (Hays, 2000)



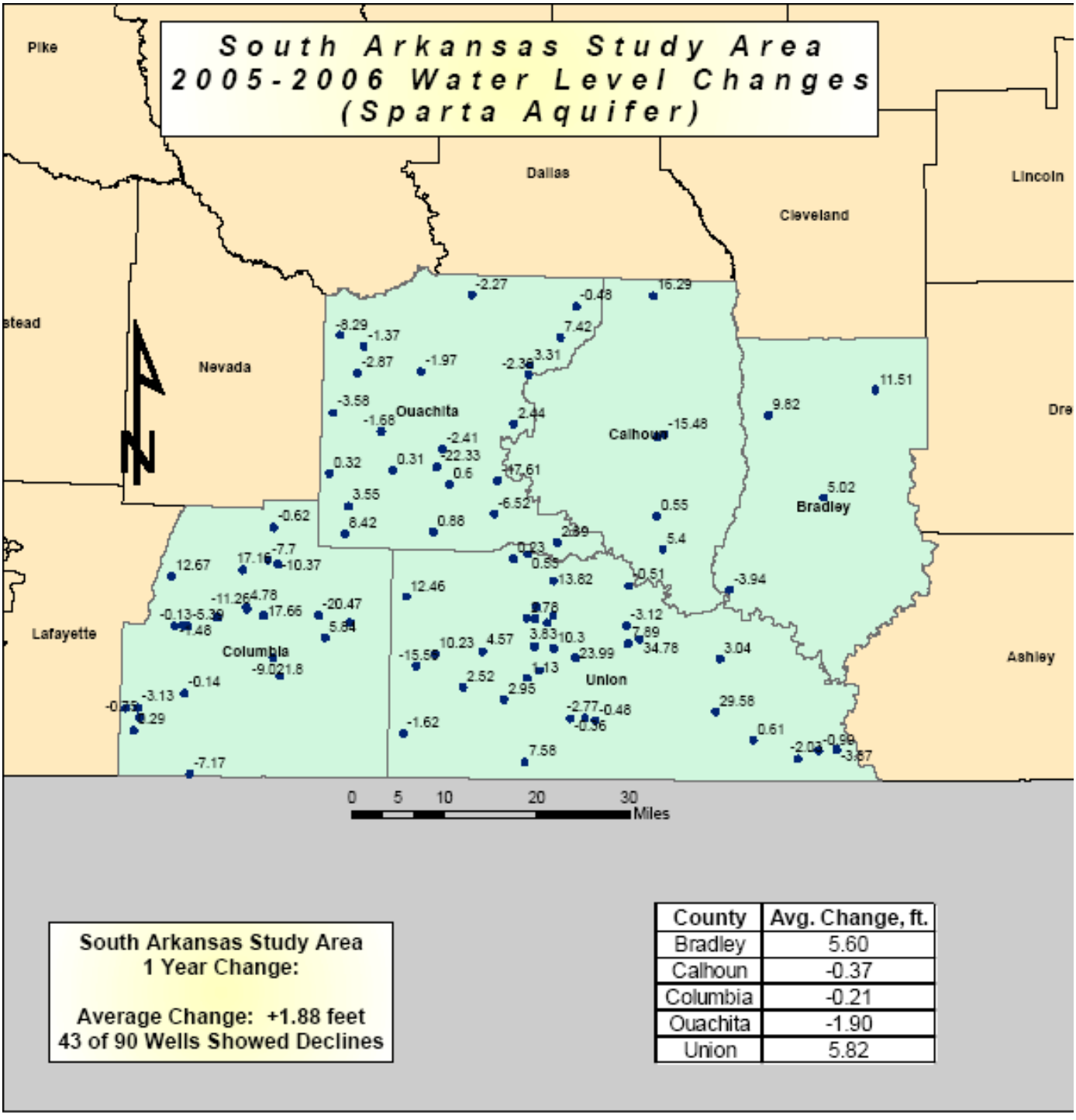

South Arkansas Study Area
2005-2006 Water Level Changes
(Sparta Aquifer)
Pike
Dallas
Cleveland
Lincoln
Nevada
Ouachita
Calhoun
Bradley
Dre
Lafayette
Columbia
Union
Ashley
0 5 10 20 30
Miles
South Arkansas Study Area
1 Year Change:
Average Change: +1.88 feet
43 of 90 Wells Showed Declines
County | Avg. Change, ft.
Bradley | 5.60
Calhoun | -0.37
Columbia | -0.21
Ouachita | -1.90
Union | 5.82
Legend
South Arkansas Study Area
Wells

Fig. 11

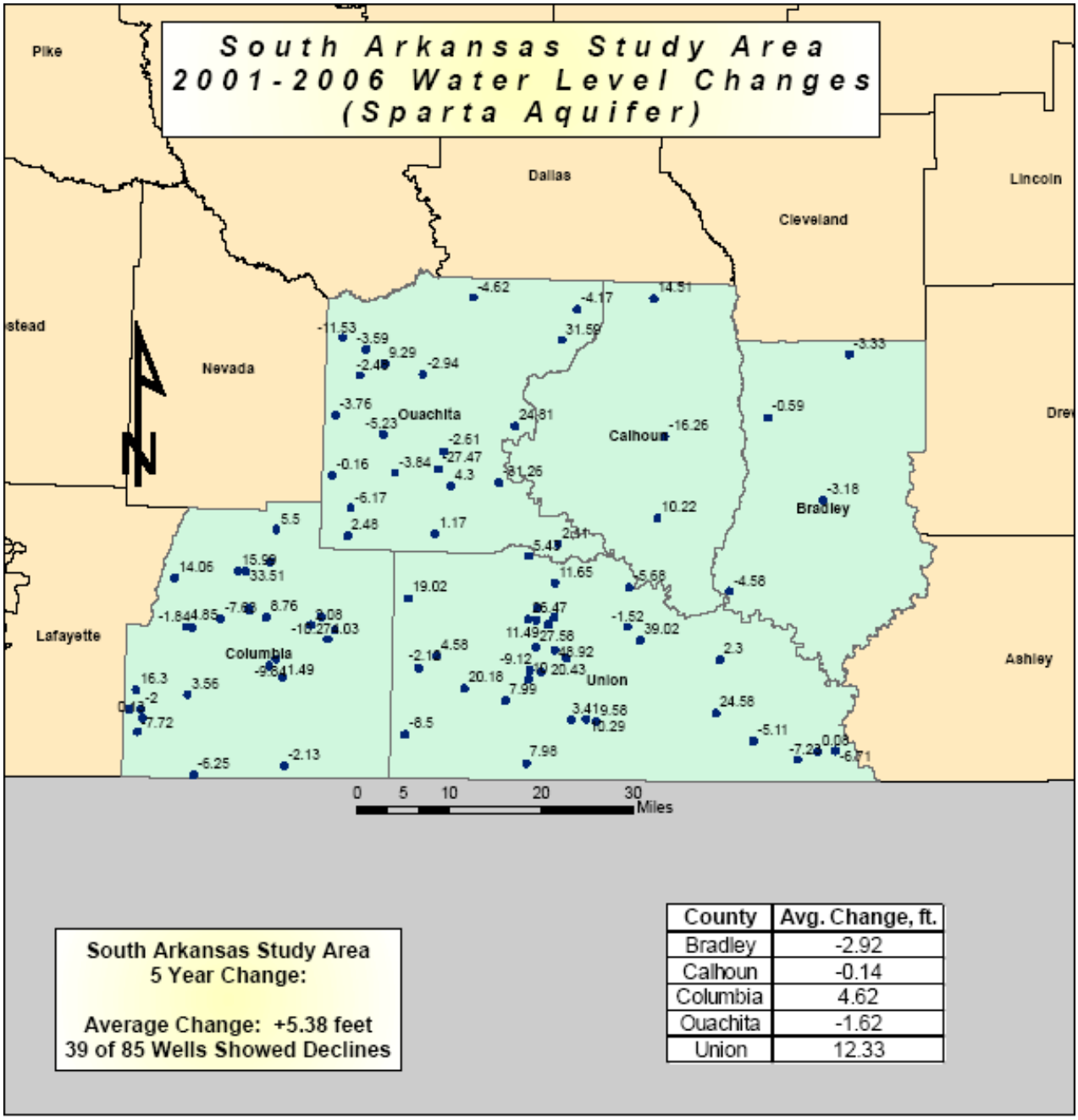

South Arkansas Study Area
2001-2006 Water Level Changes
(Sparta Aquifer)
Pike
Dallas
Lincoln
Cleveland
Nevada
Ouachita
Calhoun
Bradley
Lafayette
Columbia
Union
Ashley
0 5 10 20 30
Miles
South Arkansas Study Area
5 Year Change:
Average Change: +5.38 feet
39 of 85 Wells Showed Declines
County | Avg. Change, ft.
Bradley | -2.92
Calhoun | -0.14
Columbia | 4.62
Ouachita | -1.62
Union | 12.33
Legend
South Arkansas Study Area
Wells

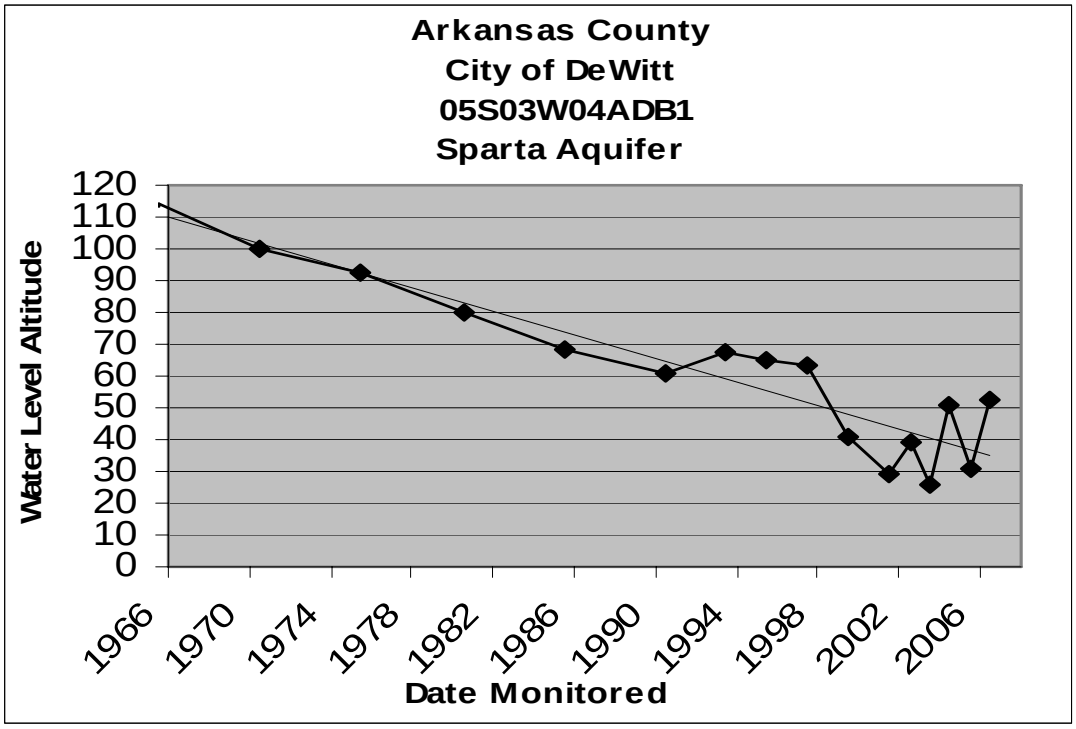
Fig. 12

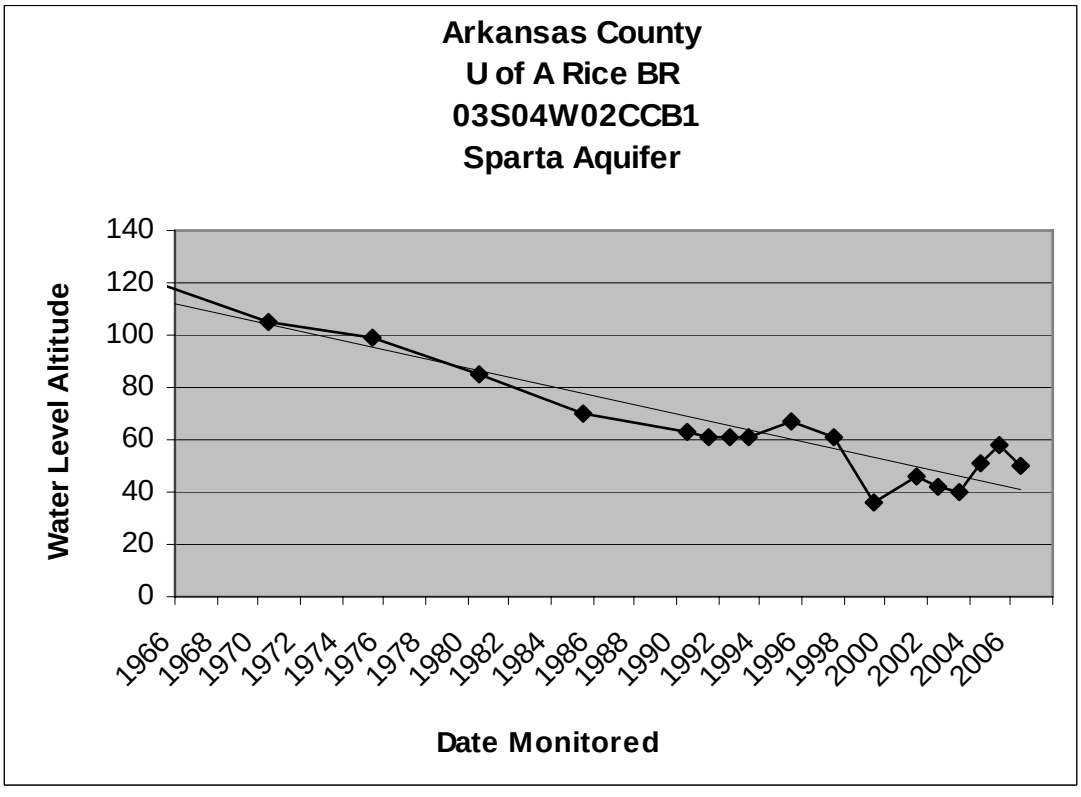
GRAND PRAIRIE CRITICAL GROUND-WATER AREA

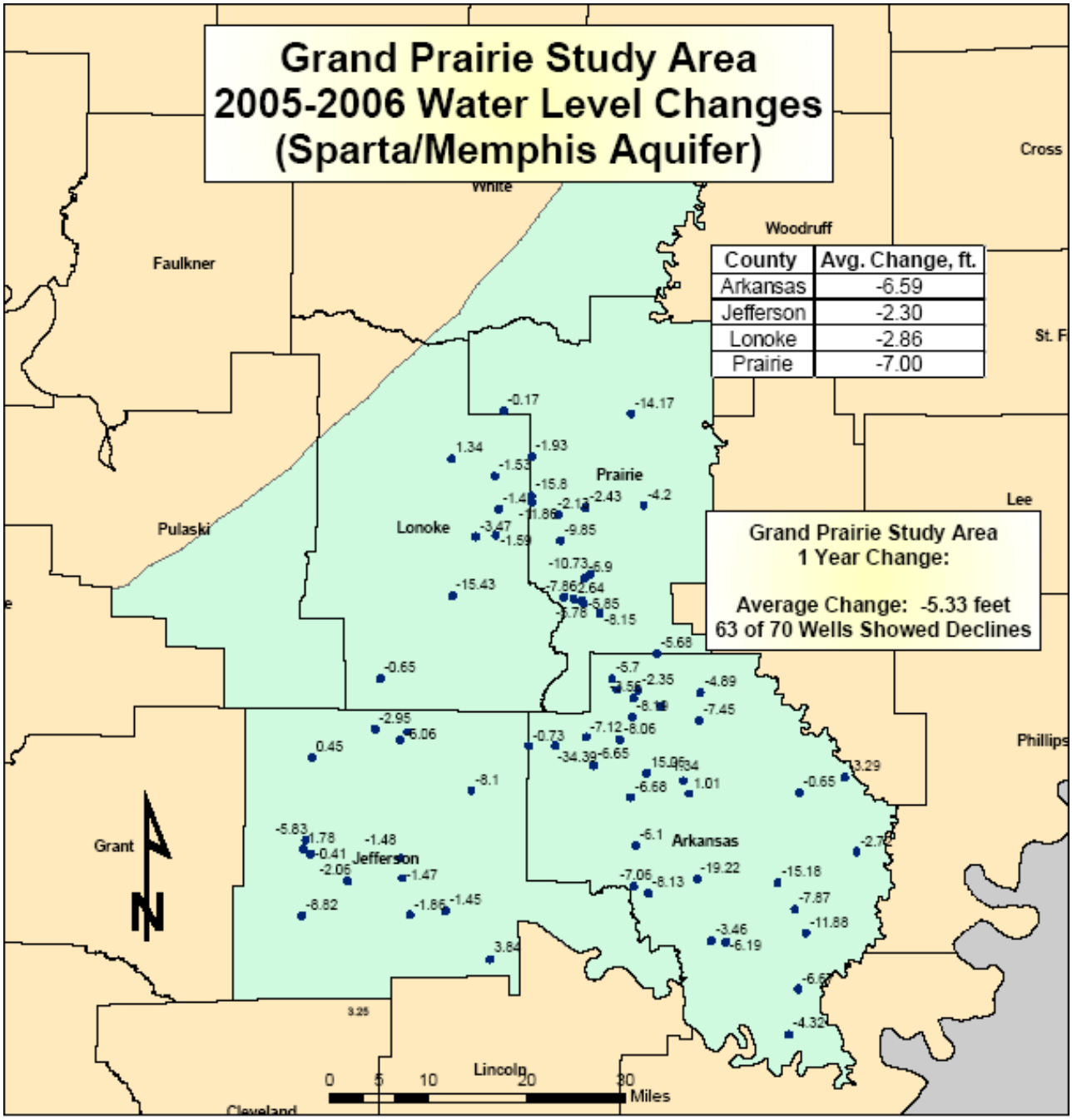
The designation “Grand Prairie” varies according to authors, but is commonly used to designate the area bounded on the south and west by the Arkansas River and on the north and east by the White and Little Red Rivers. (Ackerman, 1996) (Fig.1) This area was designated as a critical ground-water area for 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.

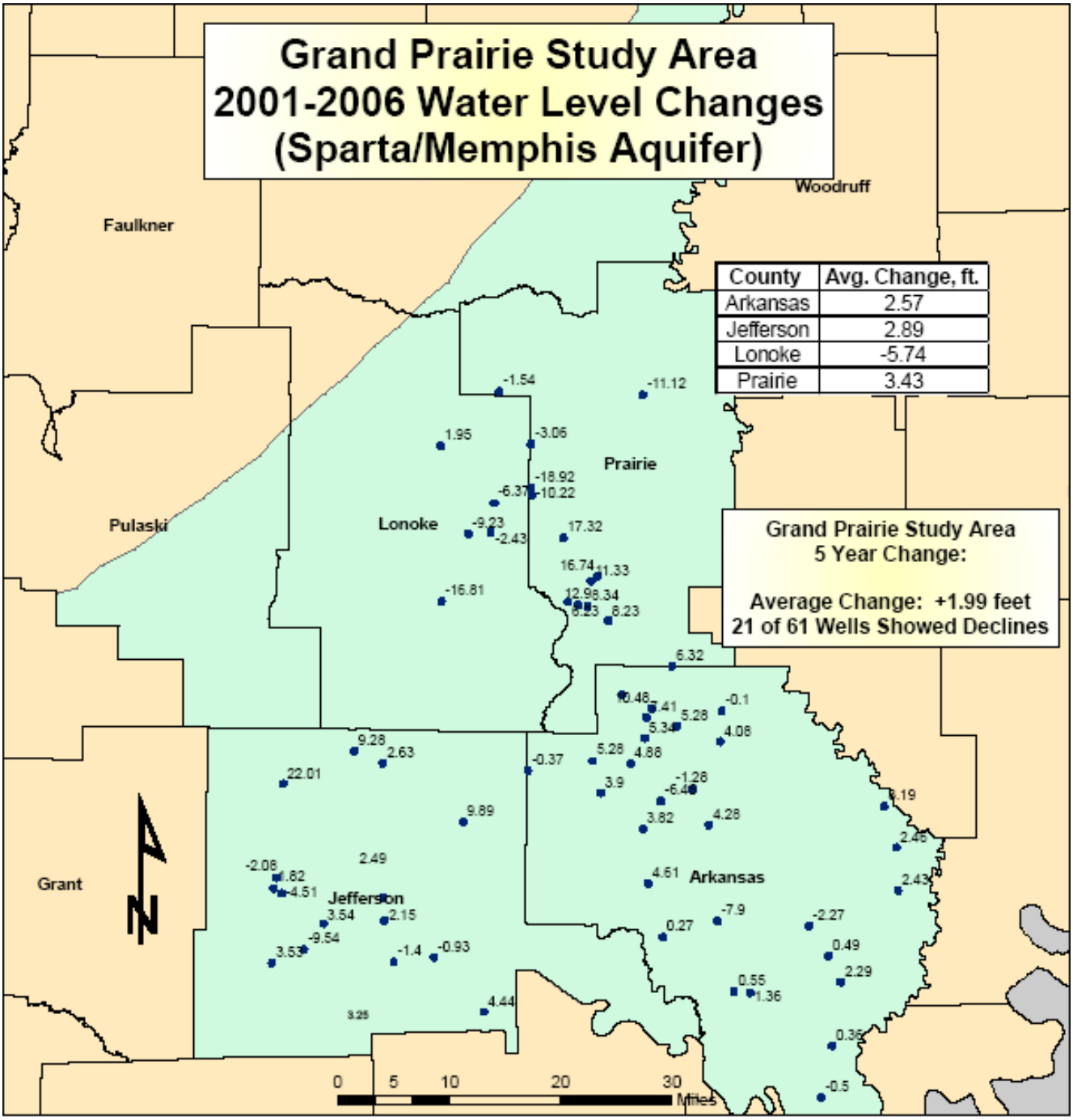
During the 2005-2006 monitoring period there 70 wells monitored with 63 (90.0%) showing average declines in the Sparta/Memphis aquifer throughout the counties in this study area. Every county in this study area had an average decline in static water levels during this monitoring period. Prairie County had an average change of -7.00 feet, Jefferson County -2.30 feet, Lonoke County -2.86 feet, and Arkansas County an average change of 6.59 feet. The average change for the entire study area for this time was -5.33 feet. (Fig.13)

During the 5-year monitoring period from 2001 to 2006 Jefferson County had an average change of +2.89 feet, Lonoke County -5.74 feet, Arkansas County +2.57 feet and Prairie County +3.43 feet. 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 +1.99 foot change during this 5-year period in the Sparta/Memphis aquifer, with 21 of 61 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 42.85 mgd in 2004, an increase of 111.1% over this time period.


Arkansas County
City of DeWitt
05S03W04ADB1
Sparta Aquifer
Water Level Altitude
120
110
100
90
80
70
60
50
40
30
20
10
0
1966
1970
1974
1978
1982
1986
1990
1994
1998
2002
2006
Date Monitored


Arkansas County
U of A Rice BR
03S04W02CCB1
Sparta Aquifer
Water Level Altitude
140
120
100
80
60
40
20
0
1966
1968
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
Date Monitored


Grand Prairie Study Area
2005-2006 Water Level Changes
(Sparta/Memphis Aquifer)
White
Woodruff
Cross
Faulkner
St. F
Lee
Pulaski
Lonoke
Prairie
Phillips
Grant
Jefferson
Arkansas
Lincoln
Cleveland
0 5 10 20 30
Miles
County | Avg. Change, ft.
Arkansas | -6.59
Jefferson | -2.30
Lonoke | -2.86
Prairie | -7.00
Grand Prairie Study Area
1 Year Change:
Average Change: -5.33 feet
63 of 70 Wells Showed Declines
-0.17
-14.17
1.34
-1.93
-1.53
-15.8
-2.43
-4.2
-11.86
-3.47
-1.59
-9.85
-10.73
-6.9
-15.43
-7.86
-2.64
-5.85
-8.15
-5.68
-0.65
-5.7
-2.35
-4.89
-7.45
-2.95
-6.06
-7.12
-8.06
0.45
-0.73
-34.39
-6.65
-8.1
-6.68
1.01
3.29
-0.65
-5.83
-1.78
-1.48
-0.41
-2.06
-1.47
-6.1
-19.22
-15.18
-7.06
-8.13
-7.87
-8.82
-1.86
-1.45
-11.88
-3.46
-6.19
3.84
-4.32
3.25
Legend
Grand Prairie Study Area
Wells
Fig. 13



Legend

Grand Prairie Study Area

Wells

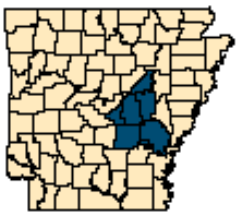


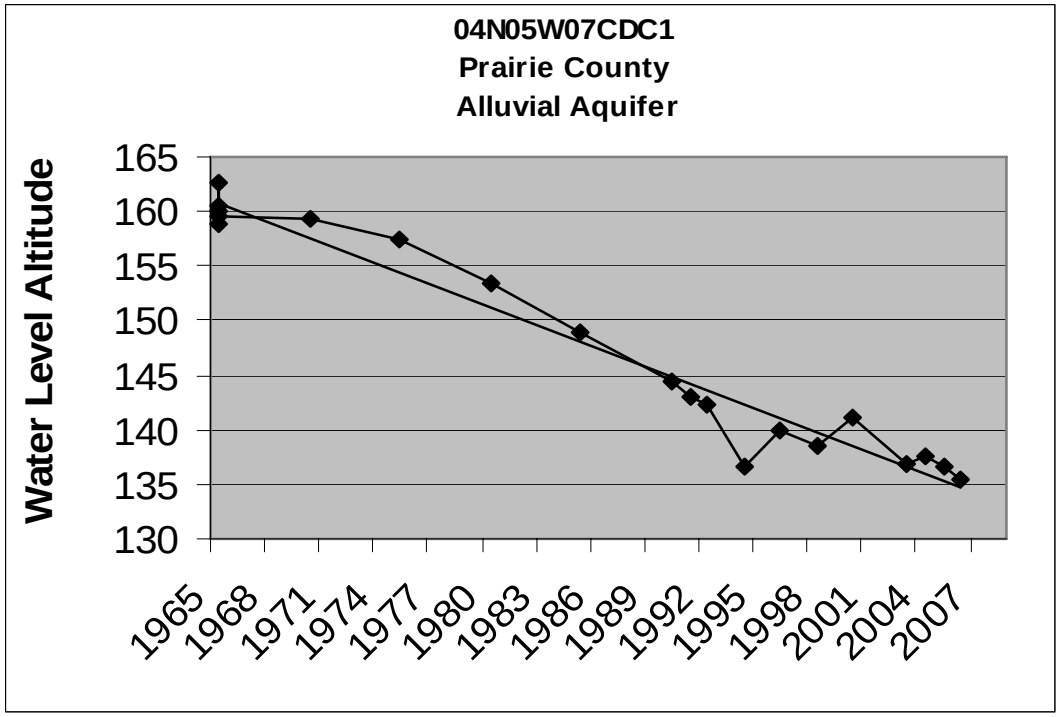
Fig. 14

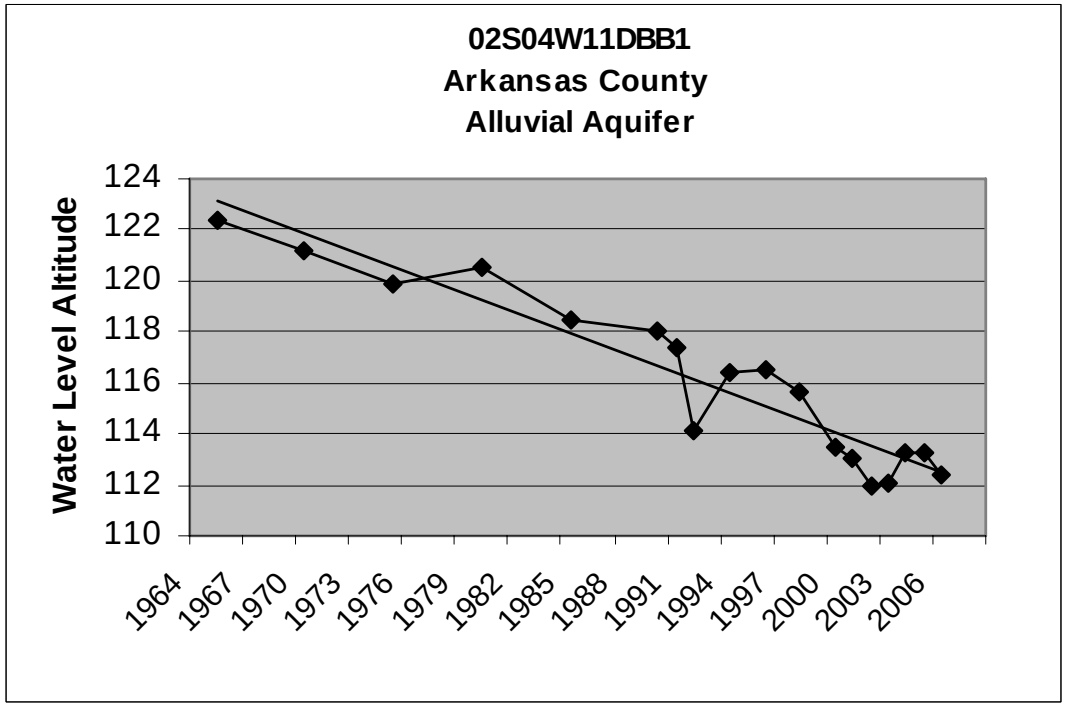
In the alluvial aquifer, during the 2005-2006 monitoring period for the Grand Prairie Critical Ground Water Area, Pulaski County had an average change of -5.63 feet, White County -2.79 feet, Prairie County -2.44 feet, Lonoke County -0.64 feet, Jefferson county -1.45 feet, and Arkansas County -1.18 feet, respectively. The average change for the entire study area for 2005-2006 in the alluvial aquifer was -1.51 feet, with 127 of the 159 wells (79.8%) monitored showing declines. (Fig.15)

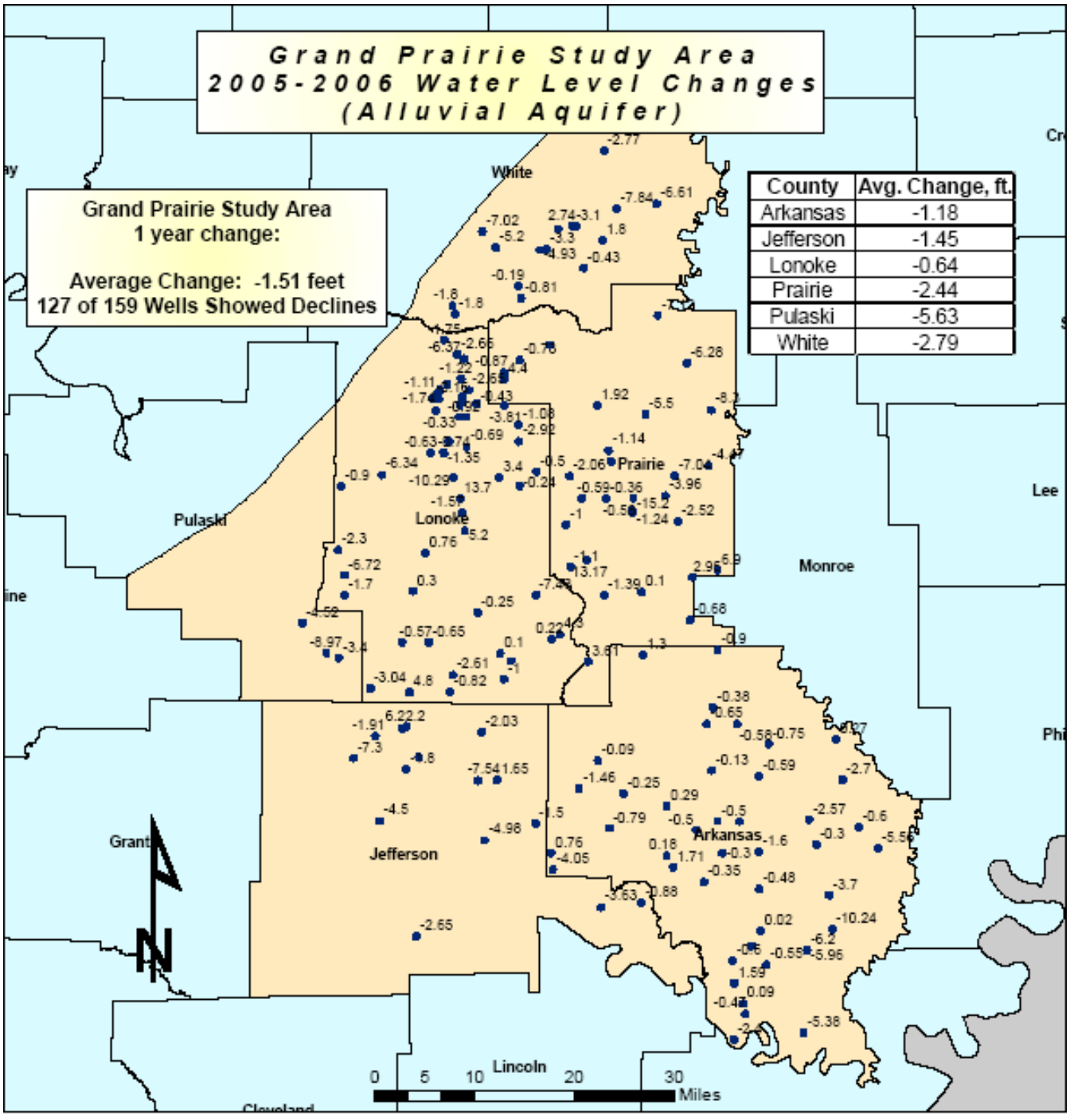
During the 5-year monitoring period from 2001 to 2006, some counties showed declines in average ground water levels, while others showed positive average changes in the alluvial aquifer. White County showed an average change of +0.30 feet, Arkansas County +0.31 feet, Jefferson County -0.68 feet, Prairie County -5.10 feet, and Lonoke County -3.97 feet respectively. The Grand Prairie Study Area had an average decline -2.41 feet during this 5-year period for the alluvial aquifer, with 49 of the 76 wells (64.5%) monitored showing declines. (Fig.16)

From 1996 to 2006 the alluvial aquifer in the Grand Prairie Study Area had an average change of -4.44 feet, with 48 of 68 (70.1%) wells monitored showing declines. Changes during this 10-year period ranged from -11.67 feet in Lonoke County, to -0.67 feet in White County. Arkansas County had an average change of -2.93 feet, Jefferson County -5.40 feet, and Prairie County showed an average decline of -1.53 foot. (Fig.17)

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 pumping rates, Jefferson County could sustain 77% of the actual pumping rate, Monroe County 85%, Prairie County 54%, Arkansas County 47%, and Lonoke County 42%. (Fig.46) The Grand Prairie Irrigation Project, once in place, is expected to significantly help reduce these counties' unmet demands for irrigation.


04N05W07CDC1
Prairie County
Alluvial Aquifer
Water Level Altitude
165
160
155
150
145
140
135
130
1965
1968
1971
1974
1977
1980
1983
1986
1989
1992
1995
1998
2001
2004
2007


02S04W11DBB1
Arkansas County
Alluvial Aquifer
Water Level Altitude
124
122
120
118
116
114
112
110
1964
1967
1970
1973
1976
1979
1982
1985
1988
1991
1994
1997
2000
2003
2006



Legend

Grand Prairie Study Area

Wells

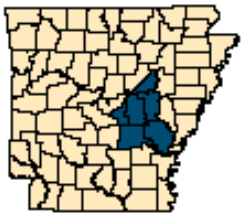
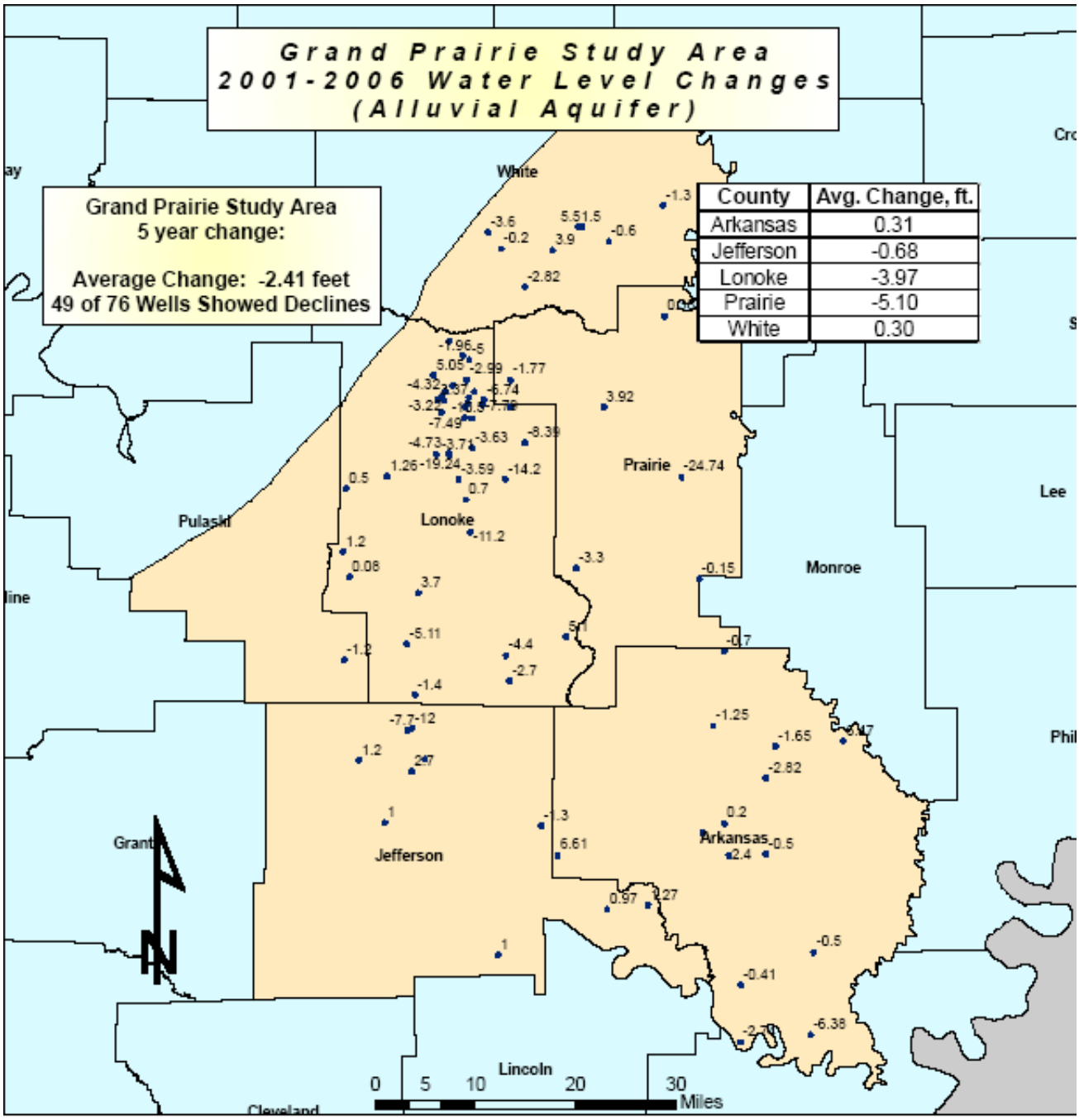


Fig. 15



Legend

- Grand Prairie Study Area
- Wells

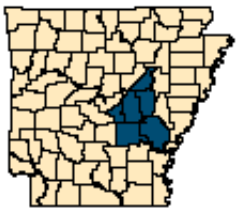
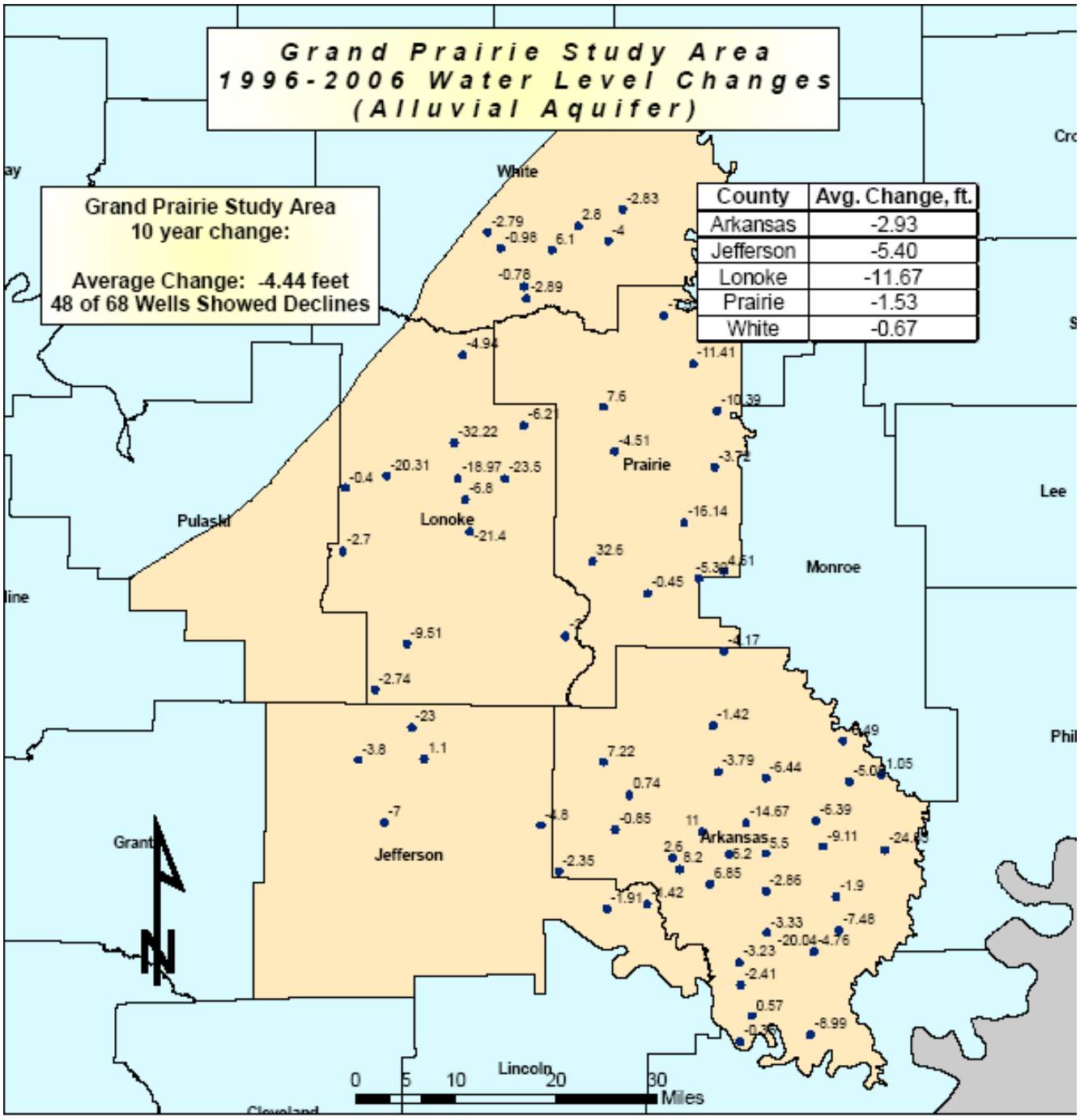


Fig. 16



Legend

Grand Prairie Study Area

Wells

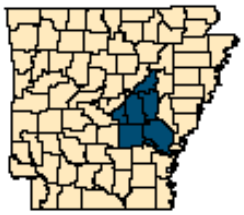


Fig. 17

CACHE STUDY AREA

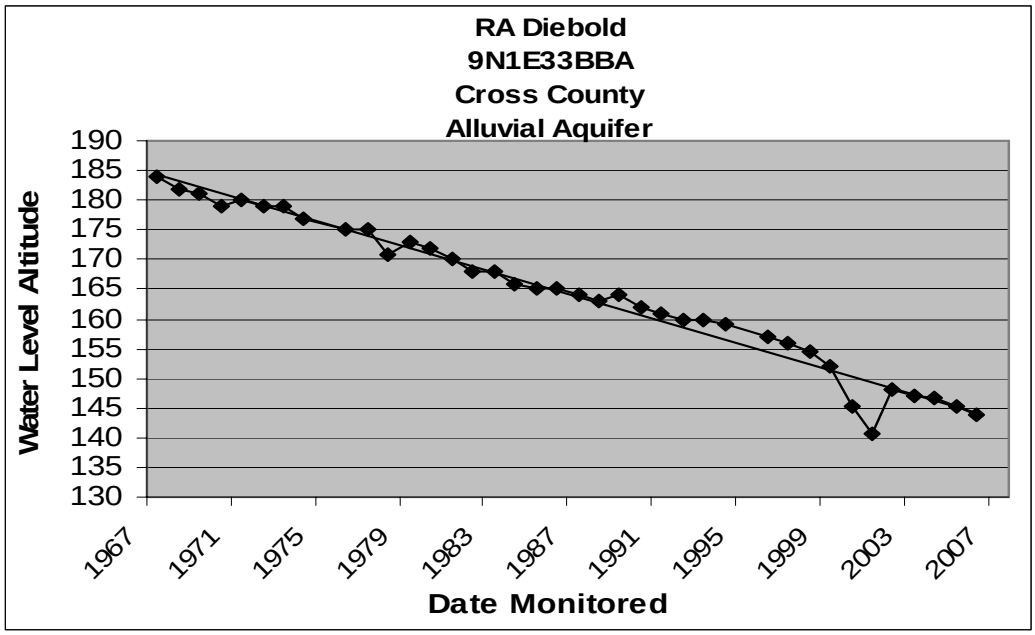
The Cache Study Area is defined as the 7300 square mile region between Crowley's Ridge to the east, the Fall Line to the west, the state line to the north, and the White River to the south. (Ackerman, 1996) This study area includes portions of Craighead, Poinsett, Cross, St. Francis, Lee, Phillips, Monroe, Woodruff, Jackson, Lawrence, Greene, and Clay Counties. (Fig.1)

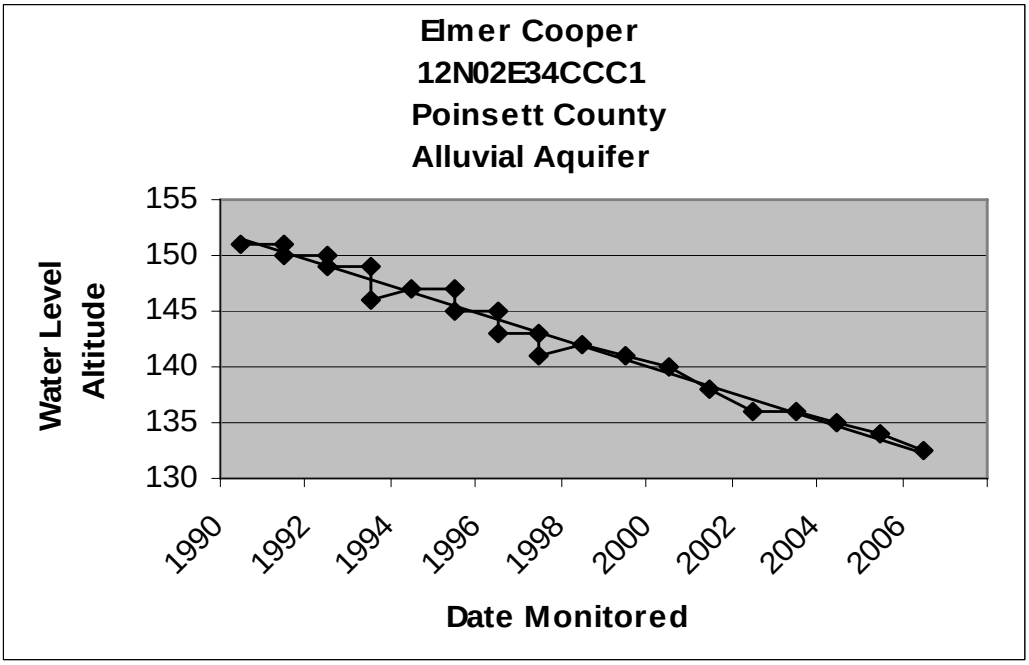
Monitoring of the alluvial aquifer in this study area from 2005-2006 showed significant change with the entire study area having an average change of -2.40 feet. Every county had an average decline. Two-hundred and forty-four of the 282 wells monitored (86.5%) having a decline in static water level. During this same time Craighead County showed an average change of -2.46 feet, Cross County -1.74 feet, Greene County -0.62 feet, Independence County -2.74 feet, Jackson County -1.87 feet, Lawrence County -1.44 feet, Lee County -5.21 feet, Monroe County -1.46 feet, Poinsett County -1.62, Randolph County -1.83, St. Francis -0.38 feet, Woodruff County -2.48, Phillips County -5.81 feet, and Clay County -2.02 feet, respectively. (Fig.18)

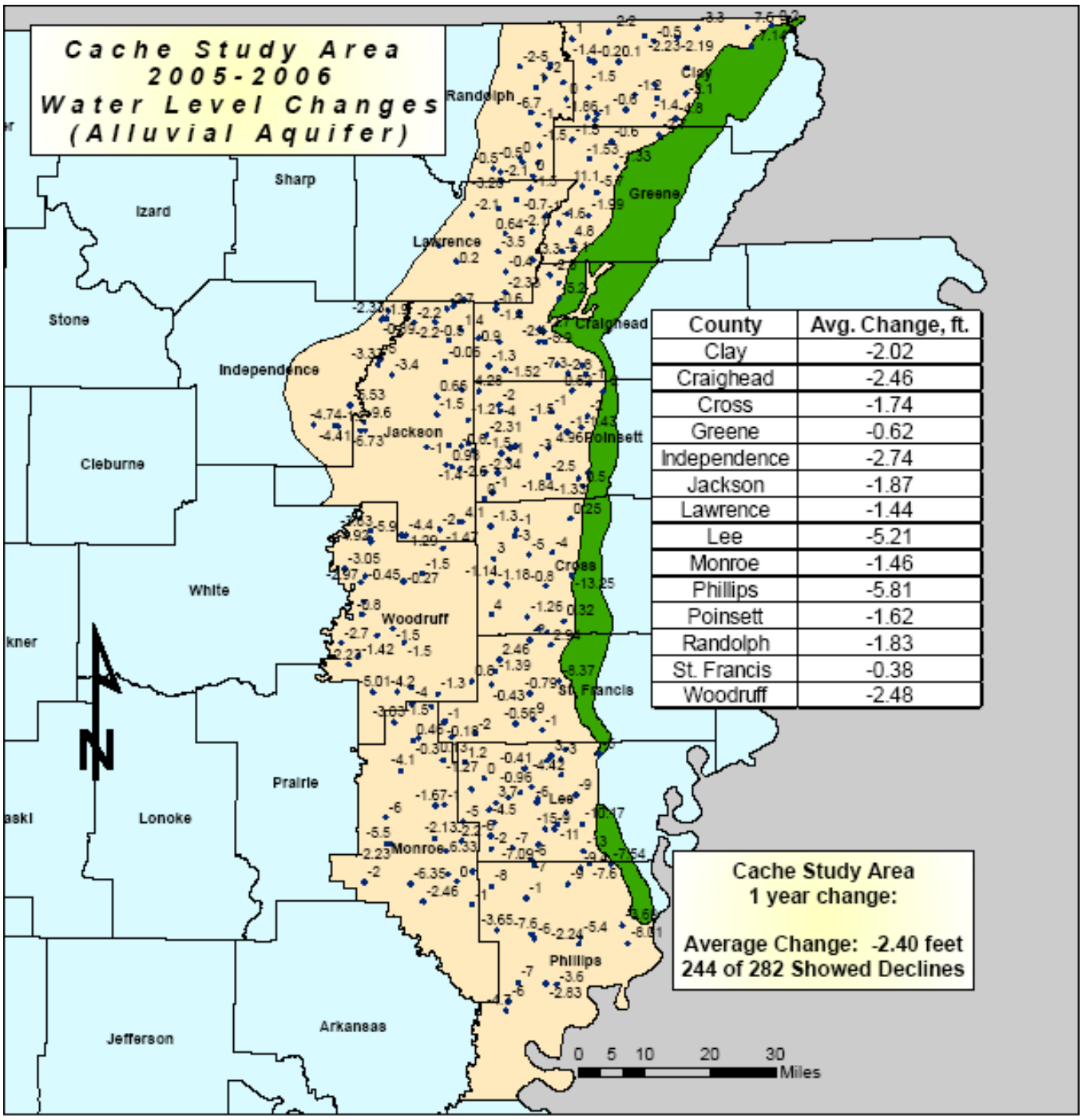
The alluvial aquifer in the Cache Study Area was also evaluated for change in water levels for a 5-year time period from 2001 to 2006. For this period all counties also showed declines in static water levels. Greene County had an average change of -2.50 feet, Clay County -2.34 feet, Craighead County -4.19 feet, Cross County -3.32 feet, Independence County -5.09 feet, Jackson County -2.64 feet, Lee County -0.20 feet, Monroe County -1.30 feet, Phillips County -4.91 feet, Poinsett County -5.87 feet, Randolph -5.27 feet, St. Francis County -2.13 feet, and Woodruff County -0.97 feet, respectively. The entire Cache Study Area showed an average change of -2.94 feet in the alluvial aquifer during this 5-year monitoring period. Out of the 182 wells monitored, 151 (83.0%) of these showed average declines. (Fig.19)

Average change was also compared in the alluvial aquifer for a 10-year timeframe for the Cache Study Area. Of the 183 wells monitored, 169 of these (92.3%) showed an average decline. Every county in the study area showed an average decline in static water levels once again for this time period. Phillips County had an average change of -4.74 feet, Cross -11.40 feet, Craighead -11.37 feet,

Jackson -7.37 feet, Lawrence -7.59 feet, Lee -5.90 feet, Monroe -3.54 feet, Poinsett -11.12 feet, Randolph -8.66 feet, St. Francis -6.85 feet, Woodruff -2.59, Greene County -10.10, and Clay County -7.91 feet respectively. The average change for the study area over this time was a decline of -7.00 feet. (Fig. 20)







County	Avg. Change, ft.
Clay	-2.02
Craighead	-2.46
Cross	-1.74
Greene	-0.62
Independence	-2.74
Jackson	-1.87
Lawrence	-1.44
Lee	-5.21
Monroe	-1.46
Phillips	-5.81
Poinsett	-1.62
Randolph	-1.83
St. Francis	-0.38
Woodruff	-2.48

Legend

- Crowleys Ridge
- Cache Study Area
- Wells

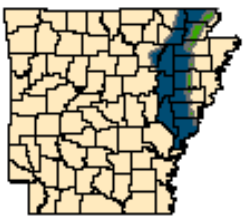
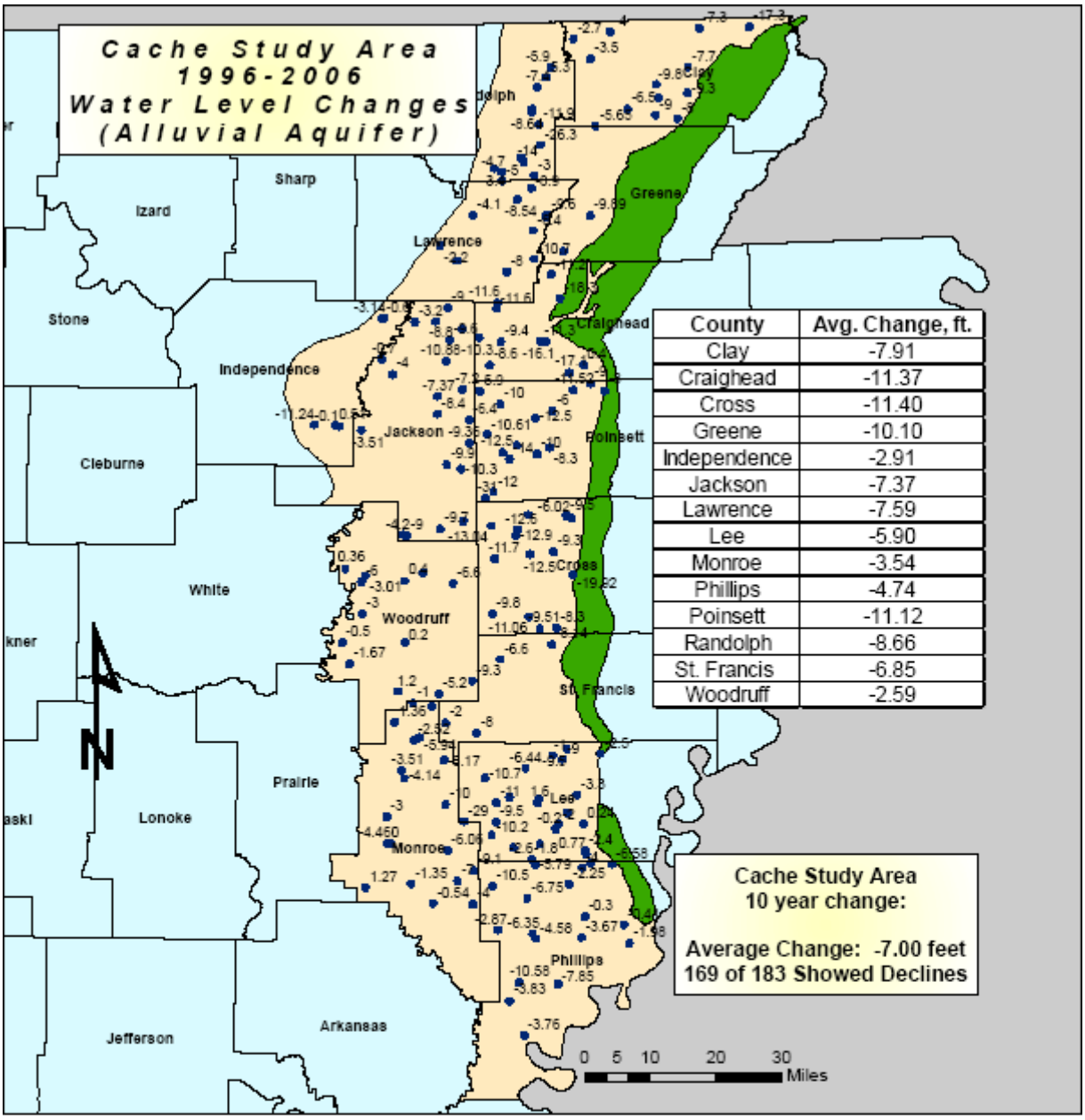


Fig. 18



County	Avg. Change, ft.
Clay	-7.91
Craighead	-11.37
Cross	-11.40
Greene	-10.10
Independence	-2.91
Jackson	-7.37
Lawrence	-7.59
Lee	-5.90
Monroe	-3.54
Phillips	-4.74
Poinsett	-11.12
Randolph	-8.66
St. Francis	-6.85
Woodruff	-2.59

Legend

- Crowleys Ridge
- Cache Study Area
- Wells

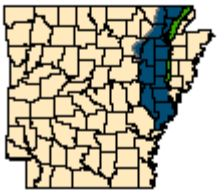
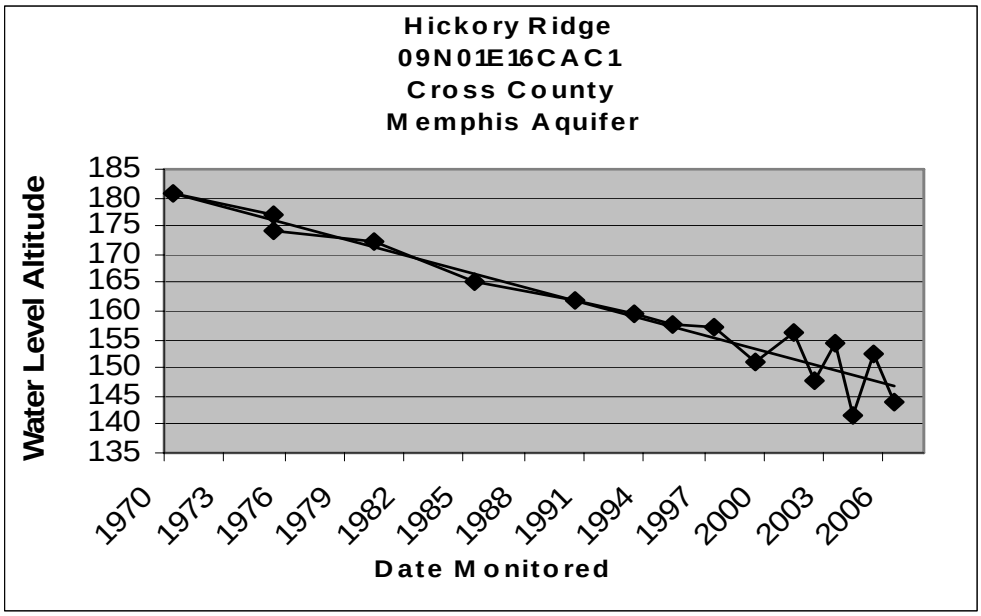


Fig. 20

Monitoring of the Sparta/Memphis aquifer in the Cache Study Area from 2005 to 2006 shows that the study area had an overall average decline in static water level of 0.42 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. Twenty-six of the 35 wells (74.3%) 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 -0.87 feet, Cross County -4.22 feet, Monroe County -0.72 feet, Phillips County +4.47 feet, Poinsett County -2.17 feet, and Woodruff County -1.64 feet respectively. (Fig.21)

During the 2001 to 2006 monitoring period the Sparta/Memphis aquifer in the Cache Study Area had an average water level decline of -0.66 feet, with 18 of the 31 wells monitored (58.1%) showing decline. Woodruff County had an average change of +0.42 feet, Phillips County +2.98 feet, Poinsett County -2.93 feet, Monroe County -0.98 feet, Cross County -7.57 feet, and Craighead County -0.10 feet respectively. (Fig. 22)



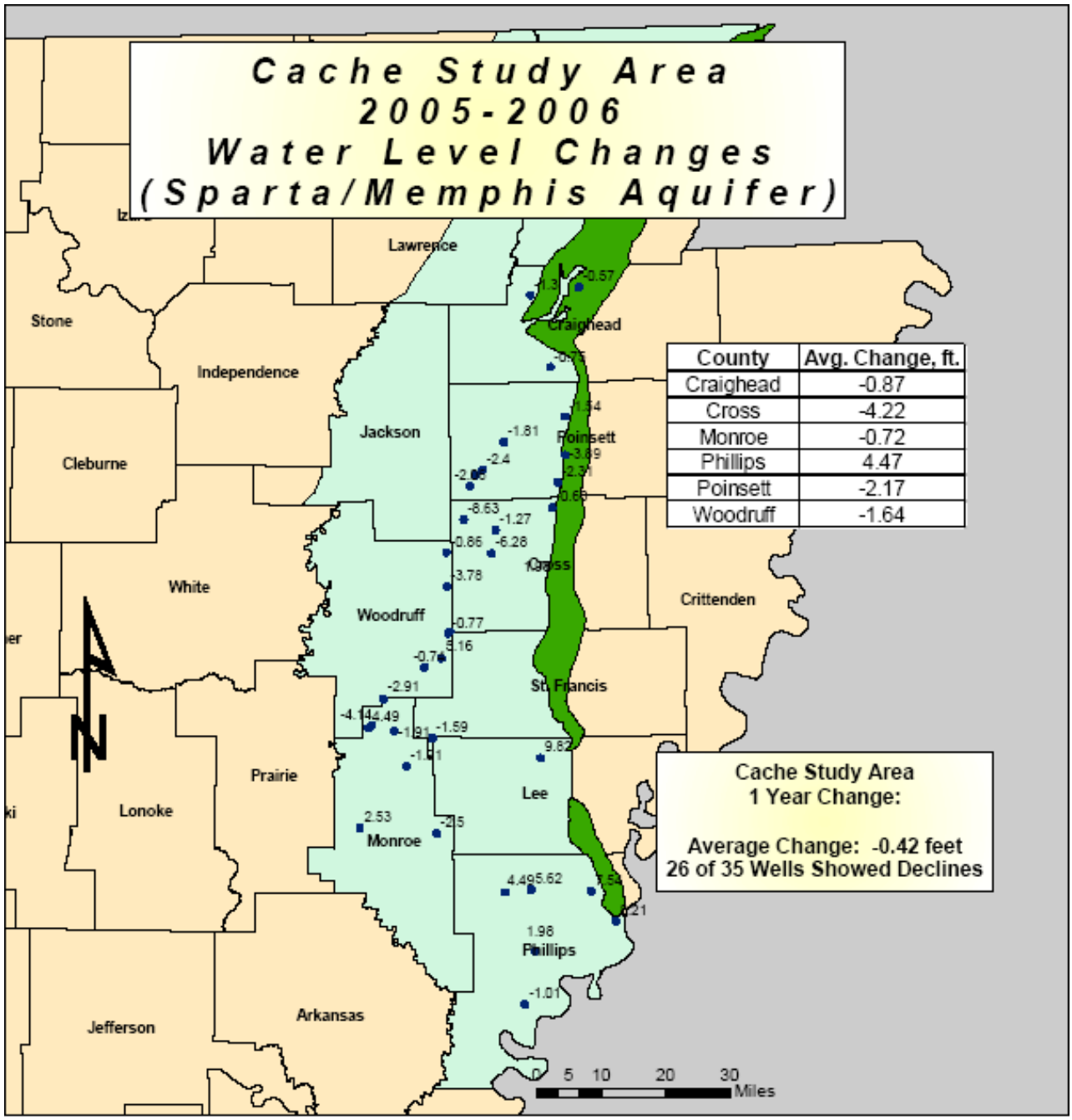
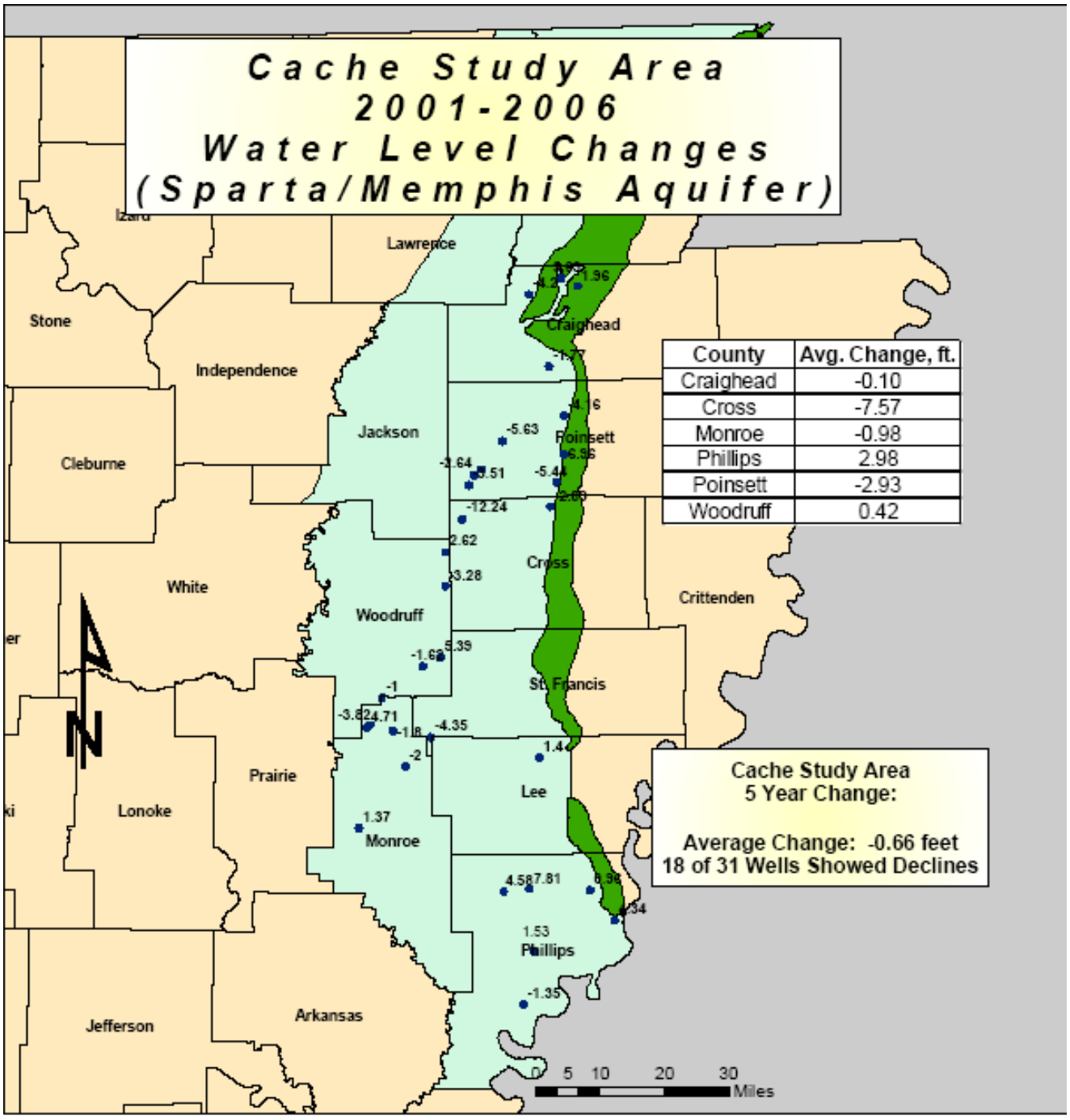

Cache Study Area
2005-2006
Water Level Changes
(Sparta/Memphis Aquifer)
Lawrence
Stone
Independence
Jackson
Craighead
Poinsett
Cleburne
White
Woodruff
Cross
Crittenden
St. Francis
Prairie
Lonoke
Monroe
Lee
Phillips
Arkansas
Jefferson
-0.57
-0.75
-1.81
-2.4
-3.89
-2.17
-0.69
-8.63
-1.27
-0.86
-6.28
-3.78
-0.77
-3.16
-0.7
-2.91
-4.49
-1.91
-1.59
9.82
2.53
-2.5
4.49
5.62
1.98
-1.01
0 5 10 20 30
Miles
County | Avg. Change, ft.
Craighead | -0.87
Cross | -4.22
Monroe | -0.72
Phillips | 4.47
Poinsett | -2.17
Woodruff | -1.64
Cache Study Area
1 Year Change:
Average Change: -0.42 feet
26 of 35 Wells Showed Declines
Legend
Crowleys Ridge
Cache Study Area
Wells

Fig. 21



Legend

- Crowleys Ridge
- Cache Study Area
- Wells

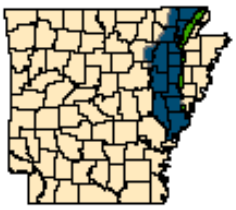


Fig. 22

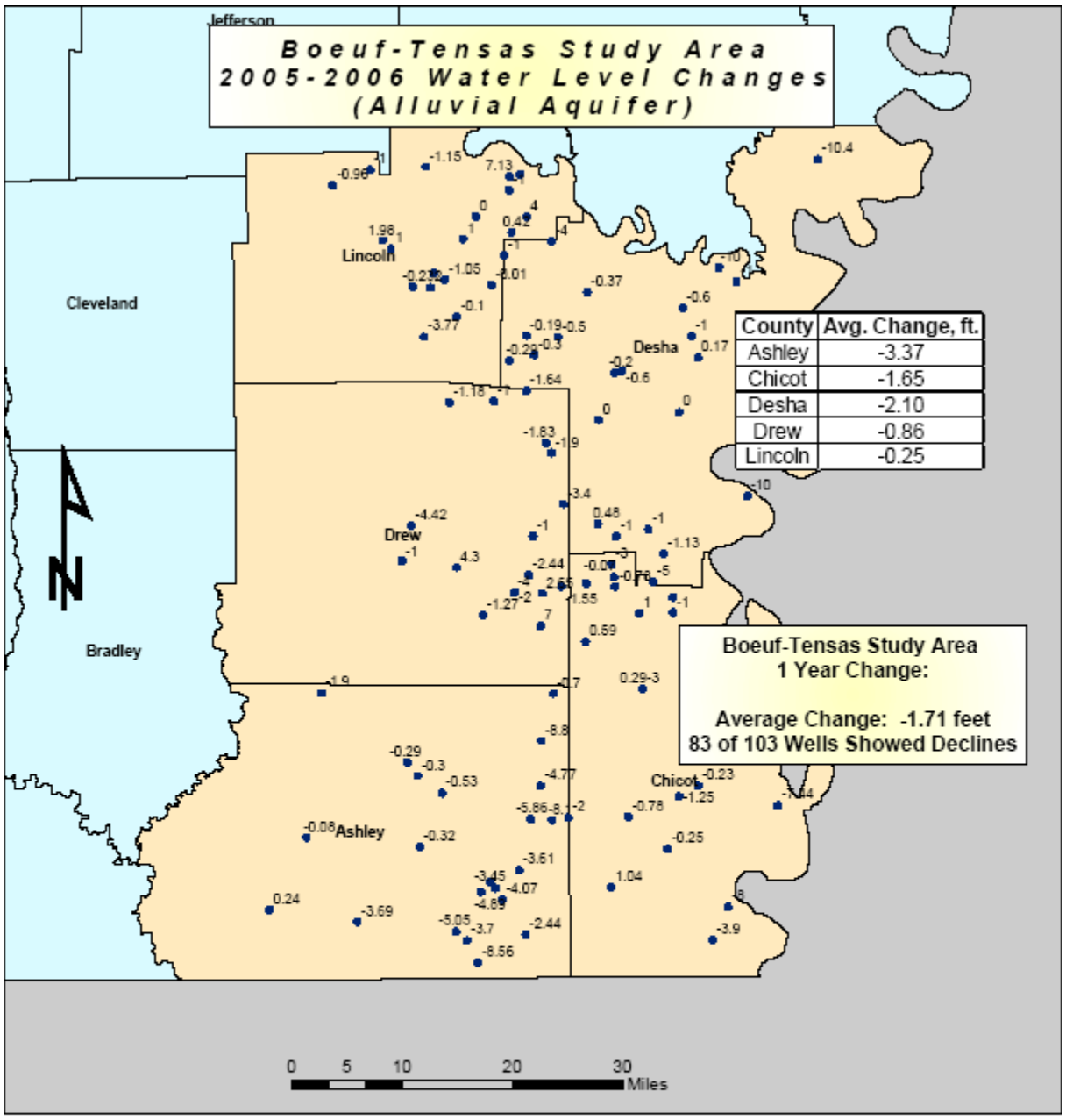
BOEUF-TENSAS STUDY AREA

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 2005-2006 showed the entire study area having an average change of -1.71 feet, and 83 of the 103 wells monitored (80.1%) having declines in static water level. Lincoln County had an average change of -0.25 feet, Chicot County -1.65 feet, Desha County -2.10 feet, Drew County -0.86 feet, and Ashley County -3.37 feet respectively. (Fig.23)

During the 5-year monitoring period from 2001 to 2006 the study area had an average change of -0.71 feet in the alluvial aquifer, with 28 of the 52 wells monitored (53.8%) showing declines. Ashley County had an average change of +0.18 feet, Chicot County -1.70 feet, Drew County +0.59 feet, Desha County -2.25 feet, and Lincoln Counties -0.16 feet respectively. (Fig.24)

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 -2.65 feet, Chicot County -6.74 feet, Desha County -6.43 feet, Drew County -2.29 feet, and Lincoln County -7.83 feet respectively. The entire study area showed an average change of -5.46 feet during this 10-year period in the alluvial aquifer with 42 of 50 wells monitored (84.0%) showing declines. (Fig.25)



Legend

Boeuf-Tensas Study Area

Wells

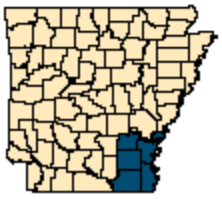
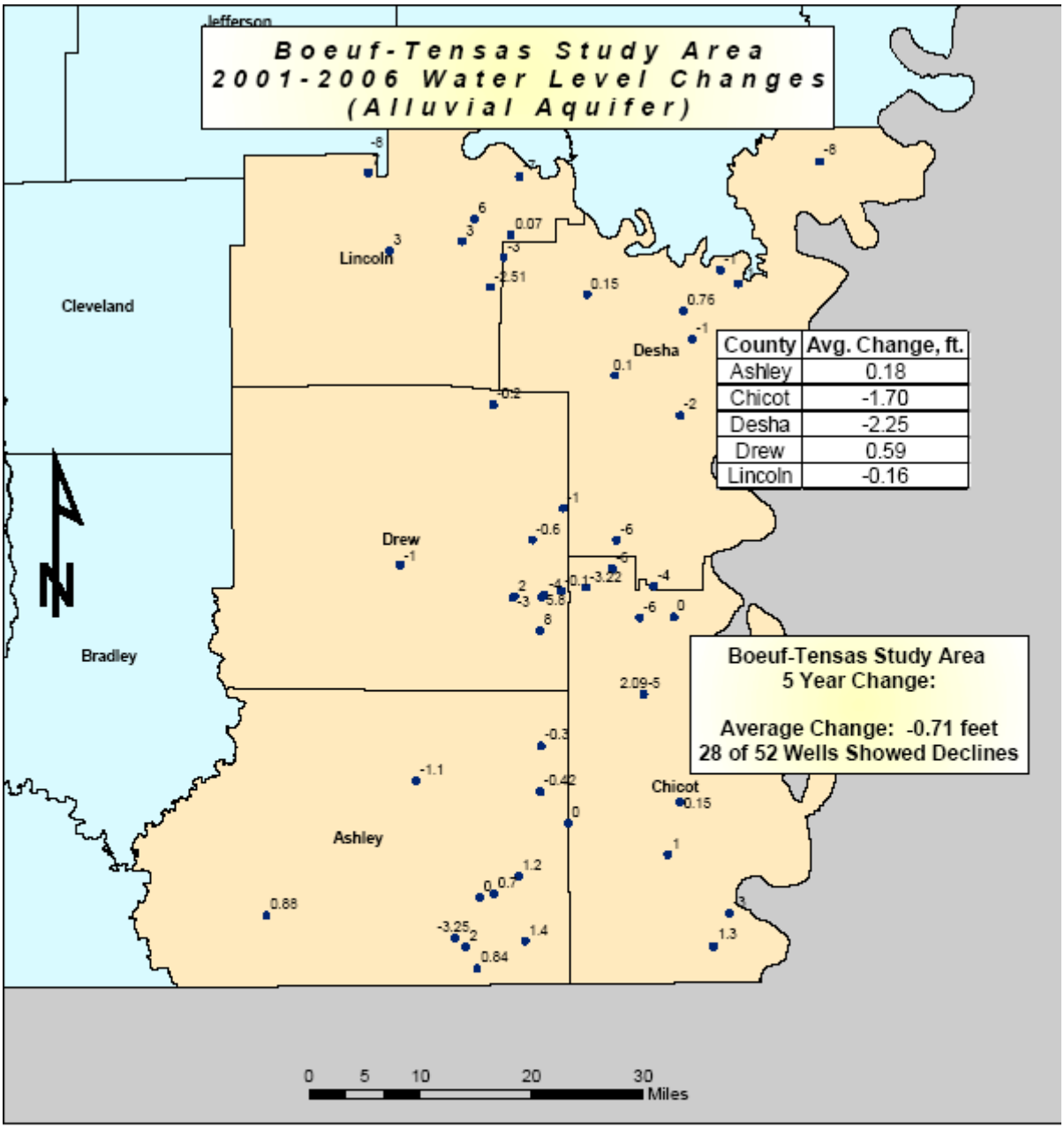


Fig. 23



Legend

- Boeuf-Tensas Study Area
- Wells

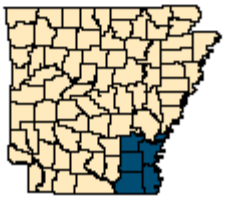
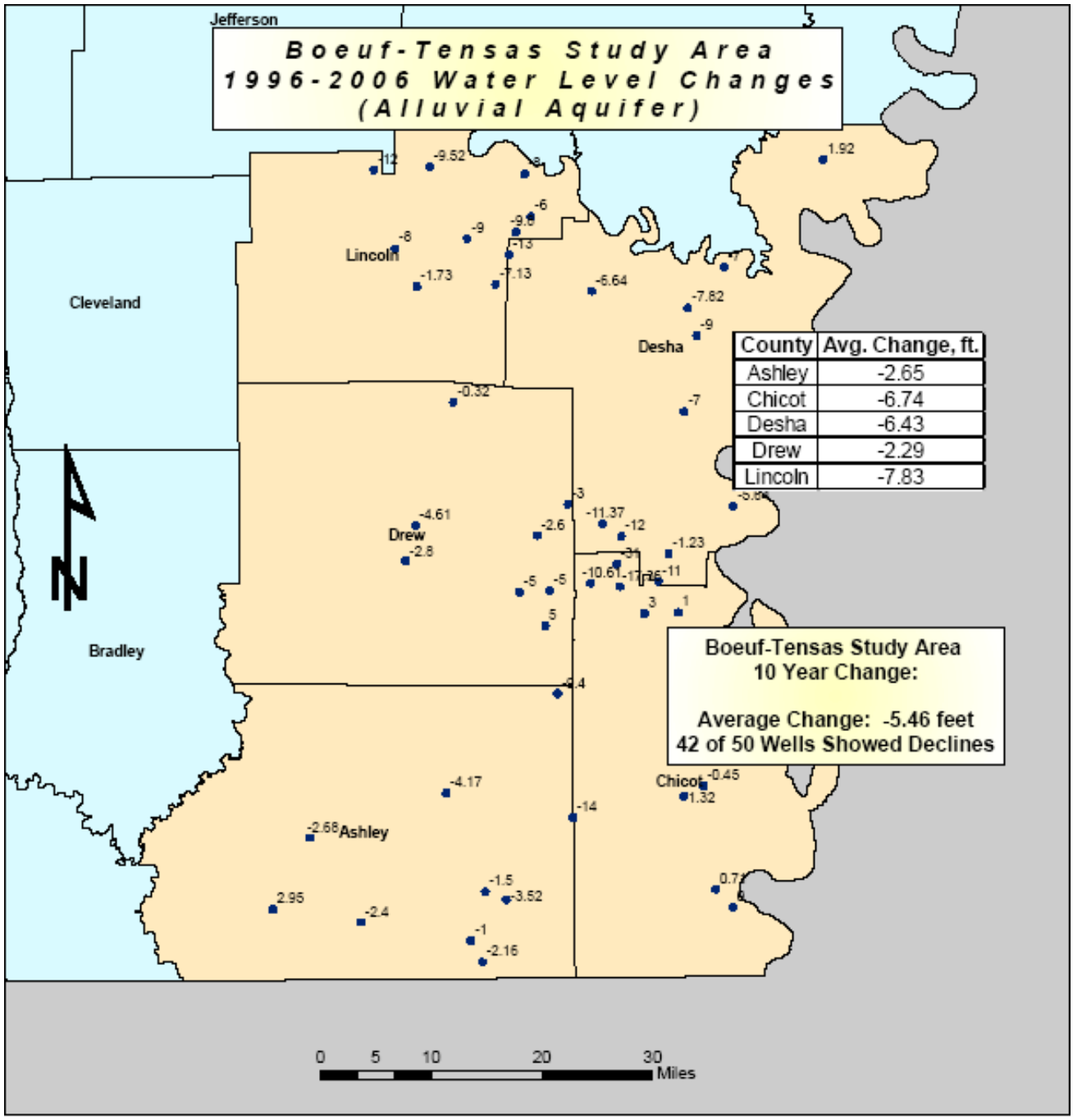


Fig. 24



Legend

Boeuf-Tensas Study Area

Wells

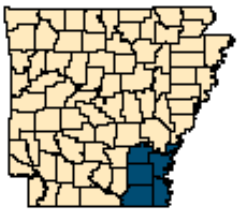
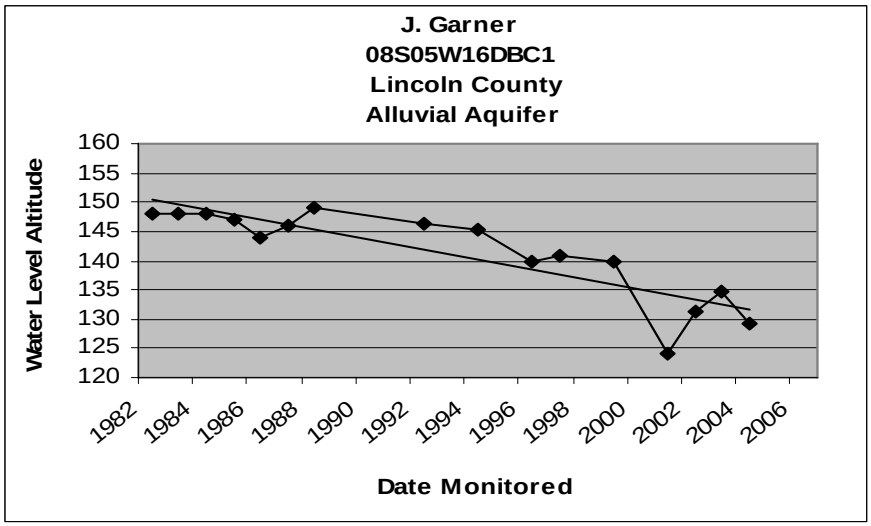


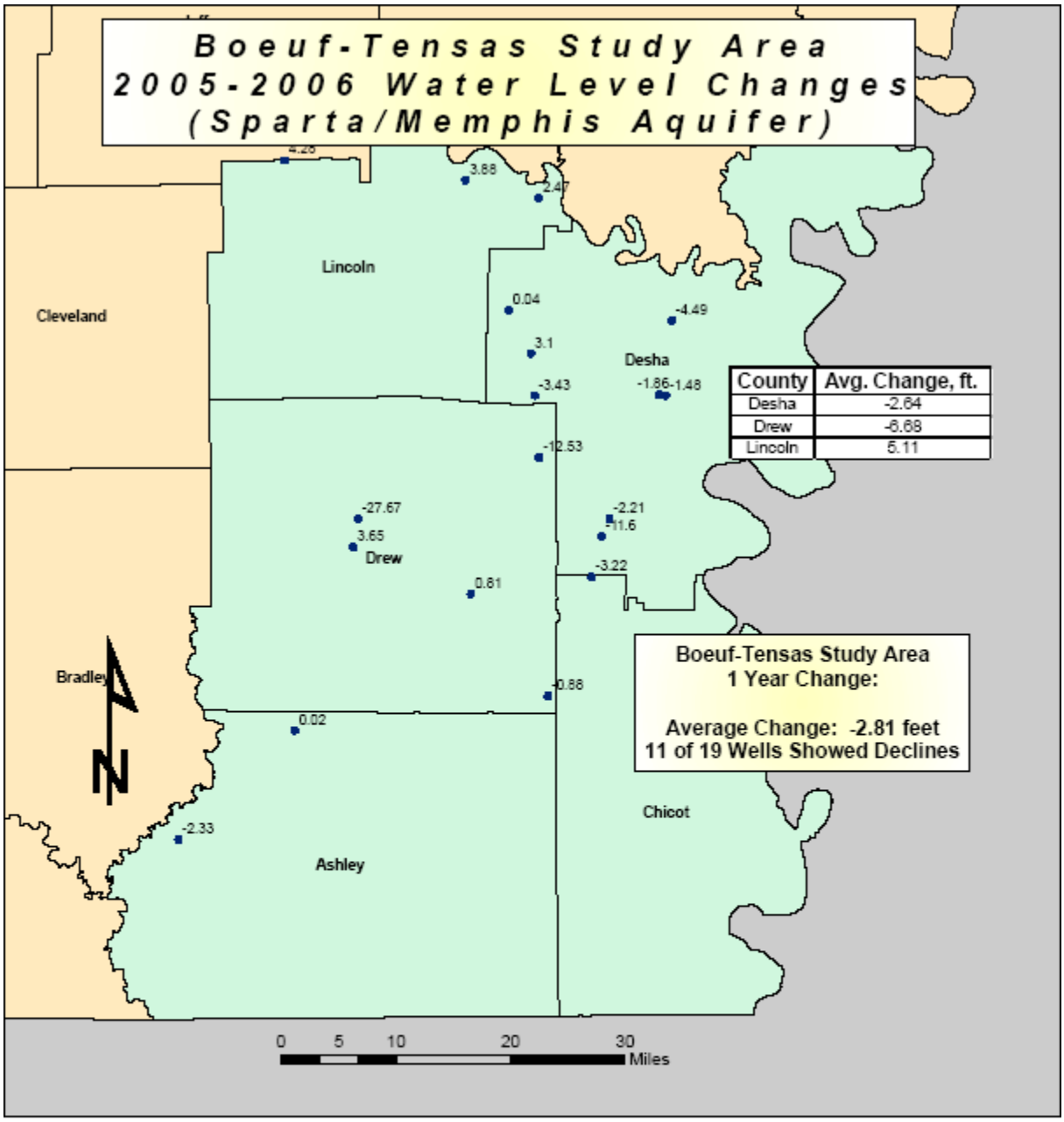
Fig. 25



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 2005-2006 monitoring period the Boeuf-Tenses Study Area showed an average decline of -2.81 feet in the Sparta/Memphis aquifer, with 11 of the 19 wells monitored (57.9%) showing declines. Lincoln County had an average change of +5.11 feet, Desha County a change of -2.64 feet, and Drew County -6.68 feet respectively. (Fig.26)

During the 5-year monitoring period, from 2001 to 2006, 14 of the 18 wells monitored in the Sparta/Memphis aquifer (77.8%) showed water-level declines in this study area. Desha County had an average change of -1.00 feet, Lincoln County -1.12 feet, and Drew County -9.43 feet respectively. The entire study area had an average change of -3.45 feet during this time. (Fig.27)



Legend

Boeuf-Tensas Study Area

Wells

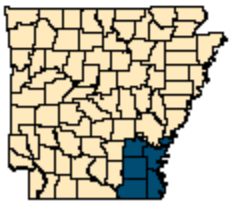
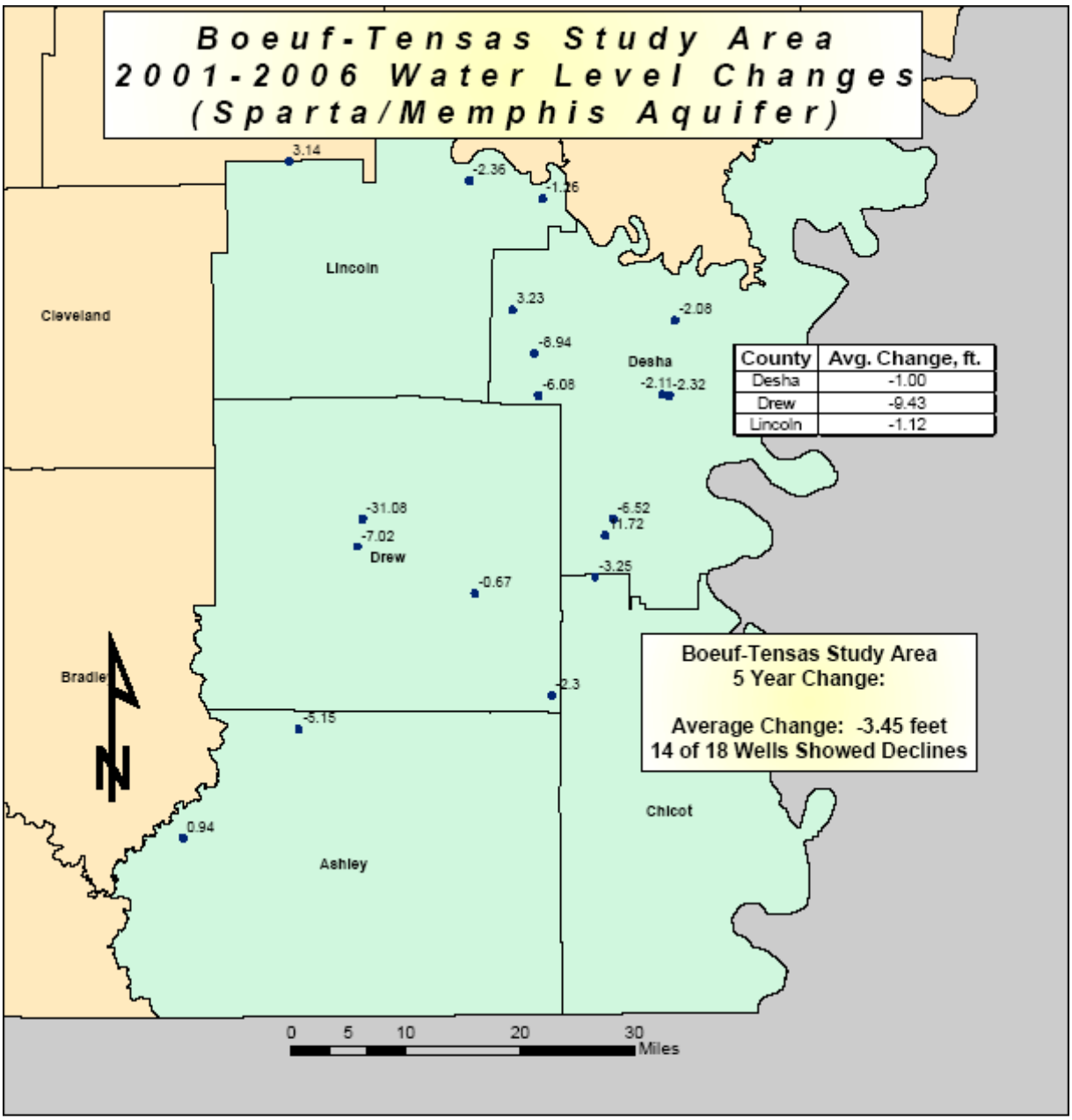


Fig. 26



Legend

Boeuf-Tensas Study Area

Wells

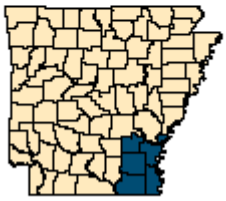


Fig. 27

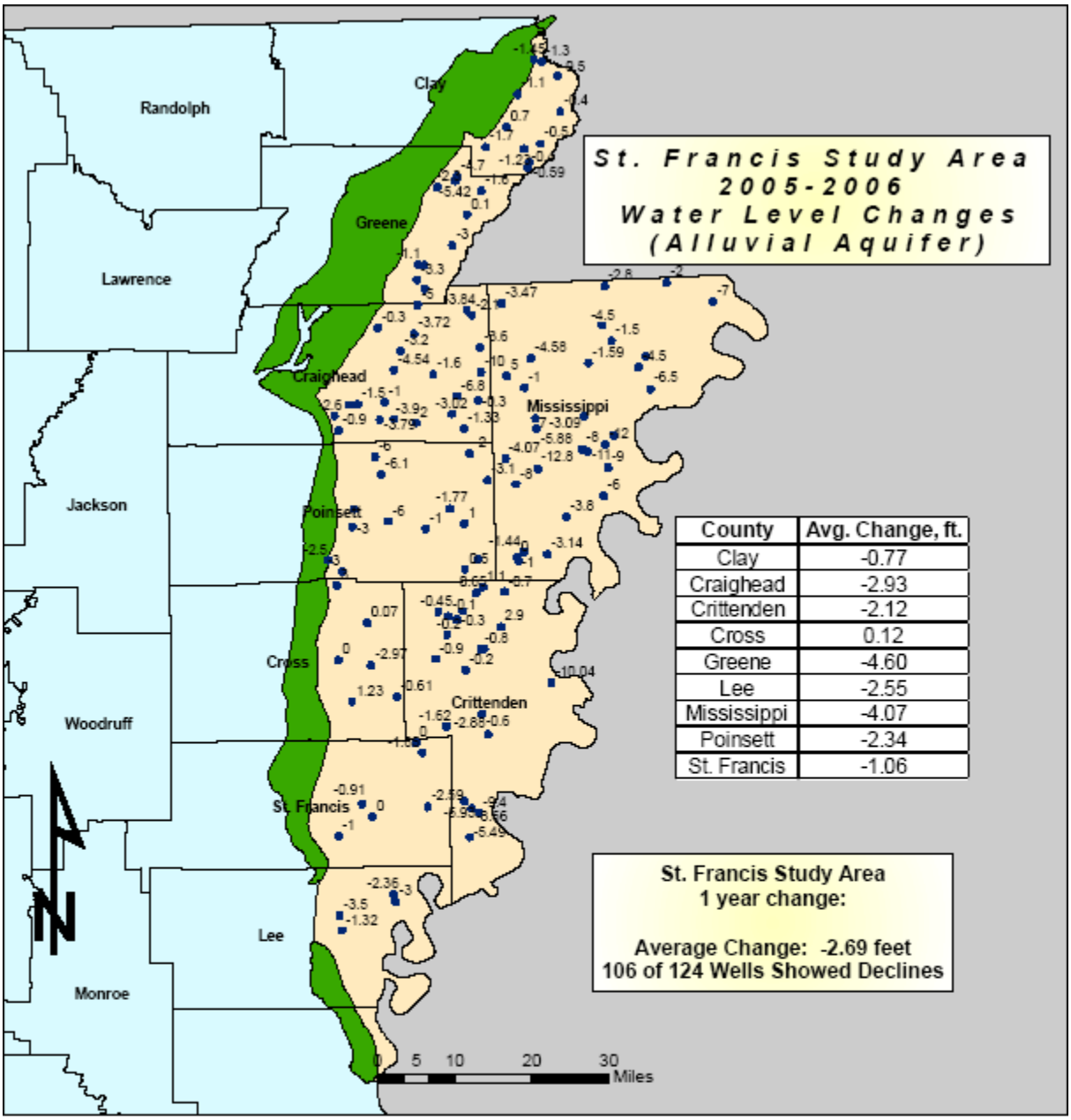
ST. FRANCIS STUDY AREA

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.

During the 2005-2006 monitoring period there were mostly declines in average static water levels in the alluvial aquifer throughout this study area, with Cross County being the exception having an average change of +0.12 feet. All other counties showed average declines with Clay county having an average change of -0.77 feet, Craighead County -2.93 feet, Crittenden County -2.12 feet, Greene County -4.60 feet, Lee County -2.55 feet, Mississippi County -4.07 feet, Poinsett County -2.34 feet, and St. Francis County -1.06 feet respectively. The overall study area had an average static water-level change of -2.69 feet during this time, with 106 of the 124 (85.5%) wells monitored showing declines. (Fig.28)

During the 5-year monitoring timeframe, from 2001 to 2006, Greene County had an average change of +0.03 feet, Mississippi County -1.14 feet, Craighead County -2.28 feet, Cross County +0.55 feet, Crittenden County -2.28, St. Francis County -0.64, Poinsett County -0.10 feet, Lee County +0.60 feet, and Clay county +0.64 feet respectively. The alluvial aquifer in this study area had an average change of -0.68 feet, with 40 of the 76 wells monitored (52.6%) showing declines. (Fig.29)

A 10-year average change was also done in the St. Francis Study Area for the alluvial aquifer static water levels. Clay County has an average change of -1.52 feet, Craighead County -3.17 feet, Crittenden County -4.54 feet, Cross County -5.90 feet, Greene County -4.91 feet, Lee County -1.00 feet, Mississippi County -3.06 feet, Poinsett County -1.46 feet, and St. Francis County +0.31 feet respectively. There was an average change of -3.24 feet over the entire study area for this 10-year period, with 73 of the 82 wells monitored (89.0%) showing declines. (Fig. 30)



County	Avg. Change, ft.
Clay	-0.77
Craighead	-2.93
Crittenden	-2.12
Cross	0.12
Greene	-4.60
Lee	-2.55
Mississippi	-4.07
Poinsett	-2.34
St. Francis	-1.06

Legend

- Crowleys Ridge
- St. Francis Study Area
- Wells

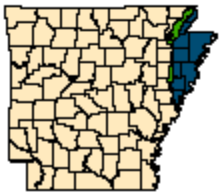
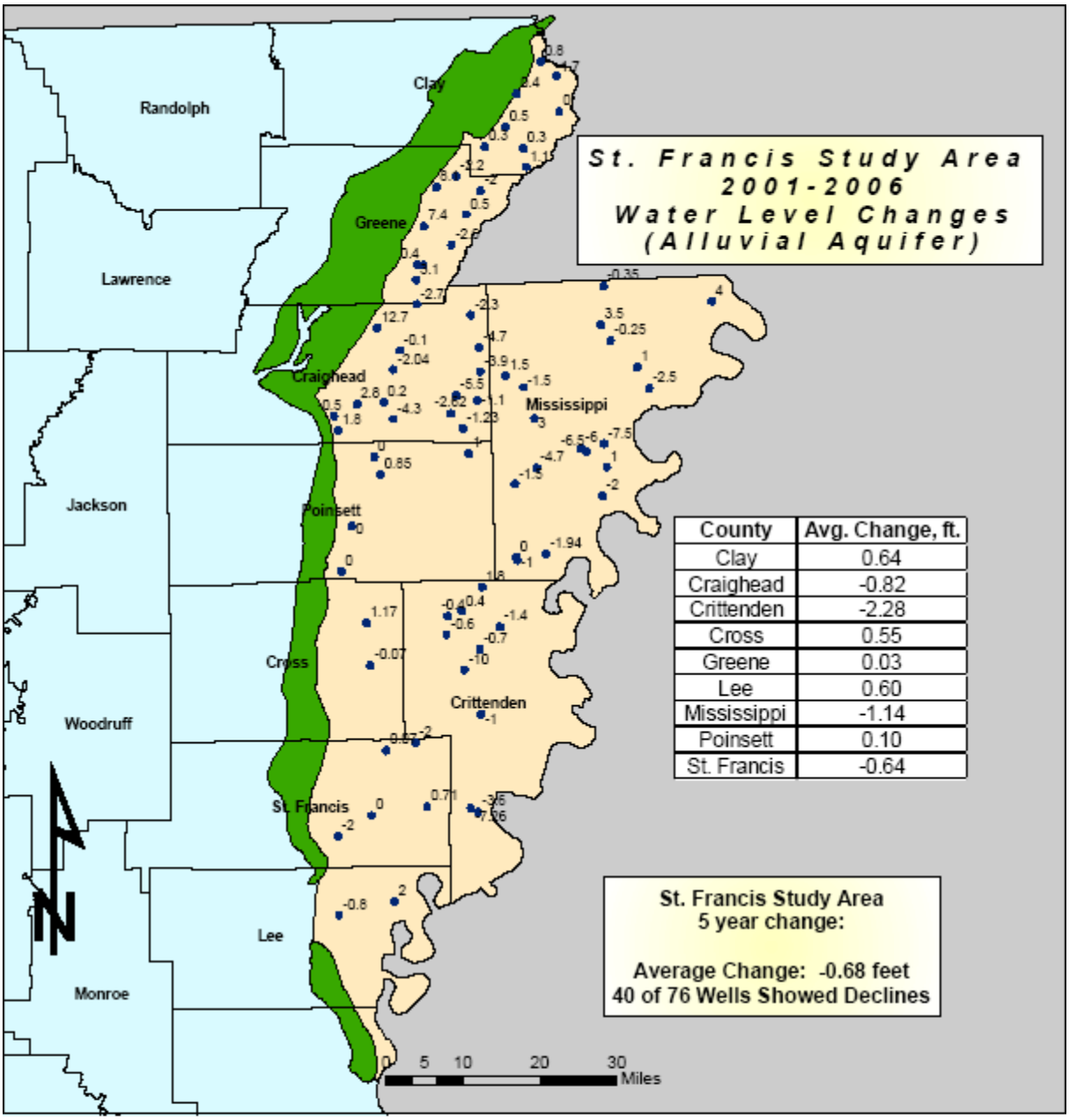


Fig. 28



County	Avg. Change, ft.
Clay	0.64
Craighead	-0.82
Crittenden	-2.28
Cross	0.55
Greene	0.03
Lee	0.60
Mississippi	-1.14
Poinsett	0.10
St. Francis	-0.64

Legend

- Crowleys Ridge
- St. Francis Study Area
- Wells

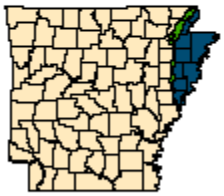
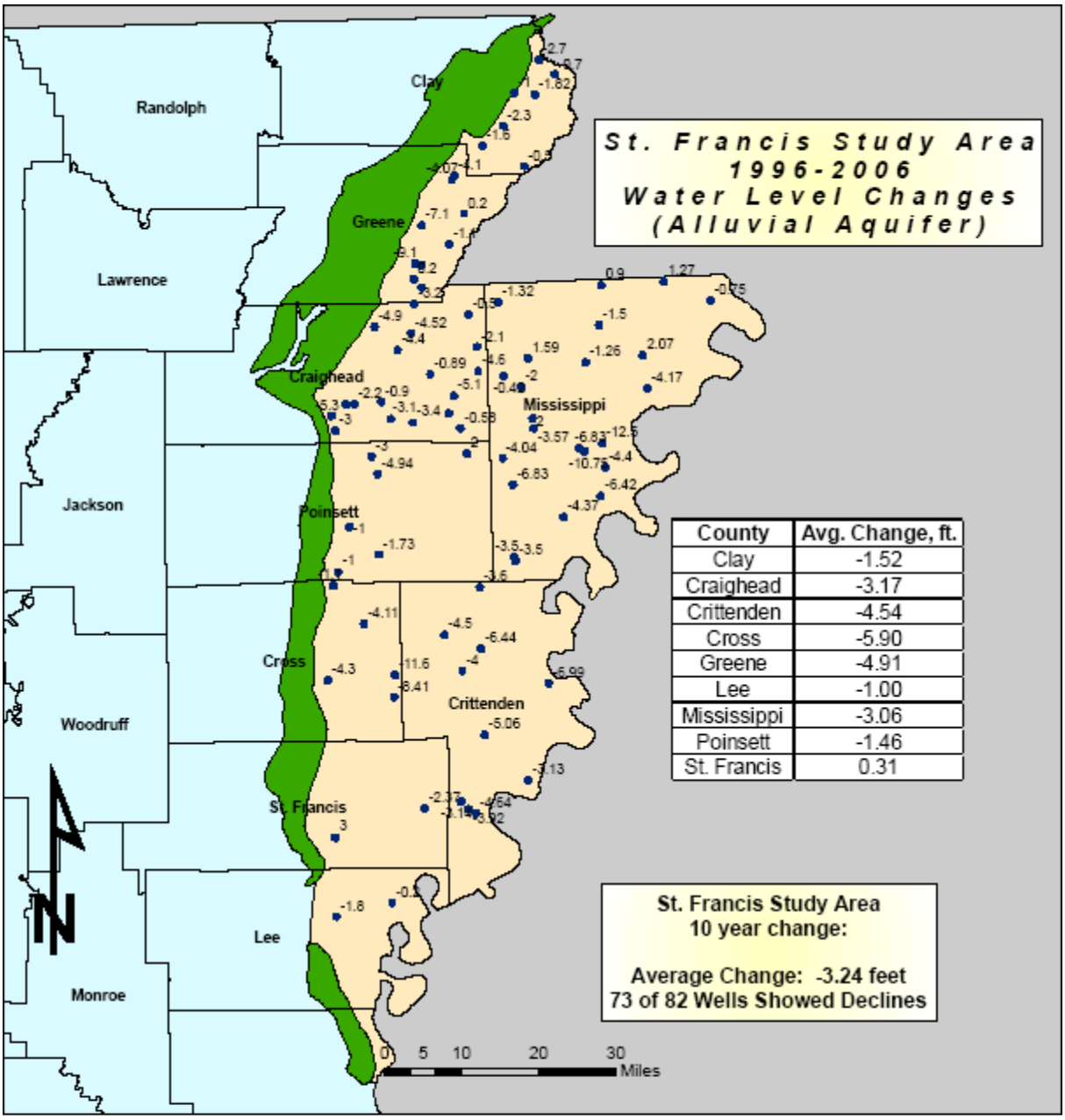


Fig. 29



County	Avg. Change, ft.
Clay	-1.52
Craighead	-3.17
Crittenden	-4.54
Cross	-5.90
Greene	-4.91
Lee	-1.00
Mississippi	-3.06
Poinsett	-1.46
St. Francis	0.31

Legend

- Crowleys Ridge
- St. Francis Study Area
- Wells

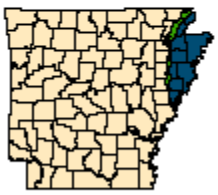
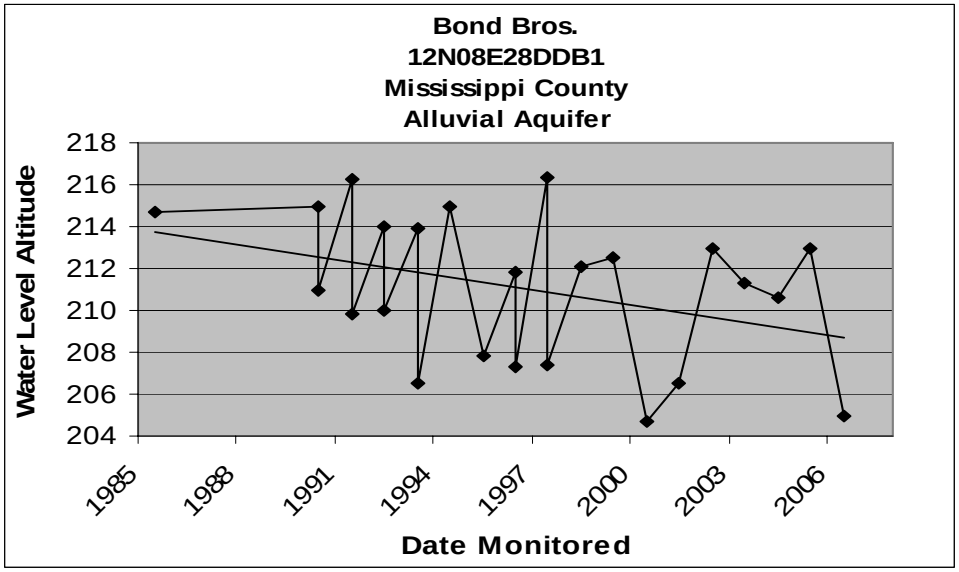
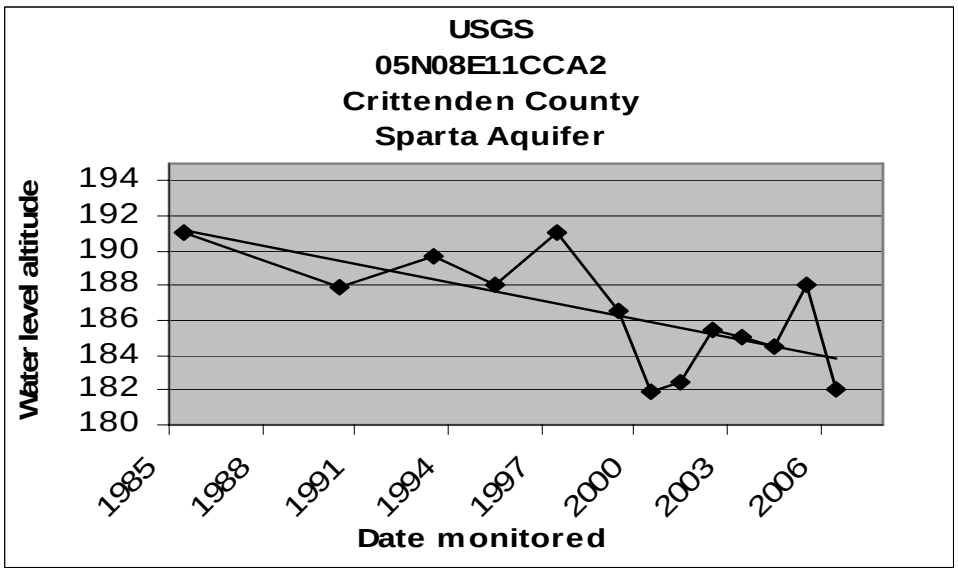
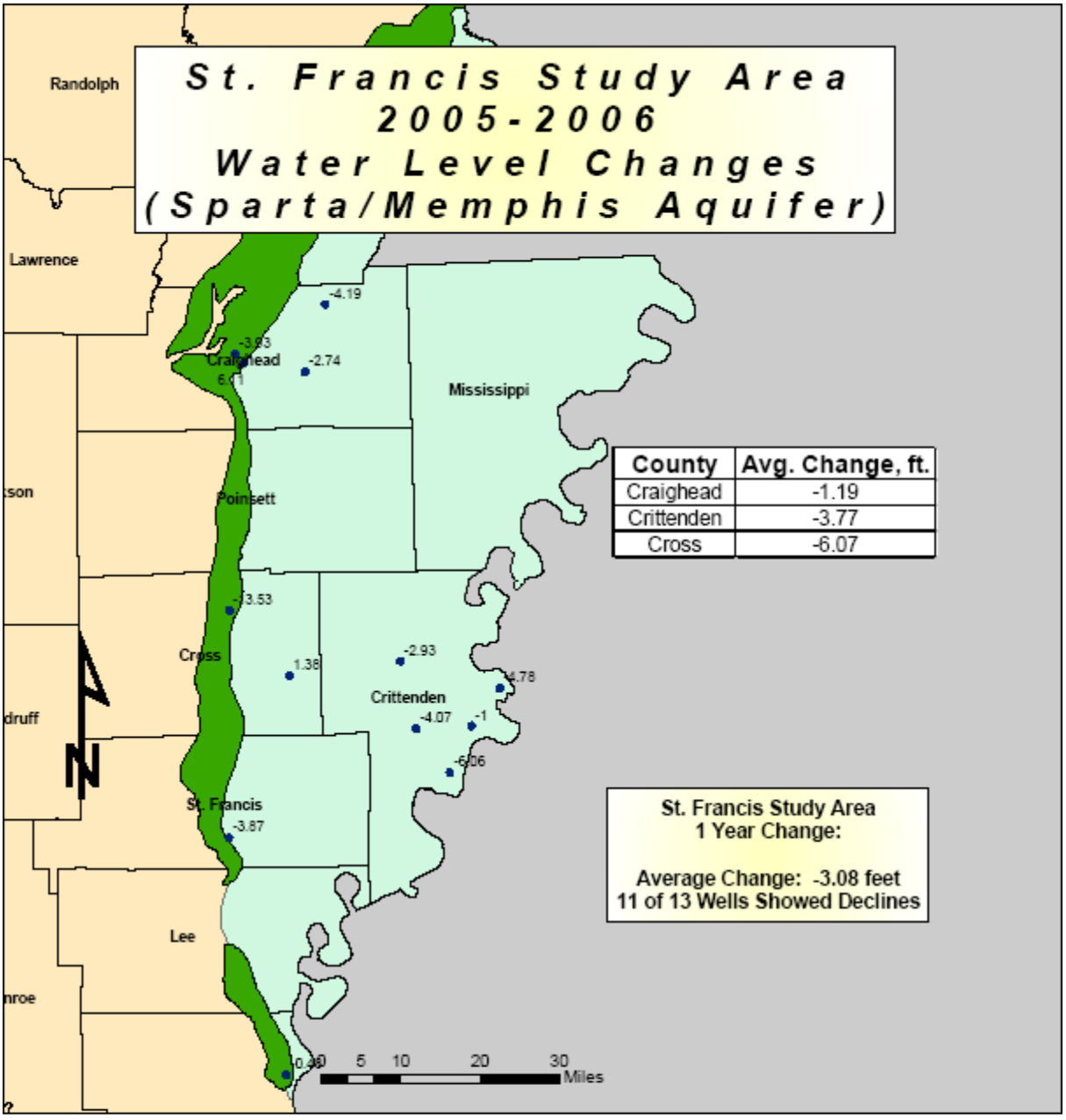


Fig. 30

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 31 and 32 show the actual measurements taken for the 1 year and 5 year periods respectively.







Legend

- Crowleys Ridge
- St. Francis Study Area
- Wells

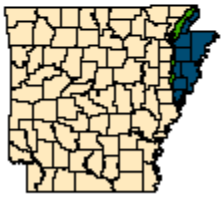
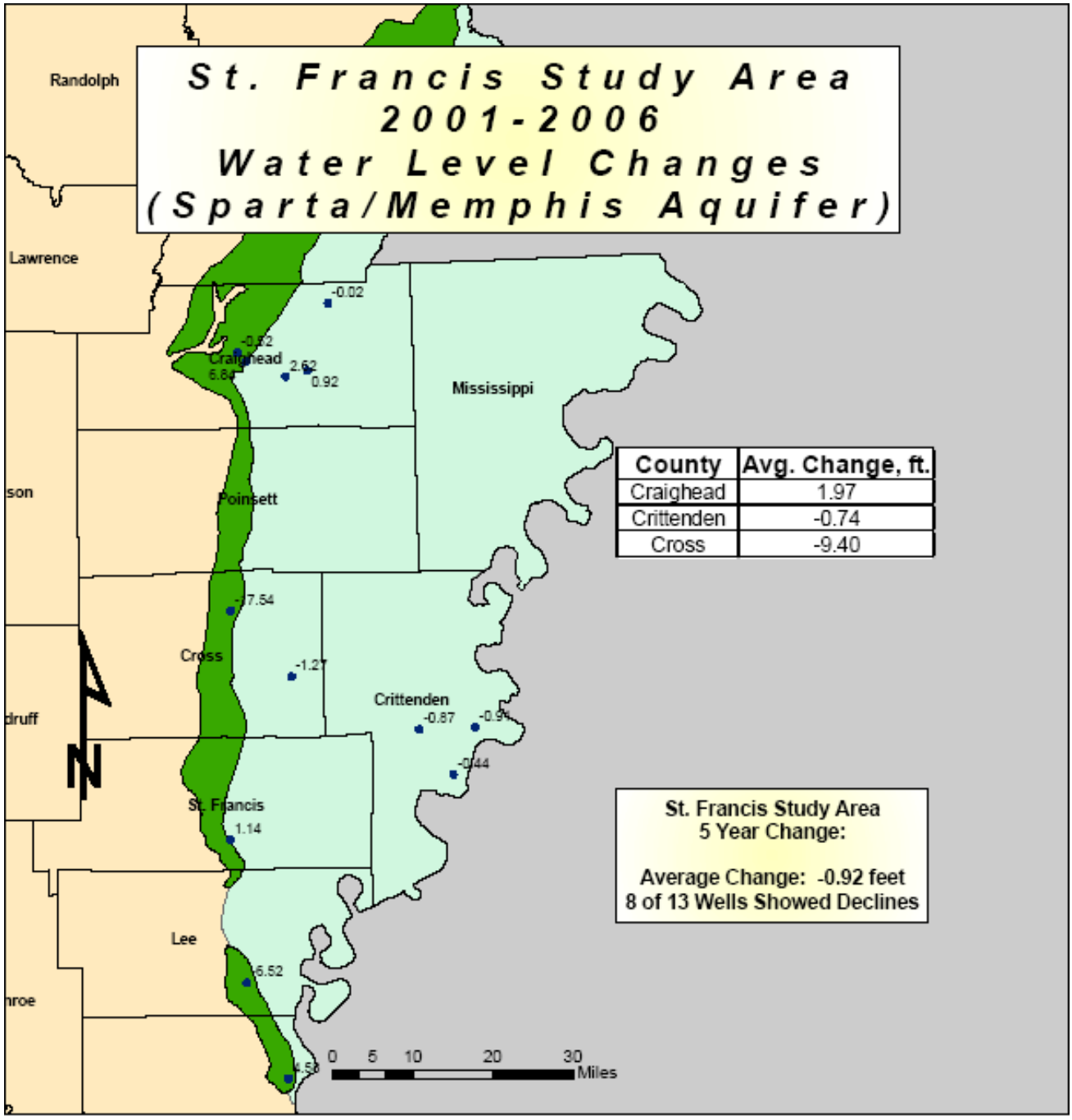


Fig. 31



Legend

- Crowleys Ridge
- St. Francis Study Area
- Wells

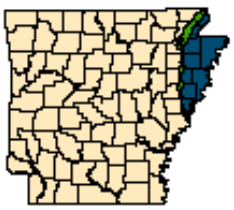


Fig. 32

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 2006 monitoring year was designated for monitoring of the Cockfield and the Wilcox aquifers. The water level changes were analyzed for a 3-year and 6-year periods from 2003 to 2006 and from 2000 to 2006 for both aquifers.

In the Cockfield aquifer there were 56 wells monitored by the USGS for water level change from 2003 to 2006. Of these 49 (87.5%) showed a decline, with an average change of -1.62 feet over the area of the aquifer studied. From the 2000 to 2006 period there were 57 wells monitored, with 34 (59.6%) of these showing static water level decline. The county by county averages may be seen on figures 33 and 34.

The area studied for the Wilcox aquifer had an average change of -2.88 feet from 2003 to 2006, with 47 of the 56 wells monitored (83.9%) having a decline in static water level. For the 2000 to 2006 period there were 58 wells monitored in the Wilcox aquifer with 25 (43.1%) showing static water level decline. The extent of the area studied, individual well changes and county averages may be seen on figures 35 and 36.

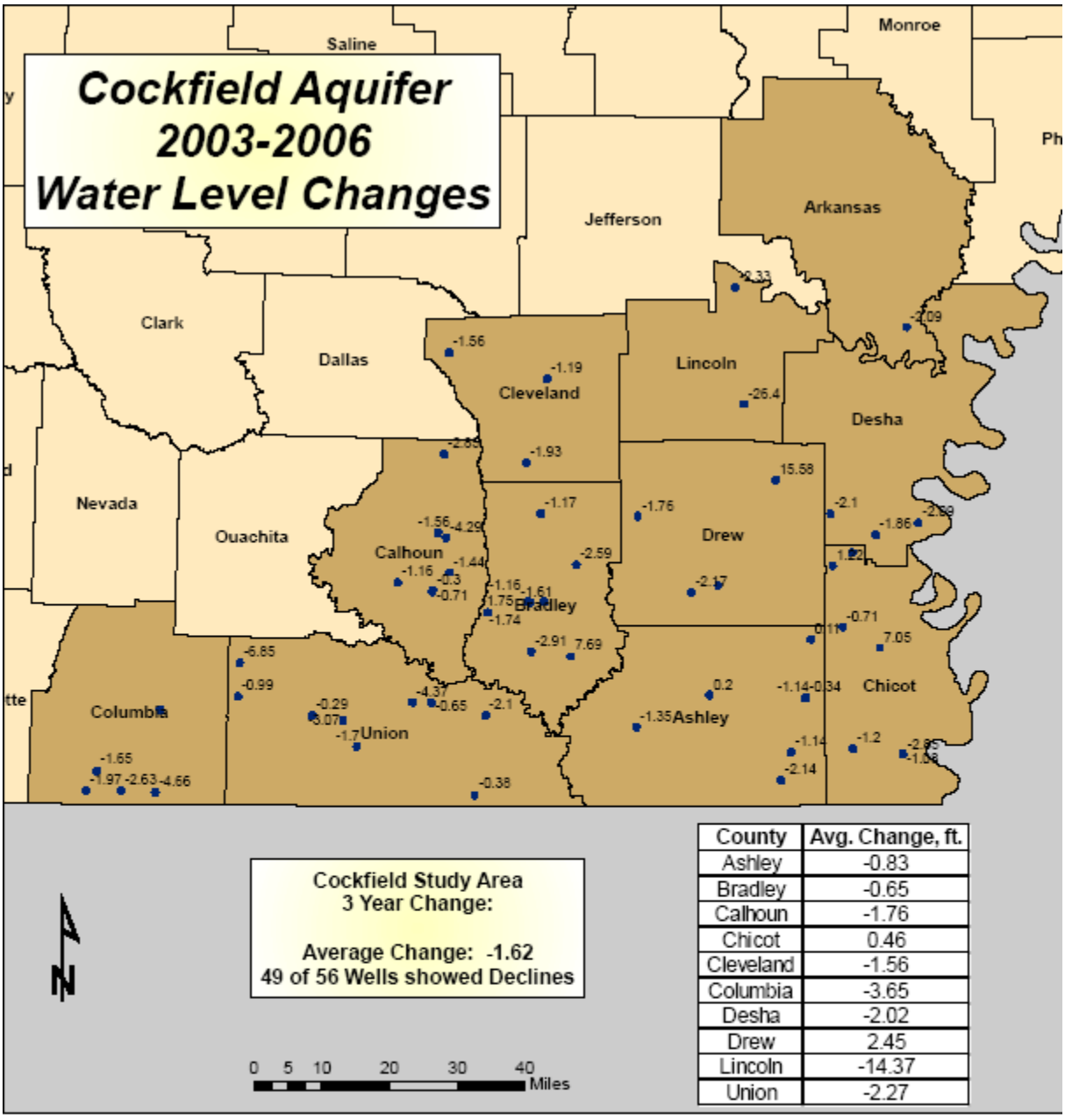

Cockfield Aquifer
2003-2006
Water Level Changes
Saline
Monroe
Jefferson
Arkansas
Clark
Dallas
Cleveland
Lincoln
Desha
Nevada
Ouachita
Calhoun
Drew
Bradley
Columbia
Union
Ashley
Chicot
Cockfield Study Area
3 Year Change:
Average Change: -1.62
49 of 56 Wells showed Declines
0 5 10 20 30 40
Miles
N
County | Avg. Change, ft.
Ashley | -0.83
Bradley | -0.65
Calhoun | -1.76
Chicot | 0.46
Cleveland | -1.56
Columbia | -3.65
Desha | -2.02
Drew | 2.45
Lincoln | -14.37
Union | -2.27
Legend
County Boundaries
Wells

Fig. 33

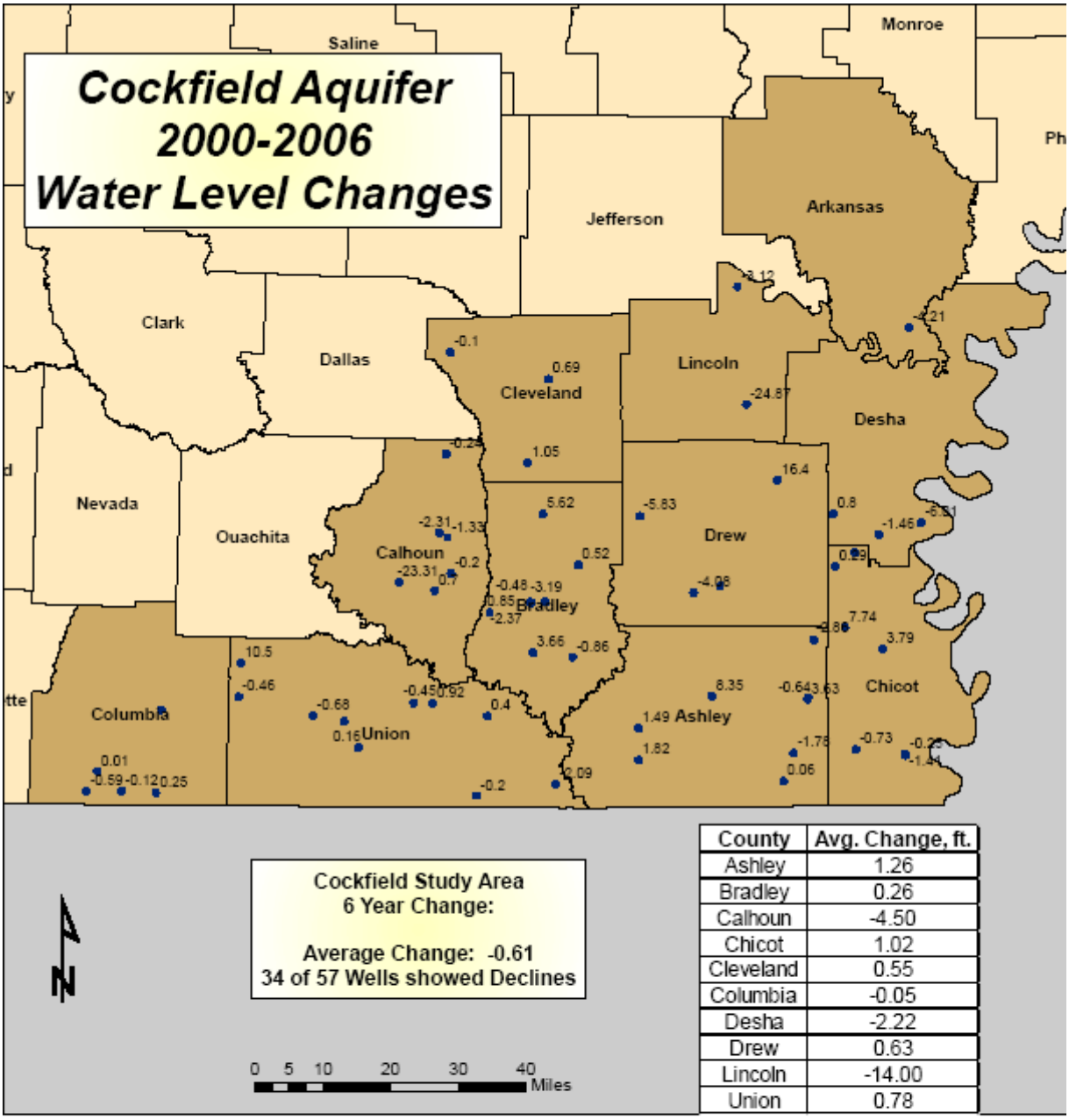
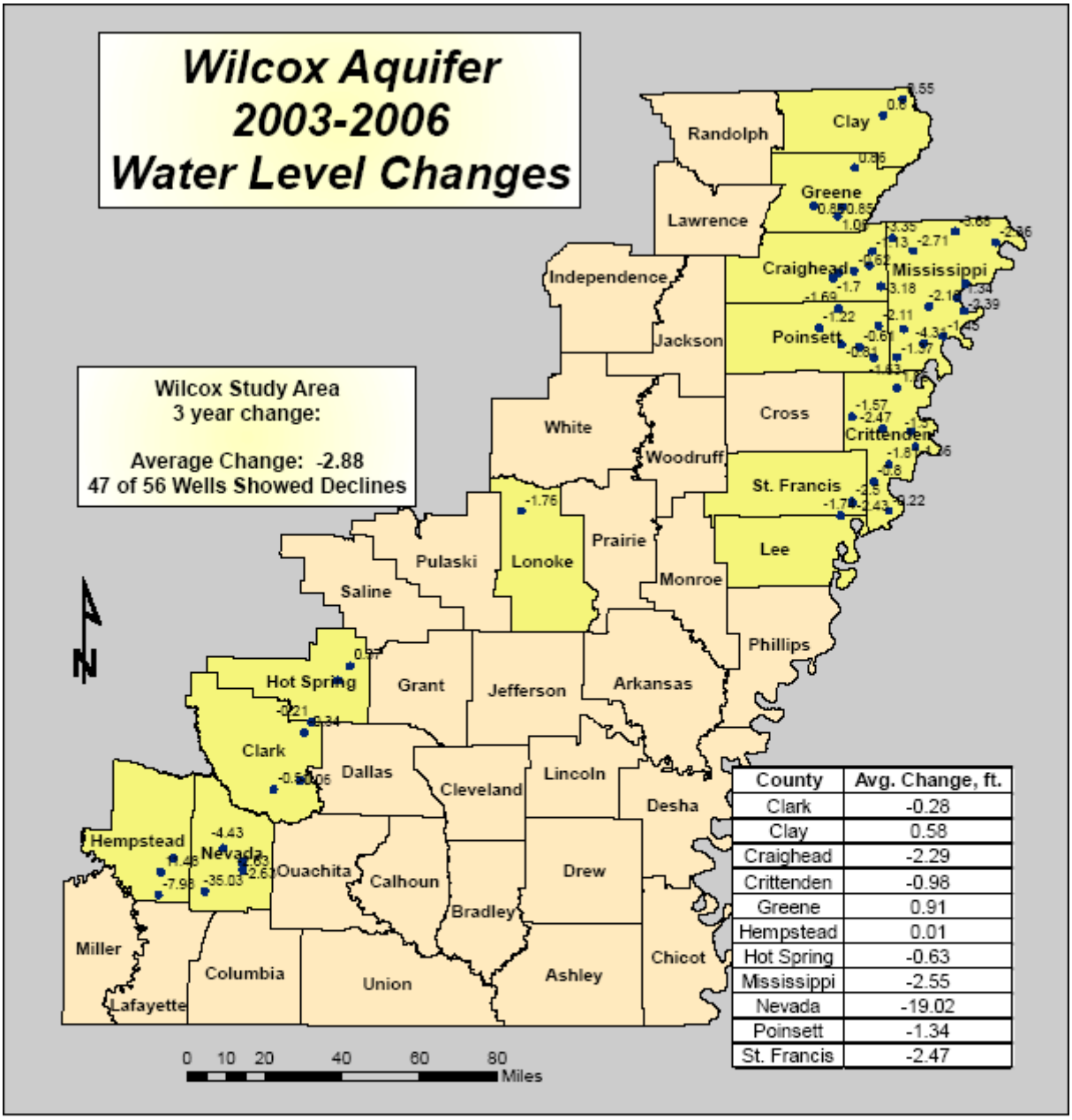

Cockfield Aquifer
2000-2006
Water Level Changes
Saline
Monroe
Jefferson
Arkansas
Clark
Dallas
Cleveland
Lincoln
Desha
Nevada
Ouachita
Calhoun
Drew
Bradley
Columbia
Union
Ashley
Chicot
Cockfield Study Area
6 Year Change:
Average Change: -0.61
34 of 57 Wells showed Declines
0 5 10 20 30 40
Miles
County | Avg. Change, ft.
Ashley | 1.26
Bradley | 0.26
Calhoun | -4.50
Chicot | 1.02
Cleveland | 0.55
Columbia | -0.05
Desha | -2.22
Drew | 0.63
Lincoln | -14.00
Union | 0.78
Legend
County Boundaries
Wells

Fig. 34



Legend

County Boundaries

Wells

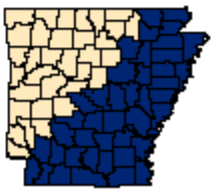
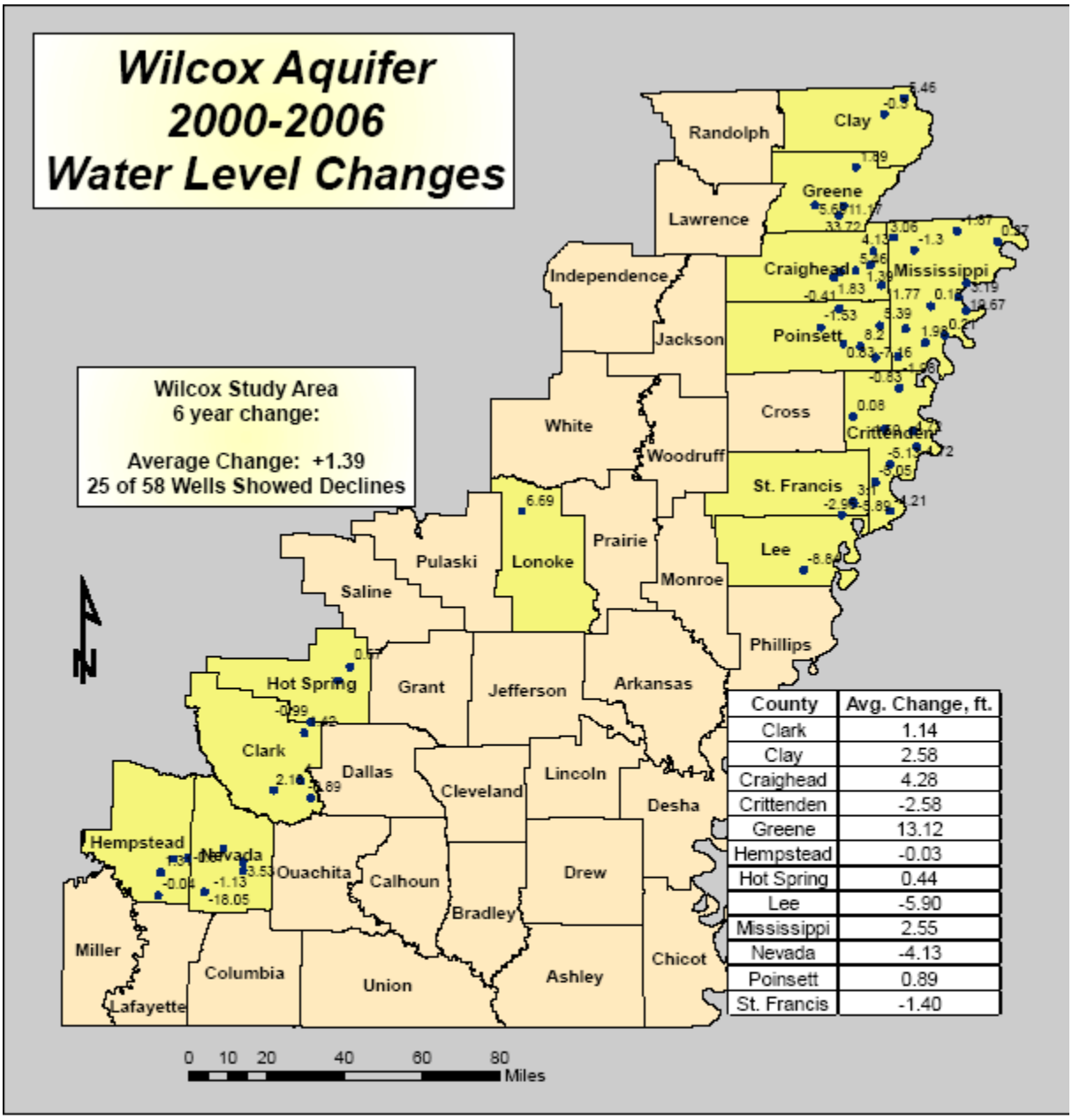


Fig. 35



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County Boundaries

Wells

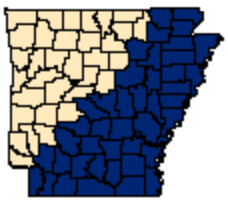


Fig. 36

Summary of Water-Level Changes Spring to Fall, 2005

A set of 387 of the Arkansas Natural Resources Commission (ANRC), and Natural Resource Conservation Service (NRCS) 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. This data illustrates the effects of the irrigation season on the alluvial aquifer in eastern Arkansas. This summary represents the first evaluation of the 2006 summer changes. This data is contained in appendix E.

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 2006 that averages 3.27 feet in the alluvial aquifer, 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 -1.80 feet, Jefferson County -2.63 feet, Lonoke County -4.50 feet, Prairie County -0.19 feet, and White County -9.76 feet, respectfully.

The water level in the USGS/UAPB Lonoke Farm (real-time site) well shows a decline of 5.5 feet from early May through late September, and a slight rise in the water level of approximately 2 feet since pumping has decreased in 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 1.25 feet over a period of about eight months ending in early December. 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

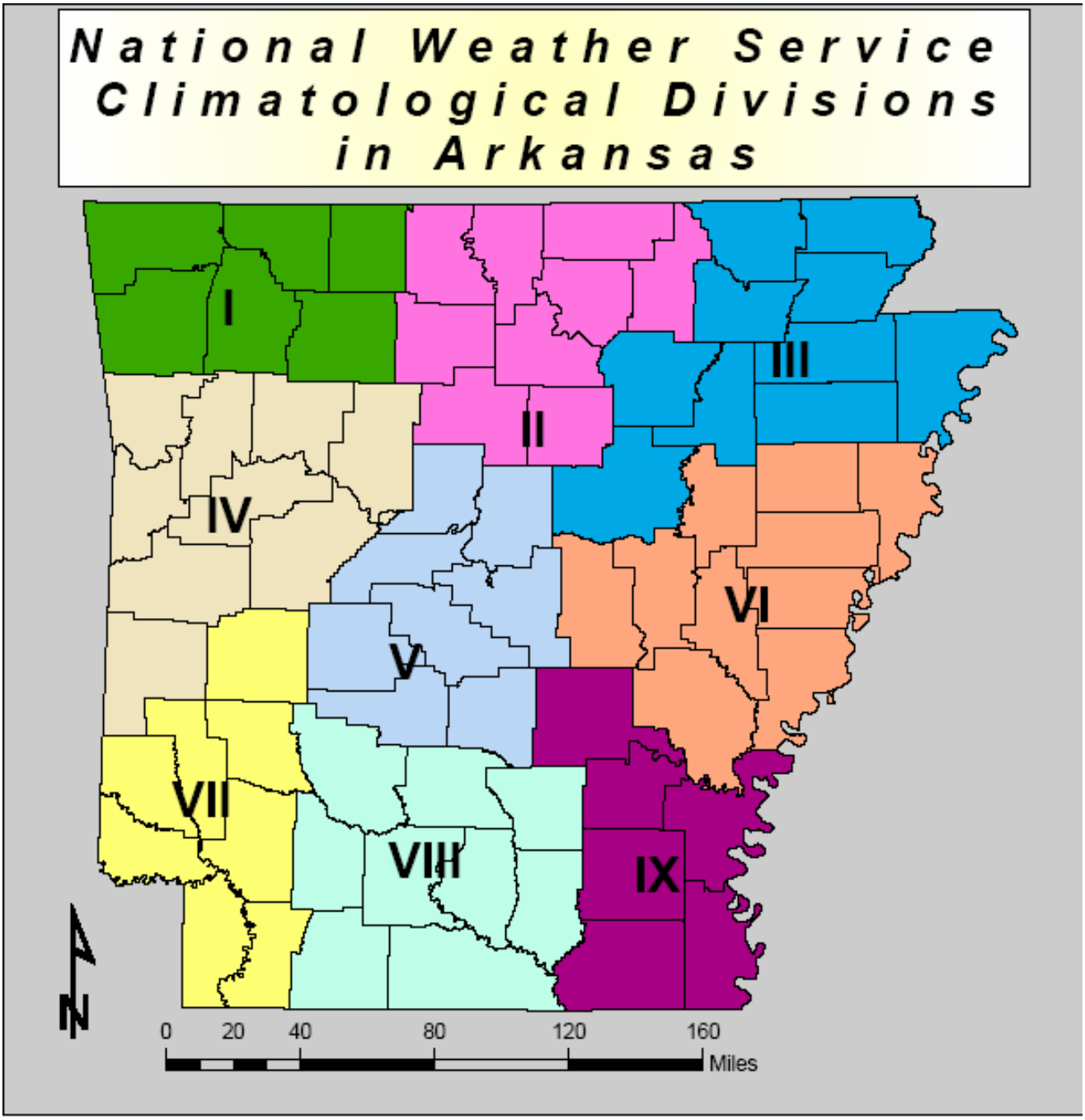
The National Weather Service Climatological Divisions for Arkansas can be seen in figure 36. For this report we have isolated the rainfall data for the months of January through August 2005 since these are the months during which the majority of the ground water is utilized for irrigation. This data is contained in table 2. 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 totals were significantly less than the average rainfall for the same divisions over past years. The 2005 totals were the 5th lowest recorded since records began being kept in 1895. This deficit of precipitation during the 2005 pumping season is consistent with the 2005-2006 changes we see in the alluvial aquifer over each of the respective study areas.



Legend

- Division I
- Division II
- Division III
- Division IV
- Division V
- Division VI
- Division VII
- Division VIII
- Division IX

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

Fig. 37

Table 1
Annual Precipitation Totals
For Arkansas (1895 – 2006)

Year	Precipitation	Year	Precipitation	Year	Precipitation
1895	45.10 inches	1933	48.99 inches	1971	41.81 inches
1896	37.86 inches	1934	42.96 inches	1972	48.51 inches
1897	46.57 inches	1935	56.88 inches	1973	69.41 inches
1898	56.89 inches	1936	34.94 inches	1974	58.86 inches
1899	41.78 inches	1937	55.09 inches	1975	53.04 inches
1900	49.14 inches	1938	49.38 inches	1976	40.70 inches
1901	35.44 inches	1939	51.00 inches	1977	45.93 inches
1902	51.93 inches	1940	45.68 inches	1978	48.77 inches
1903	44.84 inches	1941	46.38 inches	1979	59.79 inches
1904	43.63 inches	1942	49.25 inches	1980	40.16 inches
1905	62.45 inches	1943	34.81 inches	1981	42.60 inches
1906	56.20 inches	1944	55.43 inches	1982	57.13 inches
1907	49.93 inches	1945	67.16 inches	1983	46.02 inches
1908	49.36 inches	1946	58.32 inches	1984	60.79 inches
1909	44.21 inches	1947	40.85 inches	1985	48.60 inches
1910	45.40 inches	1948	50.39 inches	1986	45.79 inches
1911	49.73 inches	1949	57.42 inches	1987	53.20 inches
1912	45.93 inches	1950	60.05 inches	1988	46.06 inches
1913	54.20 inches	1951	52.74 inches	1989	51.69 inches
1914	43.03 inches	1952	42.94 inches	1990	67.03 inches
1915	53.15 inches	1953	44.09 inches	1991	60.91 inches
1916	42.33 inches	1954	37.77 inches	1992	47.73 inches
1917	40.86 inches	1955	41.89 inches	1993	51.73 inches
1918	44.76 inches	1956	41.74 inches	1994	54.13 inches
1919	54.57 inches	1957	71.01 inches	1995	42.16 inches
1920	54.51 inches	1958	55.11 inches	1996	51.33 inches
1921	47.55 inches	1959	47.81 inches	1997	51.69 inches
1922	46.79 inches	1960	45.22 inches	1998	48.28 inches
1923	60.09 inches	1961	55.75 inches	1999	44.03 inches
1924	37.24 inches	1962	46.07 inches	2000	45.47 inches
1925	42.30 inches	1963	32.35 inches	2001	56.27 inches
1926	49.44 inches	1964	45.91 inches	2002	52.61 inches
1927	66.06 inches	1965	43.60 inches	2003	44.67 inches
1928	50.61 inches	1966	45.89 inches	2004	57.08 inches
1929	46.31 inches	1967	47.09 inches	2005	36.21 inches
1930	46.86 inches	1968	58.25 inches	2006	48.68 inches
1931	47.68 inches	1969	46.05 inches		
1932	51.50 inches	1970	49.01 inches		

Table 2
2005 and 2006
Precipitation Data

	2006					2005			
Div. III (NE Arkansas)			Div. VI (East Central Arkansas)		Div. III (NE Arkansas)			Div. VI (East Central Arkansas)	
	Avg Total	Depart from Normal	Avg Total	Depart From Normal		Avg Total	Depart from Normal	Avg Total	Depart From Normal
January	4.31	0.81	7.14	3.13	January	4.76	1.26	5.33	1.32
Febuary	2.51	-0.99	3.24	-0.64	Febuary	2.51	-0.99	2.84	-1.04
March	4.28	-0.55	3.74	-1.48	March	4.81	-0.02	3.81	-1.41
April	3.51	-1.32	3.19	-2.15	April	4.84	0.01	4.82	-0.52
May	3.65	-1.33	4.31	-0.88	May	0.51	-4.47	1.19	-4.00
June	2.99	-0.68	1.69	-2.43	June	1.72	-1.95	1.39	-2.73
July	4.41	1.19	1.96	-1.45	July	4.67	1.45	4.59	1.18
August	4.45	1.52	2.42	-0.05	August	3.45	0.52	4.47	2.00
Total	**30.11**	**-1.35**	**27.69**	**-5.95**	**Total**	**27.27**	**-4.19**	**28.44**	**-5.20**
Div. VIII (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 Total	Depart from Normal	Avg Total	Depart From Normal
January	5.40	0.85	7.19	2.05	January	5.23	0.68	4.8	-0.34
Febuary	4.02	-0.11	4.80	0.10	Febuary	2.59	-1.54	2.79	-1.91
March	5.43	0.17	4.83	-0.75	March	2.36	-2.90	3.45	-2.13
April	2.89	-1.96	4.35	-0.98	April	2.87	-1.98	3.17	-2.16
May	2.68	-2.44	3.92	-1.10	May	3.15	-1.97	3.85	-1.17
June	2.28	-2.45	1.75	-2.39	June	1.49	-3.24	1.95	-2.19
July	1.95	-1.97	0.90	-2.98	July	5.03	1.11	3.82	-0.06
August	1.86	-1.18	2.92	-0.04	August	2.28	-0.76	2.09	-0.87
Total	**26.51**	**-9.09**	**30.66**	**-6.09**	**Total**	**25.00**	**-10.60**	**25.92**	**-10.83**

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 and Specific Conductance for 2006

County	Agency	Site Id	Station Name	Latitude	Longitude	Sample	Sample	Conductance	Temperature
	Code					Date	Time	µSiemens/CM	Degrees C
Arkansas	USGS	341556091293101	05S04W07CCC1	341555.36	912931.6	6/21/2006	0831	1010	19.6
Arkansas	USGS	342101091205701	04S03W17ADD1	342101.87	912058.1	6/21/2006	0915	1080	19.5
Arkansas	USGS	342130091400001	04S06W16BD1	342130	914000	6/21/2006	0730	720	20
Arkansas	USGS	343100091244501	02S04W14CD1	343100	912445	6/21/2006	1010	887	19.5
Ashley	USGS	331015091522401	18S08W01AAB1	331014.97	915225.1	6/19/2006	1505	583	19.8
Ashley	USGS	331501091504901	17S07W05CDD1	331501.87	915049.7	6/19/2006	1400	689	19.7
Ashley	USGS	332245091285201	15S04W23DBD1	332247.33	912851.9	6/19/2006	1315	612	19.2
Chicot	USGS	331415091242601	17S03W09ADA1	331415	912426	6/20/2006	0815	2960	20.3
Chicot	USGS	331500091150701	17S01W06BCC1	331501.18	911505.2	6/20/2006	0710	797	19.2
Chicot	USGS	333154091224561	13S03W35BAC1	333154.05	912245.5	6/20/2006	1010	376	23.6
Clay	USGS	361519090131801	19N08E28BB1	361519	901318	6/28/2006	1700	356	16.7
Clay	USGS	361858090110301	19N08E02ABB1	361858.57	901103.7	6/28/2006	1550	371	16.8
Clay	USGS	362055090092901	20N08E24DDA1	362057.1	900933.5	6/28/2006	1425	362	17
Clay	USGS	362445090372901	21N04E34DDC1	362445.32	903729	6/28/2006	1325	267	17.9
Craighead	USGS	354402090471201	13N03E29AAA1	354403.31	904712.9	6/28/2006	0719	1140	18.2
Craighead	USGS	355516090285600	15N06E19AAB1	355517.28	902857.3	6/27/2006	1925	513	19.2
Craighead	USGS	355813090213901	16N07E32ADD1	355812.92	902138.2	6/27/2006	1805	407	18.9
Crittenden	USGS	350848090180801	06N07E13BAA1	350849.58	901807.5	6/27/2006	0715	516	18.5
Crittenden	USGS	351043090235901	07N07E31CCC1	351041.9	902358.9	6/27/2006	0805	496	18
Cross	USGS	351520091005201	07N01E05CDA1	351517.52	910049	6/27/2006	1100	961	19
Cross	USGS	352151090351101	09N05E32BDB1	352150.53	903512.1	6/27/2006	1005	569	18.5
Cross	USSCS	352204090595901	09N01E33BBA1	352204	905959	6/27/2006	1220	566	18.7
Desha	USGS	334809091220901	10S03W26CAA1	334806	912144.5	6/20/2006	1105	826	19.4
Desha	USGS	335754091324301	09S04W06BCA1	335756.06	913242.9	6/20/2006	1149	877	20.6
Drew	USGS	332734091292501	14S04W27AA1	332734	912925	6/19/2006	1230	637	19.8
Drew	USGS	334535091313401	11S04W08DBA1	334531.98	913136.2	6/19/2006	1155	380	21.1

Table 3
Temperature and Specific Conductance for 2006

County	Agency	Site Id	Station Name	Latitude	Longitude	Sample	Sample	Conductance	Temperature
	Code					Date	Time	µSiemens/CM	Degrees C
Greene	USGS	355940090265501	16N06E28ABB1	355938.31	902657	6/28/2006	1815	819	17.8
Jackson	USGS	352151091134701	09N02W32CBB1	352151.79	911347.7	6/28/2006	0815	426	18.4
Jackson	USGS	352829091130901	10N02W29ABB1	352828.7	911311.8	6/28/2006	0910	299	18.7
Jackson	USGS	355219091051201	14N01W09AAA1	355220.36	910515.1	6/28/2006	1000	460	18.1
Jefferson	USGS	341007091370701	06S06W23AAD1	341006.74	913712.2	6/20/2006	1345	675	19.7
Jefferson	USGS	342123091492601	04S08W13DCB1	342122.85	914926.4	6/20/2006	1435	527	20
Jefferson	USGS	342415092004801	03S09W31DDA1	342415	920048	6/20/2006	1515	608	24.6
Jefferson	USGS	342657092013901	03S09W18CC2	342655.67	920139.1	6/20/2006	1605	642	20.2
Lawrence	USGS	360326090535201	16N02E05BA1	360326	905352	6/28/2006	1105	599	18.1
Lee	USGS	344025090460401	01N03E23CCC1	344025.26	904603.6	6/22/2006	1425	692	19.2
Lee	AR008	344914090483701	03N03E32CAB1	344932.65	904926.2	6/22/2006	1520	540	18.8
Lincoln	USGS	335714091463701	09S07W01DC1	335714	914637	6/19/2006	1035	548	19.9
Lincoln	USGS	335821091434601	09S06W04BCD1	335821.38	914345.8	6/19/2006	0950	372	19.1
Lincoln	USGS	340021091320101	08S04W19CC1	340021	913204.5	6/19/2006	1120	843	19.4
Lonoke	USGS	343230091495001	02S08W13BBB1	343231.92	914935.3	6/21/2006	1120	712	20
Lonoke	USGS	344114091472001	01N07W29BBB1	344114	914720	6/21/2006	1215	458	20.7
Lonoke	USGS	344957091433801	02N07W02BBA1	344957	914338	6/21/2006	1330	415	20.9
Mississippi	USGS	353841090145901	12N08E20DAD1	353842.48	901457.6	6/27/2006	1650	411	19.4
Monroe	USGS	343906091231701	01S04W01BAB1	343905.86	912316.7	6/22/2006	1030	712	19.4
Monroe	AR008	343958091264601	01N04W33BB2	343958	912646	6/22/2006	0940	743	19.4
Monroe	USGS	344242091103001	01N02W12CBC1	344242.3	911031.9	6/22/2006	1230	985	19.2
Monroe	USGS	345021091154701	03N03W36AAA1	345026.65	911547.1	6/22/2006	1110	806	18.9
Phillips	USGS	342916091005801	02S01E28CCB1	342916.37	910058.1	6/22/2006	1340	606	19.5
Poinsett	USGS	352651090443701	10N03E35CDD1	352656.17	904435.9	6/27/2006	1450	532	19.4
Poinsett	USGS	352947090440701	10N03E14DAB1	352947.21	904404.9	6/27/2006	1355	558	19.9

Table 3
Temperature and Specific Conductance for 2006

County	Agency Code	Site Id	Station Name	Latitude	Longitude	Sample Date	Sample Time	Conductance µSiemens/CM	Temperature Degrees C
Poinsett	USGS	353349090503501	11N02E26AAB1	353350.31	905034.1	6/27/2006	1305	787	19.2
Poinsett	USGS	353435090232001	11N07E18CAB1	353435	902320	6/27/2006	1545	537	19.1
Prairie	USGS	343521091262401	01S04W28BD1	343521	912624	6/22/2006	0700	952	19.6
Prairie	AR008	344440091345401	02N05W06BAB1	344957.63	913420.7	6/22/2006	0845	1000	19.7
Prairie	USGS	344544091330802	02N05W29DDB2	344545.22	913308.7	6/22/2006	0750	886	19.1
Pulaski	USGS	343213092030901	02S10W14DC1	343204.71	920333.7	6/21/2006	1635	830	20.3
Randolph	USGS	360942090572901	18N01E34AAC1	360942.69	905729.1	6/28/2006	1210	761	17.7
St. Francis	USGS	345647091024500	04N01W24DA1	345649.24	910246.8	6/22/2006	1810	892	19.5
St. Francis	USGS	345708090563801	04N01E13DDA1	345708	905638	6/22/2006	1900	714	19.5
St. Francis	USGS	350812090500201	06N02E13DCA1	350812.64	905002.7	6/23/2006	0715	755	19.1
White	USGS	350623091375201	06N06W34AAB1	350623.57	913753.5	6/23/2006	1045	843	18
Woodruff	USGS	350944091051201	06N01W10AB1	350945.35	910512.5	6/23/2006	0805	925	19.1
Woodruff	USGS	351046091074101	07N01W32CCD1	351046	910741	6/23/2006	0910	589	18.3
Woodruff	USGS	351655091202801	08N03W31AAD1	351655	912028	6/23/2006	1000	668	18.5

Ground-Water Quality Standards

Through legislative authority, the ANRC Ground-Water section has been given the task of creating ground-water quality standards for the State of Arkansas. For the past year, ANRC Ground-Water section staff has been researching and documenting existing ground-water quality standards throughout the United States to determine the best approach to initializing the creation of enforceable regulations for the state of Arkansas. Arkansas Department of Environmental Quality (ADEQ) geologist, Tim Kresse, among others, has assisted ANRC staff by providing information from their research and documentation of existing ground-water quality standards from other States in the US. This information has been most valuable to ANRC staff, and the ANRC is extremely grateful to have the assistance of ADEQ on this matter.

ANRC staff has determined that although most states have some form of water quality standards, there are few that have enforceable standards targeted specifically at ground-water. Some states have chosen to have either narrative or numerical standards; however other states decided to include both narrative criteria as well as a list of numerical standards in their ground-water quality standards document. Fig. 38 shows an illustration of the differences between states' ground-water quality standards. Those states that have standards deemed appropriate by ANRC staff will be used as models in the preparation of standards for Arkansas. The standards vary from state to state, but most of them share a few common traits. Most standards are based on water use. For example, waters used for agriculture may have a different set of numerical criteria than waters designated for municipal use. Some states have also implemented a numerical warning level that is usually half of the allotted MCL to serve as an early indicator that the ground-water is becoming impaired. These levels are often referred to as preventative action levels, (PAL).

ANRC staff has begun compiling data into lists, spreadsheets, and maps that will aid in the overall process of initializing a set of standards for the State. A comprehensive list of the specific constituents and their recommended maximum

contaminant level (MCL), listing every constituent that other States have included in their regulations and a range of the recommended MCL's, has been developed. From this spreadsheet, ANRC staff along with other groups and agencies will determine which constituents apply to Arkansas.

On December 5, 2006 a meeting was held at the ANRC office to begin formally discussing the ideas and concerns of stakeholders. Several state and federal agencies sent representatives to the meeting. Among the items discussed at the meeting were the identification of additional stakeholders for future meetings, the difficulties that may arise when attempting aquifer classification based upon water use, and the possible hardships in enforcing such standards. Another meeting is scheduled for the spring of 2007.

Developing ground-water quality standards for the State of Arkansas will prove to be a monumental task for the ANRC as well as for the stakeholders involved. There is currently no timeline in which the ANRC expects to have completed a set of standards; however, the need for such enforceable standards continues to grow. Enforceable ground-water quality standards will protect the State's ground-water for all uses, and once completed and in effect, the standards will be of utmost value to current and future citizens of the State of Arkansas.

Legend

- No Standards
- Narritave Standards
- Numerical Standards
- Narritave and Numerical Standards

* Data compiled by Arkansas Department of Environmental Quality

Fig. 38

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 two nonpoint source ground-water projects in 1996.

A statewide 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 focused in the existing and potential critical ground-water areas of eastern Arkansas. A more efficient monitoring network has resulted as a result of new well installations. 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 (ADHH). 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.

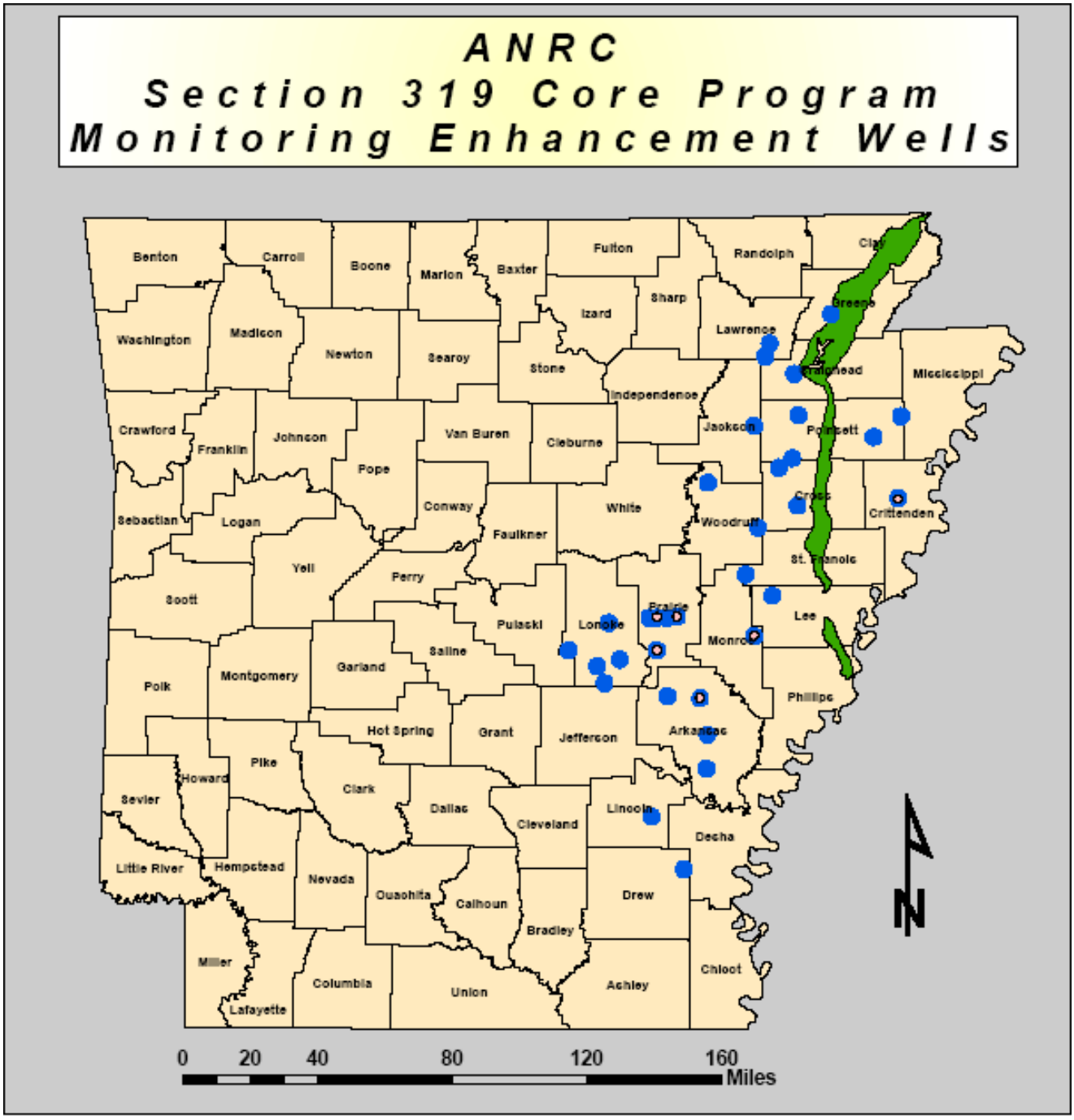
New monitoring well installations in eastern Arkansas initiated in June 2002 and are continuing to-date. Thus far, 33 alluvial wells and 6 Sparta wells have been installed in 16 counties in eastern Arkansas from Greene to Drew Counties (Figure 39). Three additional alluvial wells are planned for installation in 2007 in southeastern Arkansas, in addition to planned well installations in southwestern and northwestern Arkansas in the Sparta and Boone Aquifers. 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.

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.



Legend

- Sparta Wells
- Alluvial Wells
- Crowleys Ridge
- County Boundaries

Fig. 39

These results are presented in Appendix F. 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 is underway. 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 (Ogden, 1979; Steele and Adamski, 1987). The inordinate rural population growth in the region, with associated reliance on onsite wastewater systems for homes and businesses, represent a threat to ground-water quality. ANRC is currently documenting karst feature locations through review of relevant publications and maps, and generating maps displaying sinkholes, lineaments, losing stream segments, and critical soils. Sinkhole locations are also currently being received from ADHH, Environmental Health Specialists and Designated Representatives.

A threat to ground-water quality from onsite wastewater systems also exists in the fractured rock terrain of the southern Ozarks, Arkansas valley, and Ouachitas. Similar to the karst region, characterized by thin soils in upland areas and rapid recharge into fractures, water wells in this region are also subject to potential contamination.

Karst maps and other training materials associated with the hydrogeology of karst and fractured rock terrains were presented to ADHH professionals in November 2006. The goal is to achieve improved septic and alternative system design in the karst region and in the fractured rock terrain of the southern Ozarks, Arkansas valley, and Ouachitas. Training materials are also planned for distribution to governmental agencies and the general public to provide information regarding the potential for ground-water contamination in karst and fractured rock terrain.

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

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 commission 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 Soil and Water Conservation 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. Any person who engages in water well construction must obtain a water well contractors license from the commission. The contractor must keep a current bond and obtain six hours of continuing education each year to keep their license. 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 commission keeps up with wear well construction is taking place is through its relationship with Arkansas Department of Health. The Health Department has Environmental Health Specialist in each county. These health specialists 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 commission's inspectors try to visit each county health office at least once a year. The commission

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 commission.

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 commission's rules, ensure the customer clean safe water, and protect this precious resource.

During the 2003 legislative sessions an act was passed to allow the commission 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. Since the program began in 2005 forty five applicants have enrolled. The program allows a person with one year experience apply for the apprenticeship program.

The Commission fields complaints from the public about water well construction, as well as inspecting wells for violations of the Commissions rules and regulations. The following is a summary of those activities for the 2005-2006 licensing year.

1. Fourteen (14) complaints were recorded in which it was determined that 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 Six (6) cases, which required civil penalties to be assessed.
3. Four (4) administrative hearings were conducted regarding contractors.
4. Twenty four (24) new applications to become a licensed pump installer or certified driller were received.
5. Twenty seven (27) new applicants have entered the apprenticeship program.

There are 186 water well contractors licensed (drill and/or pump) to work in Arkansas. The larger contractors usually employ several registered drillers and/or pump installers

and can have more than one rig permitted. The following is a break down of the licensed contractors, drillers, pump installers, and permitted rigs.

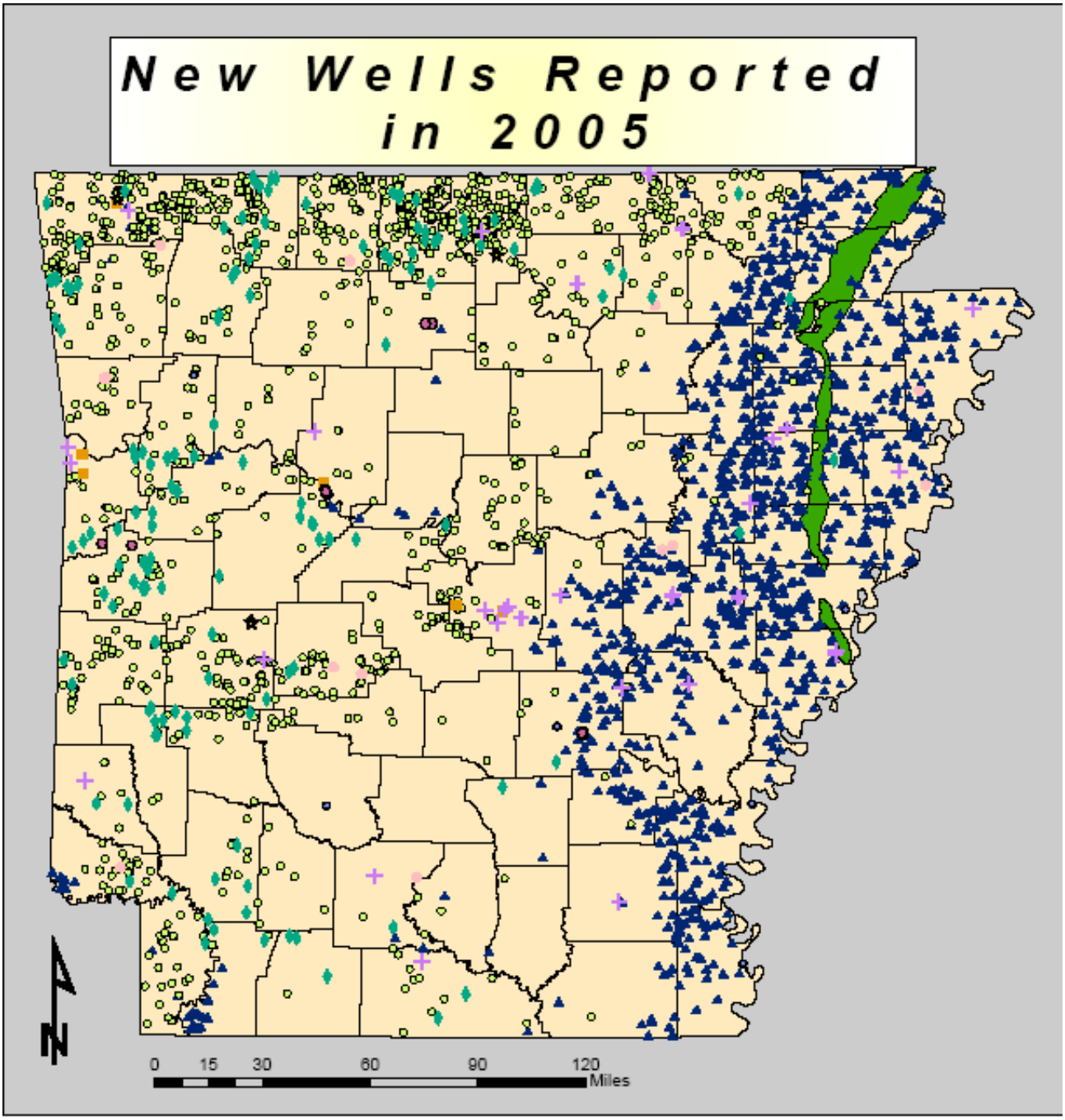
1. 150 contractors are licensed for drilling and pump installation.
2. 36 contractors are licensed for pump installation only.
3. 297 registered drillers
4. 270 registered pump installers
5. 400 permitted drill or pump installation rigs.

Last year there were 3,430 wells reported to the Commission. Of these 3,430 wells, domestic water wells accounted for 1,474 or approximately 43% of wells drilled last year. The next largest group is irrigation wells. There were 1,478 irrigation wells drilled, which makes up approximately 43% of the total number of wells drilled in Arkansas.

The remaining 478 wells were: livestock / poultry wells; monitoring wells; public or semi public supply wells; test wells; and geothermal wells for heat pump installations.

AWWCC LICENSE SUMMARY

	Contractors	Pump Installers Contractor Only	Drillers	Pump Installers	Driller Apprentice	Pump Installers Apprentice	Riggs
2001	**187**	**63**	**313**	**311**			**444**
2002	**186**	**54**	**316**	**313**			**444**
2003	**176**	**56**	**303**	**300**			**383**
2004	**148**	**37**	**283**	**271**			**389**
2005	**142**	**34**	**276**	**254**			**369**
2006	**149**	**34**	**305**	**271**	**7**	**11**	**393**



Legend

Monitoring	Geo-thermal	Irrigation
Livestock/Poultry	Commercial	Crowleys Ridge
Semi-Public	Public	County Boundaries
Test Wells	Domestic	

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 2006 (2005 water year), there were approximately 54,710 registered wells reported in the State. Of this total, 53,603 (98.0%) are agricultural wells most of which are irrigation wells located primarily in eastern Arkansas. The remaining 1,107 reported wells are used predominately for municipal or industrial purposes.

REPORTED WATER USE

In 2004, an estimated 6494.9 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 552.01 mgd and 433.53 mgd respectively. The reported total ground-water use from the alluvial aquifer during 2004 was 5868.46 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 2004 was 205.7 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 42.1 Mgal/d, followed by Jefferson County with a rate of 38.5 Mgal/d. (Holland, 2006)

Table 4 contains the reported ground-water use by aquifer per county in Arkansas for 2004 and is also broken down by category of use. This 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 5955.73 Mgal/d. Poinsett County showed the highest water use with an average rate of 552.19 Mgal/d, followed by Cross County with a rate of 439.01 Mgal/d.

The Sparta/Memphis aquifer had a reported average withdrawal of 205.7 Mgal/d during the 2004 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 42.1 Mgal/d. Jefferson County is the second largest user of Sparta/Memphis ground-water by far, with an average withdrawal of 38.5 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 2004 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 2004 reported ground-water use from the Sparta/Memphis aquifer was an estimated 113 Mgal/d for agricultural uses, 54.74 Mgal/d for public supply use, and 37.47 Mgal/d for industrial uses, which combine with other uses for an estimated total use of 205.7 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 122.7 Mgal/day, or 67.6% 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 AR Counties by use Type, 2004 (In Mgal/day: ---,no data available)

County	Use Type	Deposits Quaternary age		Cockfield Formation		Cane River		Sparta-Memphis Sand		Vilcox Group		Clayton Formation		Nacatoch Sand		Tokio Formation		Trinity Group		Rocks Paleozoic age		All Other Aquifers		Use Type total	
		Mgal/ day	# of Wells	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mga day	# of Well	Mga day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal/ day	# of Well	Mgal/ day	# of Well
Arkansas	IN/CO/MI	--	--	--	--	--	--	0.01	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	2
	IR/AG	360.12	1886	0.47	1	--	--	40.21	103	--	--	--	--	--	--	--	--	--	--	--	--	6.87	33	407.7	2023
	WS	--	--	--	--	--	--	1.88	7	--	--	--	--	--	--	--	--	--	--	--	--	0.1	3	1.98	10
	Total	360.12	1886	0.47	1	--	--	42.1	112	--	--	--	--	--	--	--	--	--	--	--	--	6.97	36	409.7	2035
Ashley	IN/CO/MI	--	--	6.48	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.48	7
	IR/AG	111.4	888	0.01	1	--	--	0.18	1	--	--	--	--	--	--	--	--	--	--	--	--	12.2	123	123.8	1013
	WS	--	--	2.07	12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	2	2.17	14
	Total	111.4	888	8.56	20	--	--	0.18	1	--	--	--	--	--	--	--	--	--	--	--	--	12.3	125	132.4	1034
Baxter	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02	2	0.01	3	0.02	5
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	19	--	--	0.4	19
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.42	21	0.01	3	0.43	24
Benton	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02	3	--	--	0.01	3
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.55	11	--	--	0.55	11
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.57	14	--	--	0.57	14
Boone	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.91	13	0.04	1	0.95	14
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.91	13	0.04	1	0.95	14
Bradley	IN/CO/MI	--	--	--	--	--	--	0.49	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.49	5
	WS	--	--	0.06	2	--	--	1.02	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.08	8
	Total	--	--	0.06	2	--	--	1.51	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.57	13
Calhoun	IN/CO/MI	--	--	--	--	--	--	0.01	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	2
	IR/AG	--	--	--	--	--	--	0.01	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	1
	WS	--	--	--	--	--	--	0.27	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.27	7
	Total	--	--	--	--	--	--	0.29	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.29	10
Carroll	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.06	3	0.05	2	0.11	5
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.78	8	0.01	5	0.79	13
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.84	11	0.06	7	0.9	18
Chicot	IR/AG	148.78	1100	0.08	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	13.93	102	162.8	1203
	WS	--	--	1.22	5	--	--	0.43	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.64	8
	Total	148.78	1100	1.3	6	--	--	0.43	3	--	--	--	--	--	--	--	--	--	--	--	--	13.93	102	164.4	1211
Clark	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	0.28	2	--	--	--	--	0.01	3	--	1	0.29	6
	WS	--	--	--	--	--	--	--	--	--	--	--	--	0.01	4	0.06	2	--	--	--	--	--	1	0.07	7
	Total	--	--	--	--	--	--	--	--	--	--	--	--	0.29	6	0.06	2	--	--	0.01	3	--	--	0.36	13
Clay	IN/CO/MI	0.01	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	2
	IR/AG	277.66	1907	--	--	--	--	--	--	2.29	15	--	--	--	--	--	--	--	--	0.26	2	42.46	267	322.7	2191
	WS	0.03	1	--	--	--	--	--	--	--	--	--	--	1.15	11	--	--	--	--	--	--	--	--	1.17	12
	Total	277.7	1910	--	--	--	--	--	--	2.29	15	--	--	1.15	11	--	--	--	--	0.26	2	42.46	267	323.9	2205
Cleveland	WS	--	--	--	--	--	--	0.39	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.39	5
	Total	--	--	--	--	--	--	0.39	5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.39	5
Columbia	IN/CO/MI	--	--	--	--	--	--	0.53	30	--	--	--	--	--	--	--	--	0.02	1	--	--	--	--	0.55	31
	WS	--	--	--	--	--	--	2.13	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.13	21
	Total	--	--	--	--	--	--	2.66	51	--	--	--	--	--	--	--	--	0.02	1	--	--	--	--	2.68	52

Table 4

Withdrawals of Ground Water from Aquifers in AR Counties by use Type, 2004 (In Mgal/day: ---,no data available)

County	Use Type	Deposits Quaternary age		Cockfield Formation		Cane River		Sparta-Memphis Sand		Vilcox Group		Clayton Formation		Nacatoch Sand		Tokio Formation		Trinity Group		Rocks Paleozoic age		All Other Aquifers		Use Type total	
		Mgal/ day	# of Wells	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mga day	# of Well	Mga day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal/ day	# of Well	Mgal/ day	# of Well
Conway	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	1	**0.01**	**1**
	IR/AG	1.53	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	1	**1.64**	**11**
	Total	**1.53**	**10**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.12**	**2**	**1.65**	**12**
Craighead	IR/AG	291.71	2677	--	--	--	--	19.02	167	0.26	2	--	--	--	--	--	--	--	--	--	--	24	241	**335**	**3087**
	IN/CO/MI	0.07	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.07**	**1**
	WS	1.99	7	--	--	--	--	9.49	20	43.75	8	--	--	--	--	--	--	--	--	--	--	--	--	**55.22**	**35**
	Total	**293.77**	**2685**	--	--	--	--	**28.5**	**187**	**44**	**10**	--	--	--	--	--	--	--	--	--	--	**24**	**241**	**390.3**	**3123**
Crawford	IR/AG	0.09	9	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.09**	**9**
	Total	**0.09**	**9**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.09**	**9**
Crittenden	IN/CO/MI	0.79	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.29	2	**1.08**	**5**
	IR/AG	136.86	1083	0.08	1	--	--	0.11	1	0.22	2	--	--	--	--	--	--	--	--	--	--	9.09	60	**146.4**	**1147**
	WS	--	--	--	--	--	--	--	--	7.21	16	--	--	--	--	--	--	--	--	--	--	0.16	1	**7.37**	**17**
	Total	**137.65**	**1086**	**0.08**	**1**	--	--	**0.11**	**1**	**7.43**	**18**	--	--	--	--	--	--	--	--	--	--	**9.54**	**63**	**154.8**	**1169**
Cross	IR/AG	432.1	2000	--	--	--	--	2.72	8	--	--	--	--	--	--	--	--	--	--	--	--	45.19	197	**480**	**2205**
	IN/CO/MI	0.44	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.44**	**4**
	WS	0.99	5	--	--	--	--	0.96	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**1.95**	**12**
	Total	**433.53**	**2009**	--	--	--	--	**3.68**	**15**	--	--	--	--	--	--	--	--	--	--	--	--	**45.19**	**197**	**482.4**	**2221**
Dallas	WS	--	--	--	--	--	--	0.77	5	0.03	2	--	--	--	--	--	--	--	--	--	--	--	--	**0.8**	**7**
	Total	--	--	--	--	--	--	**0.77**	**5**	**0.03**	**2**	--	--	--	--	--	--	--	--	--	--	--	--	**0.8**	**7**
Desha	IN/CO/MI	--	--	0.01	1	--	--	3.05	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**3.06**	**5**
	IR/AG	209.68	1442	0.25	3	--	--	1.97	11	--	--	--	--	--	--	--	--	--	--	--	--	67.27	475	**279.2**	**1931**
	WS	--	--	--	--	--	--	1.93	10	--	--	--	--	--	--	--	--	--	--	--	--	0.03	1	**1.96**	**11**
	Total	**209.68**	**1442**	**0.26**	**4**	--	--	**6.95**	**25**	--	--	--	--	--	--	--	--	--	--	--	--	**67.3**	**476**	**284.2**	**1947**
Drew	IR/AG	51.03	460	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.64	66	**60.67**	**526**
	WS	--	--	--	--	--	--	2.66	10	--	--	--	--	--	--	--	--	--	--	--	--	0.05	2	**2.71**	**12**
	Total	**51.03**	**460**	--	--	--	--	**2.66**	**10**	--	--	--	--	--	--	--	--	--	--	--	--	**9.69**	**68**	**63.38**	**538**
Faulkner	IR/AG	0.39	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	1	**0.52**	**8**
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	8	--	--	**0.23**	**8**
	Total	**0.39**	**7**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.23**	**8**	**0.13**	**1**	**0.75**	**16**
Franklin	IN/CO/MI	0.09	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.09**	**2**
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	1	--	--	**0.01**	**1**
	Total	**0.09**	**2**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.01**	**1**	--	--	**0.1**	**3**
Fulton	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	1	--	--	**0.01**	**1**
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.59	7	--	--	**0.59**	**7**
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.6**	**8**	--	--	**0.6**	**8**
Garland	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	2	**0.01**	**2**
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.13	4	--	--	**0.13**	**4**
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.13**	**4**	**0.01**	**2**	**0.14**	**6**
Grant	IN/CO/MI	--	--	--	--	--	--	0.15	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.15**	**6**
	IR/AG	0.09	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.09**	**1**
	WS	--	--	--	--	--	--	1.61	12	--	--	--	--	--	--	--	--	--	--	--	--	0.14	2	**1.75**	**14**
	Total	**0.09**	**1**	--	--	--	--	**1.76**	**18**	--	--	--	--	--	--	--	--	--	--	--	--	**0.14**	**2**	**1.99**	**21**

Table 4

Withdrawals of Ground Water from Aquifers in AR Counties by use Type, 2004 (In Mgal/day: ---,no data available)

County	Use Type	Deposits Quaternary age		Cockfield Formation		Cane River		Sparta-Memphis Sand		Wilcox Group		Clayton Formation		Nacatoch Sand		Tokio Formation		Trinity Group		Rocks Paleozoic age		All Other Aquifers		Use Type total	
		Mgal/ day	# of Wells	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mga day	# of Well	Mga day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal/ day	# of Well	Mgal/ day	# of Well
Greene	IN/CO/MI	0.11	1	--	--	--	--	--	--	0.39	5	--	--	--	--	--	--	--	--	--	--	--	--	**0.52**	**7**
	IR/AG	161	1770	--	--	--	--	--	--	4.75	46	--	--	--	--	--	--	--	--	--	--	1.59	17	**167.3**	**1833**
	WS	--	--	--	--	--	--	--	--	3.72	10	--	--	0.24	1	--	--	--	--	--	--	--	--	**3.96**	**11**
	Total	**161.11**	**1771**	--	--	--	--	--	--	**8.86**	**61**	--	--	**0.26**	**2**	--	--	--	--	--	--	**1.59**	**17**	**171.8**	**1851**
Hempstead	IR/AG	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.15	4	--	--	--	--	--	--	**1.15**	**4**
	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	0.01	1	--	--	--	--	--	--	--	--	**0.01**	**1**
	WS	--	--	--	--	--	--	--	--	--	--	--	--	0.6	7	0.43	9	--	--	--	--	--	--	**1.03**	**16**
	Total	--	--	--	--	--	--	--	--	--	--	--	--	**0.61**	**8**	**1.58**	**13**	--	--	--	--	--	--	**2.19**	**21**
Hot Spring	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	3	--	--	**0.01**	**3**
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.01**	**3**	--	--	**0.01**	**3**
Howard	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	1	**0.01**	**1**
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	4	--	--	--	--	--	--	**0.12**	**4**
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.12**	**4**	--	--	--	--	**0.01**	**1**	**0.13**	**5**
Independence	IR/AG	27.96	279	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.99	13	**28.95**	**292**
	IN/CO/MI	0.47	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.47**	**6**
	WS	0.38	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.38**	**3**
	Total	**28.81**	**288**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.99**	**13**	**29.8**	**301**
Izard	IR/AG	0.49	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.49**	**2**
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.69	12	0.1	1	**0.79**	**13**
	Total	**0.49**	**2**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.69**	**12**	**0.1**	**1**	**1.28**	**15**
Jackson	IR/AG	335.68	2403	--	--	--	--	0.85	4	--	--	--	--	--	--	--	--	--	--	--	--	2.18	18	**338.7**	**2425**
	WS	0.41	14	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.41**	**14**
	Total	**336.09**	**2417**	--	--	--	--	**0.85**	**4**	--	--	--	--	--	--	--	--	--	--	--	--	**2.18**	**18**	**339.1**	**2439**
Jefferson	IN/CO/MI	5.44	7	0.98	1	--	--	25.04	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**30.48**	**31**
	IR/AG	218.96	1511	1.34	15	--	--	0.21	1	--	--	--	--	--	--	--	--	--	--	--	--	0.26	4	**220.8**	**1531**
	WS	--	--	--	--	--	--	13.25	43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**13.25**	**43**
	Total	**224.41**	**1518**	**2.32**	**16**	--	--	**38.5**	**67**	--	--	--	--	--	--	--	--	--	--	--	--	**0.26**	**4**	**265.5**	**1605**
Johnson	WS	0.01	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.01**	**1**
	Total	**0.01**	**1**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.01**	**1**
Lafayette	IR/AG	19.37	189	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	2	**19.57**	**191**
	IN/CO/MI	--	--	--	--	--	--	0.15	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.15**	**8**
	WS	--	--	--	--	0.53	5	0.1	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.63**	**9**
	Total	**19.37**	**189**	--	--	**0.53**	**5**	**0.25**	**12**	--	--	--	--	--	--	--	--	--	--	--	--	**0.2**	**2**	**20.35**	**208**
Lawrence	IR/AG	307.44	1717	--	--	--	--	4.82	16	--	--	--	--	--	--	--	--	--	--	--	--	8	56	**320.3**	**1789**
	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	0.01	1	--	--	--	--	--	--	--	--	**0.01**	**1**
	WS	1	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.71	7	0.04	1	**1.75**	**16**
	Total	**308.44**	**1725**	--	--	--	--	**4.82**	**16**	--	--	--	--	**0.01**	**1**	--	--	--	--	**0.71**	**7**	**8.04**	**57**	322	**1806**
Lee	IR/AG	252.78	2043	--	--	--	--	0.52	2	--	--	--	--	--	--	--	--	--	--	--	--	1.25	8	**254.6**	**2053**
	WS	--	--	--	--	--	--	1.08	2	--	--	--	--	--	--	--	--	--	--	--	--	0.04	1	**1.12**	**3**
	Total	**252.78**	**2043**	--	--	--	--	**1.6**	**4**	--	--	--	--	--	--	--	--	--	--	--	--	**1.29**	**9**	255.7	**2056**

Table 4

Withdrawals of Ground Water from Aquifers in AR Counties by use Type, 2004 (In Mgal/day: ---,no data available)

County	Use Type	Deposits Quaternary age		Cockfield Formation		Cane River		Sparta-Memphis Sand		Wilcox Group		Clayton Formation		Nacatoch Sand		Tokio Formation		Trinity Group		Rocks Paleozoic age		All Other Aquifers		Use Type total	
		Mgal/ day	# of Wells	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mga day	# of Well	Mga day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal/ day	# of Well	Mgal/ day	# of Well
Lincoln	IR/AG	146.55	1028	--	--	--	--	0.47	4	--	--	--	--	--	--	--	--	--	--	--	--	6.04	42	153.1	1074
	WS	--	--	--	--	--	--	2.16	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.16	11
	Total	**146.55**	**1028**	--	--	--	--	**2.63**	**15**	--	--	--	--	--	--	--	--	--	--	--	--	**6.04**	**43**	155.2	1085
Little River	IN/CO/MI	0.3	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.3**	**8**
	IR/AG	5.95	22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**5.95**	**22**
	WS	0.59	6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.59**	**6**
	Total	**6.84**	**36**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**6.84**	**36**
Logan	IR/AG	0.1	24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.1**	**24**
	Total	**0.1**	**24**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.1**	**24**
Lonoke	IN/CO/MI	0.61	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.61**	**4**
	IR/AG	305.36	2509	--	--	--	--	19.42	75	0.5	5	--	--	--	--	--	--	--	--	--	--	2.19	14	**327.5**	**2603**
	WS	3.34	15	0.3	2	--	--	1.28	6	0.39	4	--	--	--	--	--	--	--	--	--	--	--	--	**5.3**	**27**
	Total	**309.31**	**2528**	**0.3**	**2**	--	--	**20.7**	**81**	**0.89**	**9**	--	--	--	--	--	--	--	--	--	--	**2.19**	**14**	333.4	2634
Marion	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	1	--	--	**0.01**	**1**
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	2	--	--	**0.01**	**2**
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.02**	**3**	--	--	**0.02**	**3**
Miller	IR/AG	15.82	74	--	--	--	--	0.01	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**15.83**	**75**
	IN/CO/MI	0.15	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.15**	**1**
	WS	--	--	--	--	--	--	0.01	1	0.13	4	--	--	--	--	--	--	--	--	--	--	--	--	**0.14**	**5**
	Total	**15.97**	**75**	--	--	--	--	**0.02**	**2**	**0.13**	**4**	--	--	--	--	--	--	--	--	--	--	--	--	16.12	81
Mississippi	IN/CO/MI	0.01	1	--	--	--	--	--	--	2.42	10	--	--	--	--	--	--	--	--	--	--	--	--	**2.42**	**11**
	IR/AG	204.34	1903	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6.16	84	**210.5**	**1987**
	WS	--	--	--	--	--	--	--	--	3.6	26	--	--	--	--	--	--	--	--	--	--	--	--	**3.6**	**26**
	Total	**204.35**	**1904**	--	--	--	--	--	--	**6.02**	**36**	--	--	--	--	--	--	--	--	--	--	**6.16**	**84**	216.5	2024
Monroe	IR/AG	272.21	2124	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**272.2**	**2126**
	WS	0.5	1	--	--	--	--	0.73	2	--	--	--	--	--	--	--	--	--	--	--	--	0.01	1	**1.24**	**4**
	Total	**272.71**	**2125**	--	--	--	--	**0.73**	**2**	--	--	--	--	--	--	--	--	--	--	--	--	**0.04**	**3**	273.5	2130
Montgomery	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02	5	--	--	**0.02**	**5**
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.03	3	**0.03**	**3**
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.02**	**5**	**0.03**	**3**	0.05	8
Nevada	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	0.08	1	--	--	--	--	--	--	--	--	--	--	**0.08**	**1**
	WS	--	--	--	--	--	--	0.04	2	0.06	2	--	--	0.07	2	--	--	--	--	--	--	--	--	**0.17**	**6**
	Total	--	--	--	--	--	--	**0.04**	**2**	**0.06**	**2**	**0.1**	**1**	**0.07**	**2**	--	--	--	--	--	--	--	--	0.25	7
Newton	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.06	7	--	--	**0.06**	**7**
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.06**	**7**	--	--	**0.06**	**7**
Ouachita	WS	--	--	--	--	0.03	1	1.19	12	--	--	--	--	0.01	1	--	--	--	--	--	--	--	--	**1.23**	**14**
	Total	--	--	--	--	**0.03**	**1**	**1.19**	**12**	--	--	--	--	**0.01**	**1**	--	--	--	--	--	--	--	--	1.23	14
Perry	WS	0.01	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.01**	**1**
	Total	**0.01**	**1**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	1

Table 4

Withdrawals of Ground Water from Aquifers in AR Counties by use Type, 2004 (In Mgal/day: ---,no data available)

County	Use Type	Deposits Quaternary age		Cockfield Formation		Cane River		Sparta-Memphis Sand		Wilcox Group		Clayton Formation		Nacatoch Sand		Tokio Formation		Trinity Group		Rocks Paleozoic age		All Other Aquifers		Use Type total	
		Mgal/ day	# of Wells	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mga day	# of Well	Mga day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal/ day	# of Well	Mgal/ day	# of Well
Phillips	IN/CO/MI	--	--	0.01	1	--	--	0.22	4	--	--	--	--	--	--	--	--	--	--	--	--	--	0	**0.23**	5
	IR/AG	189.93	1701	--	--	--	--	0.11	2	--	--	--	--	--	--	--	--	--	--	--	--	1.33	21	**191.4**	1724
	WS	--	--	--	--	--	--	3.53	15	--	--	--	--	--	--	--	--	--	--	--	--	--	0	**3.53**	15
	Total	**189.93**	**1701**	**0.01**	**1**	--	--	**3.86**	**21**	--	--	--	--	--	--	--	--	--	--	--	--	**1.33**	**21**	**195.1**	**1744**
Pike	IR/AG	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	2	--	--	**0.01**	2
	WS	0.06	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.06**	1
	Total	**0.06**	**1**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.01**	**2**	--	--	**0.07**	3
Poinsett	IN/CO/MI	0.43	2	--	--	--	--	0.08	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.51**	3
	IR/AG	550.98	2738	--	--	--	--	1.76	6	--	--	--	--	--	--	--	--	--	--	--	--	2.21	21	**555**	2765
	WS	0.6	6	--	--	--	--	0.07	4	1.73	7	--	--	--	--	--	--	--	--	--	--	--	--	**2.4**	17
	Total	**552.01**	**2746**	--	--	--	--	**1.91**	**11**	**1.73**	**7**	--	--	--	--	--	--	--	--	--	--	**2.21**	**21**	**557.9**	2785
Polk	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	2	**0.01**	2
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02	4	**0.02**	4
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.03**	**6**	**0.03**	6
Pope	IN/CO/MI	0.07	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.07**	3
	IR/AG	0.22	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	2	--	--	**0.45**	5
	Total	**0.29**	**6**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.23**	**2**	--	--	**0.52**	8
Prairie	IR/AG	186.17	1769	--	--	--	--	18.48	96	--	--	--	--	--	--	--	--	--	--	--	--	2.08	20	**206.7**	1885
	WS	0.84	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	**0.84**	11
	Total	**187.01**	**1779**	--	--	--	--	**18.5**	**96**	--	--	--	--	--	--	--	--	--	--	--	--	**2.08**	**21**	**207.6**	1896
Pulaski	IR/AG	17.25	220	--	--	--	--	0.43	4	--	--	--	--	--	--	--	--	--	--	--	--	0.13	4	**17.81**	228
	WS	3.71	19	--	--	--	--	0.13	2	--	--	--	--	--	--	--	--	--	--	0.03	4	0.25	3	**4.12**	28
	Total	**20.96**	**239**	--	--	--	--	**0.56**	**6**	--	--	--	--	--	--	--	--	--	--	**0.03**	**4**	**0.38**	**7**	**21.93**	256
Randolph	IR/AG	92.49	609	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.14	1	**92.63**	610
	WS	0.1	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.18	5	--	--	**0.27**	8
	Total	**92.59**	**612**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.18**	**5**	**0.14**	**1**	**92.91**	618
St. Francis	IR/AG	240.33	1736	--	--	--	--	0.36	5	--	--	--	--	--	--	--	--	--	--	--	--	28.89	186	**269.6**	1927
	IN/CO/MI	0.04	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.04**	4
	WS	2.6	10	--	--	--	--	--	--	0.35	3	--	--	--	--	--	--	--	--	--	--	0.29	2	**3.24**	15
	Total	**242.97**	**1750**	--	--	--	--	**0.36**	**5**	**0.35**	**3**	--	--	--	--	--	--	--	--	--	--	**29.18**	**188**	**272.9**	1946
Saline	IR/AG	--	--	--	--	--	--	0.03	2	0.01	1	--	--	--	--	--	--	--	--	--	--	--	--	**0.04**	3
	WS	0.04	1	--	--	--	--	0.38	3	1.12	8	--	--	--	--	--	--	--	--	--	--	0.03	1	**1.57**	13
	Total	**0.04**	**1**	--	--	--	--	**0.41**	**5**	**1.13**	**9**	--	--	--	--	--	--	--	--	--	--	**0.03**	**1**	**1.61**	16
Scott	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	2	--	--	**0.01**	2
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.01**	**2**	--	--	**0.01**	2
Searcy	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.15	4	0.12	2	**0.27**	6
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.15**	**4**	**0.12**	**2**	**0.27**	6
Sevier	IN/CO/MI	--	--	--	--	--	--	0.01	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	1
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.12	3	--	--	--	--	0.01	1	0.13	4
	Total	--	--	--	--	--	--	**0.01**	**1**	--	--	--	--	--	--	**0.12**	**3**	--	--	--	--	**0.01**	**1**	**0.14**	5

Table 4

Withdrawals of Ground Water from Aquifers in AR Counties by use Type, 2004 (In Mgal/day: ---,no data available)

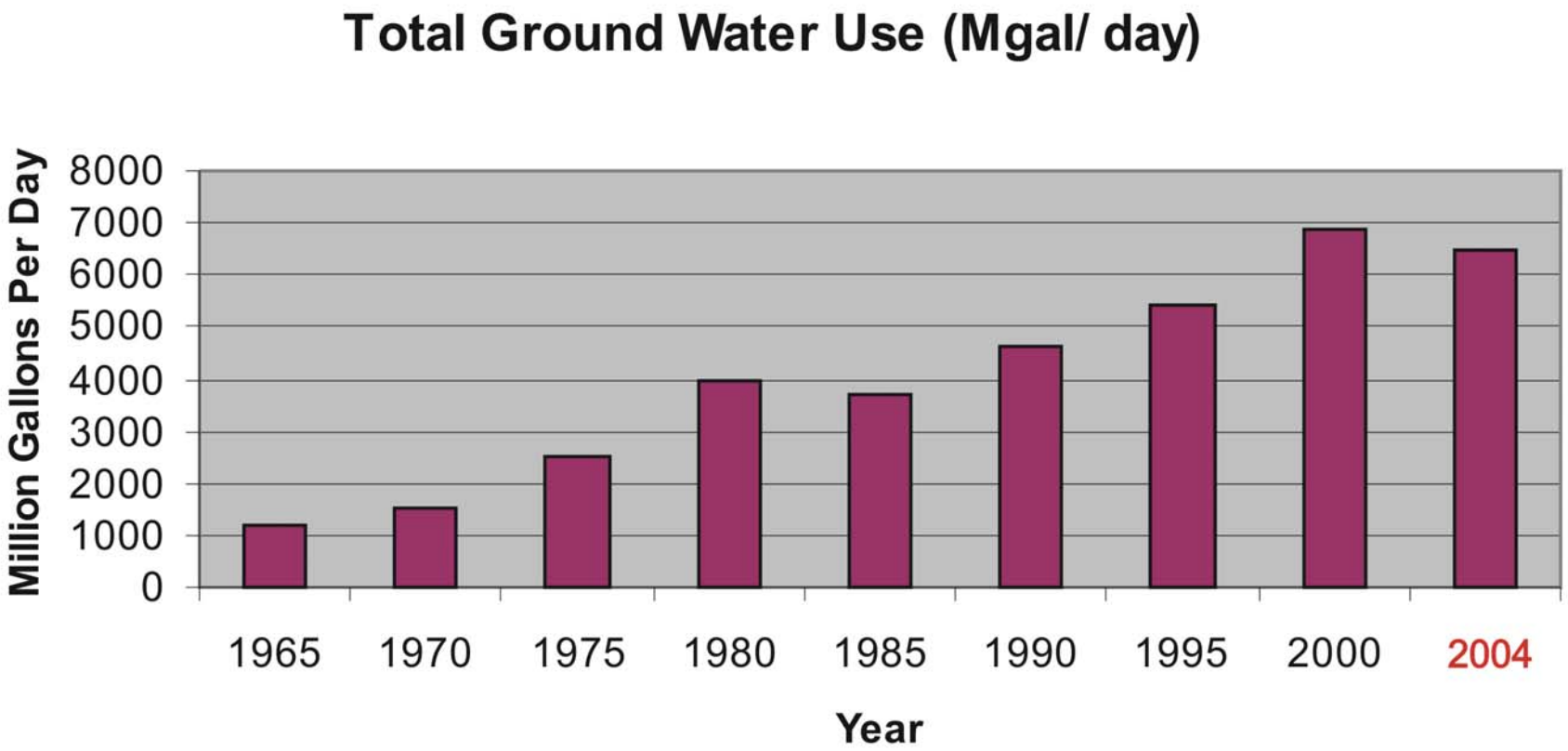
County	Use Type	Deposits Quaternary age		Cockfield Formation		Cane River		Sparta-Memphis Sand		Vilcox Group		Clayton Formation		Nacatoch Sand		Tokio Formation		Trinity Group		Rocks Paleozoic age		All Other Aquifers		Use Type total	
		Mgal/ day	# of Wells	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mga day	# of Well	Mga day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal/ day	# of Well	Mgal/ day	# of Well
Sharp	IN/CO/MI	0.01	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.01**	**1**
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	2	--	--	0.85	12	--	1	**0.96**	**15**
	Total	**0.01**	**1**	--	--	--	--	--	--	--	--	--	--	--	--	**0.11**	**2**	--	--	**0.85**	**12**	--	--	**0.97**	**16**
Stone	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	1	--	--	**0.01**	**1**
	IR/AG	0.43	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.43**	**2**
	WS	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.01	1	--	--	**0.01**	**1**
	Total	**0.43**	**2**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.02**	**2**	--	--	**0.45**	**4**
Union	IN/CO/MI	--	--	--	--	--	--	8.24	29	--	--	--	--	--	--	--	--	--	--	--	--	0.19	2	**8.43**	**31**
	WS	--	--	--	--	--	--	7.37	38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**7.37**	**38**
	Total	--	--	--	--	--	--	**15.6**	**67**	--	--	--	--	--	--	--	--	--	--	--	--	**0.19**	**2**	**15.8**	**69**
Van Buren	IR/AG	0.33	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.33**	**1**
	Total	**0.33**	**1**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.33**	**1**
Washington	IN/CO/MI	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.03	6	**0.03**	**6**
	IR/AG	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.03	2	--	--	**0.03**	**2**
	Total	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.03**	**2**	**0.03**	**6**	**0.06**	**8**
White	IN/CO/MI	0.05	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.05**	**1**
	IR/AG	32.51	541	--	--	--	--	--	--	1.43	1	--	--	--	--	--	--	--	--	--	--	0.34	3	**34.28**	**545**
	WS	0.72	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.72**	**7**
	Total	**33.28**	**549**	--	--	--	--	--	--	**1.43**	**1**	--	--	--	--	--	--	--	--	--	--	**0.34**	**3**	**35.05**	**553**
Woodruff	IR/AG	235.84	2093	--	--	--	--	1.43	6	--	--	--	--	--	--	--	--	--	--	--	--	21.38	144	**258.7**	**2243**
	IN/CO/MI	0.08	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**0.08**	**4**
	WS	0.41	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	**0.41**	**5**
	Total	**236.33**	**2100**	--	--	--	--	**1.43**	**6**	--	--	--	--	--	--	--	--	--	--	--	--	**21.38**	**146**	**259.1**	**2252**
Yell	WS	1.94	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**1.94**	**10**
	Total	**1.94**	**10**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**1.94**	**10**

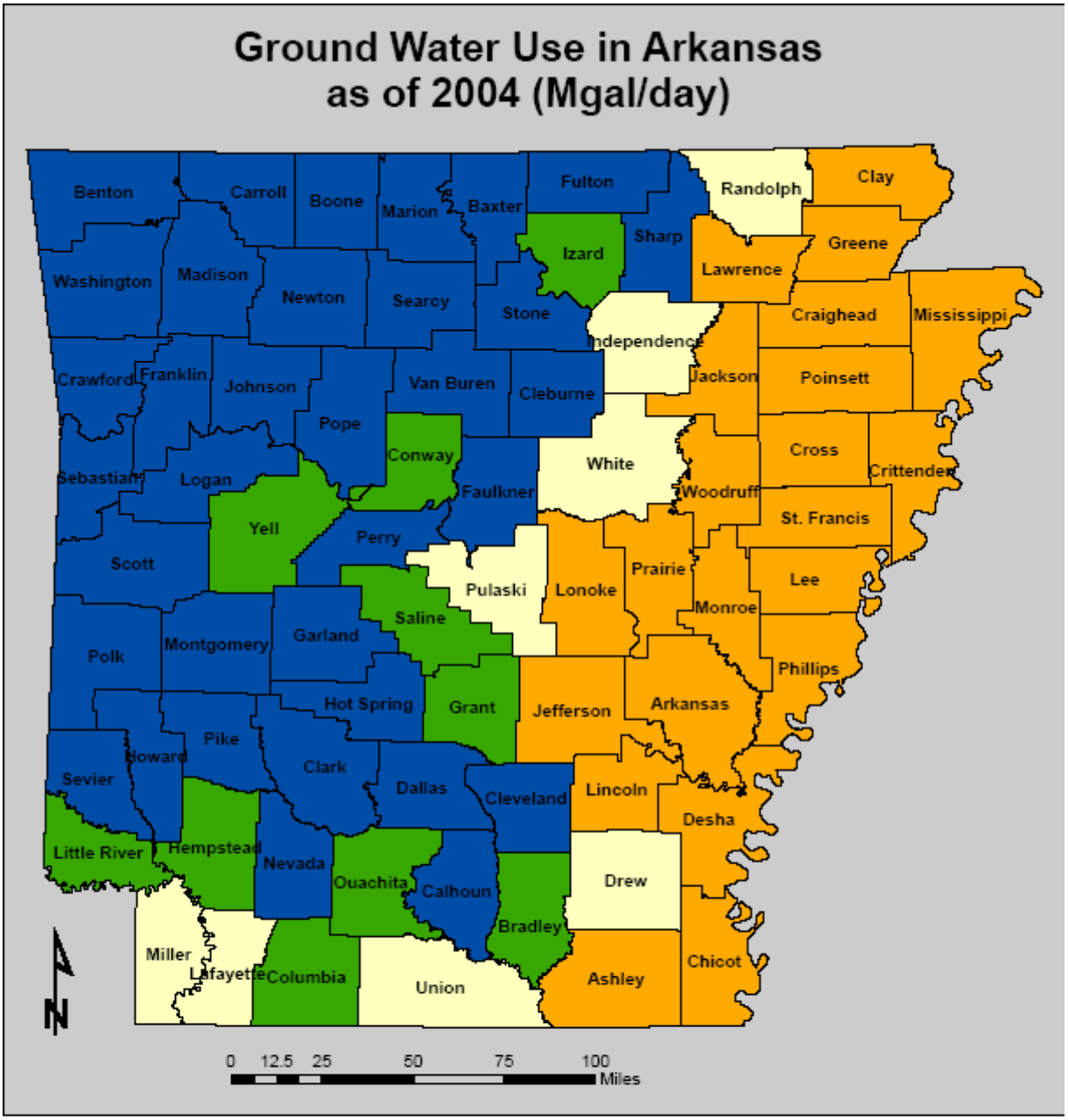
Table 4

Withdrawals of Ground Water from Aquifers in AR Counties by use Type, 2004 (In Mgal/day: ---,no data available)

2004 Statewide Withdrawals of Ground Water from Aquifers (by type of use; Mgal/day: ---, no data available)

Use Type	Deposits Quaternary age		Cockfield Formation		Cane River		Sparta-Memphis Sand		Vilcox Group		Clayton Formation		Nacatoch Sand		Tokio Formation		Trinity Group		Rocks Paleozoic age		All Other Aquifers		Use Type total	
	Mgal/ day	# of Wells	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mga day	# of Well	Mga day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal day	# of Well	Mgal/ day	# of Well	Mgal/ day	# of Well
Agriculture	36.66	155	--	--	--	--	0.01	1	--	--	--	--	--	--	1.15	4	--	--	--	--	7	43	**44.82**	**203**
Commercial	0.71	14	--	--	--	--	0.01	4	0.02	2	--	--	0.01	1	--	--	--	--	0.06	25	0.07	16	**0.88**	**62**
Industrial	7.64	29	6.48	8	--	--	37.47	107	2.71	12	0.08	1	0.28	2	--	--	0.02	1	0.01	6	0.43	4	**55.12**	**170**
Irrigation	5802.55	42309	2.2	22	--	--	113	518	9.43	73	--	--	--	--	--	--	--	--	0.52	12	312.32	2207	**6240**	**###**
Mining	0.07	3	--	--	--	--	0.08	1	0.07	1	--	--	0.02	2	--	--	--	--	0.01	6	--	3	**0.25**	**16**
Power Fossil Fuel	0.66	14	0.98	1	--	--	0.36	10	--	--	--	--	--	--	--	--	--	--	--	--	--	1	**1.99**	**26**
Power Hydroelectric	--	--	0.01	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	**0.01**	**1**
Water Supply	20.17	134	3.63	21	0.55	7	54.74	261	62.07	90	--	--	2.04	26	0.83	20	--	--	6.2	127	1.56	44	**151.8**	**730**
Total	**5868.5**	**42658**	**13.3**	**53**	**0.55**	**7**	**206**	**902**	**74.3**	**178**	**0.1**	**1**	**2.35**	**31**	**1.98**	**24**	**0.02**	**1**	**6.8**	**176**	**321.4**	**2318**	**6495**	**###**


Total Ground Water Use (Mgal/ day)
Million Gallons Per Day
8000
7000
6000
5000
4000
3000
2000
1000
0
1965
1970
1975
1980
1985
1990
1995
2000
2004
Year



Legend

- 0 - 1 Mgal/day
- 2 - 10 Mgal/day
- 11 - 100 Mgal/day
- 101 - 560 Mgal/day

* Data obtained from USGS online water use database

Fig. 42

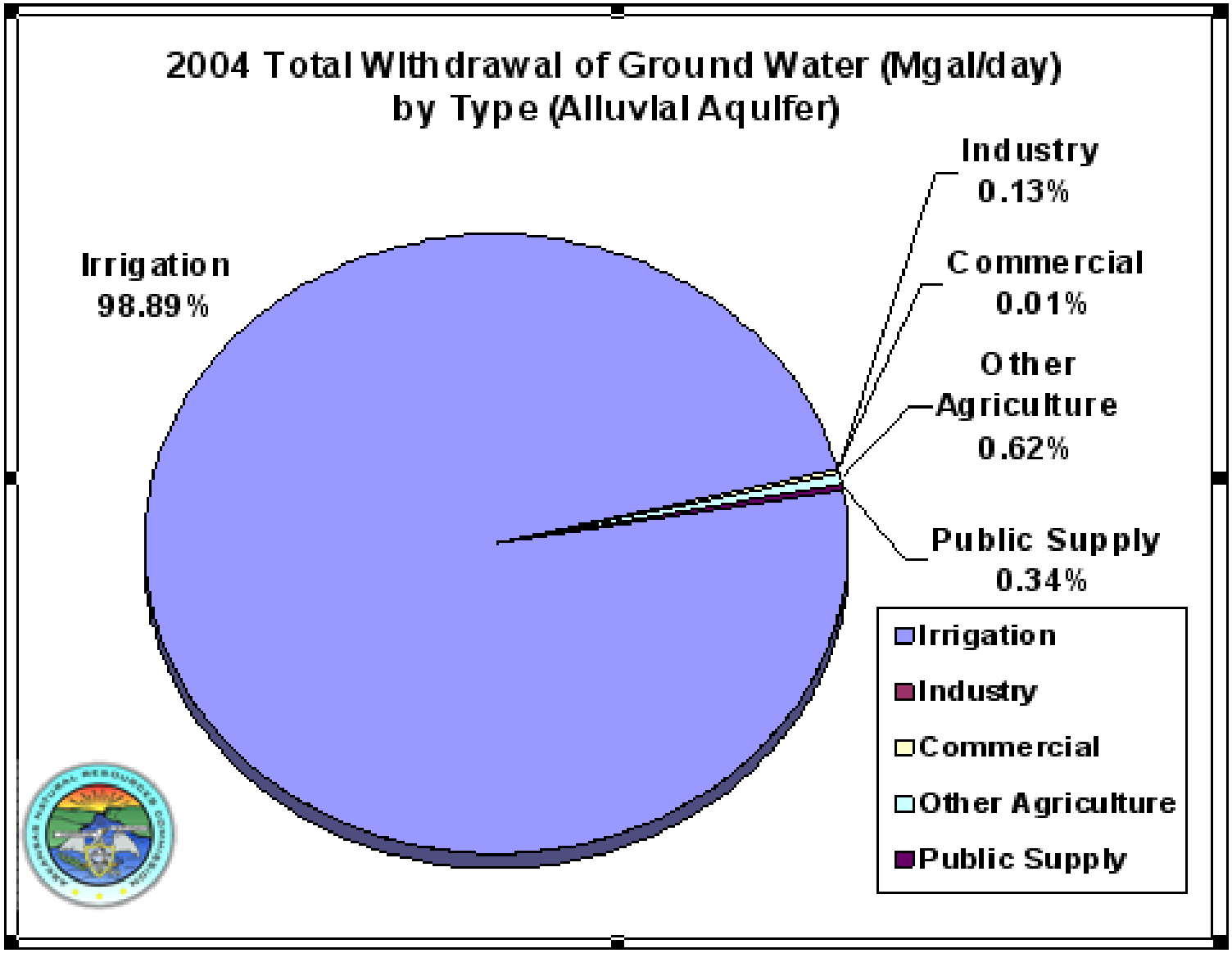

2004 Total Withdrawal of Ground Water (Mgal/day)
by Type (Alluvial Aquifer)
Industry
0.13%
Commercial
0.01%
Other
Agriculture
0.62%
Public Supply
0.34%
Irrigation
98.89%
Irrigation
Industry
Commercial
Other Agriculture
Public Supply

Fig. 43

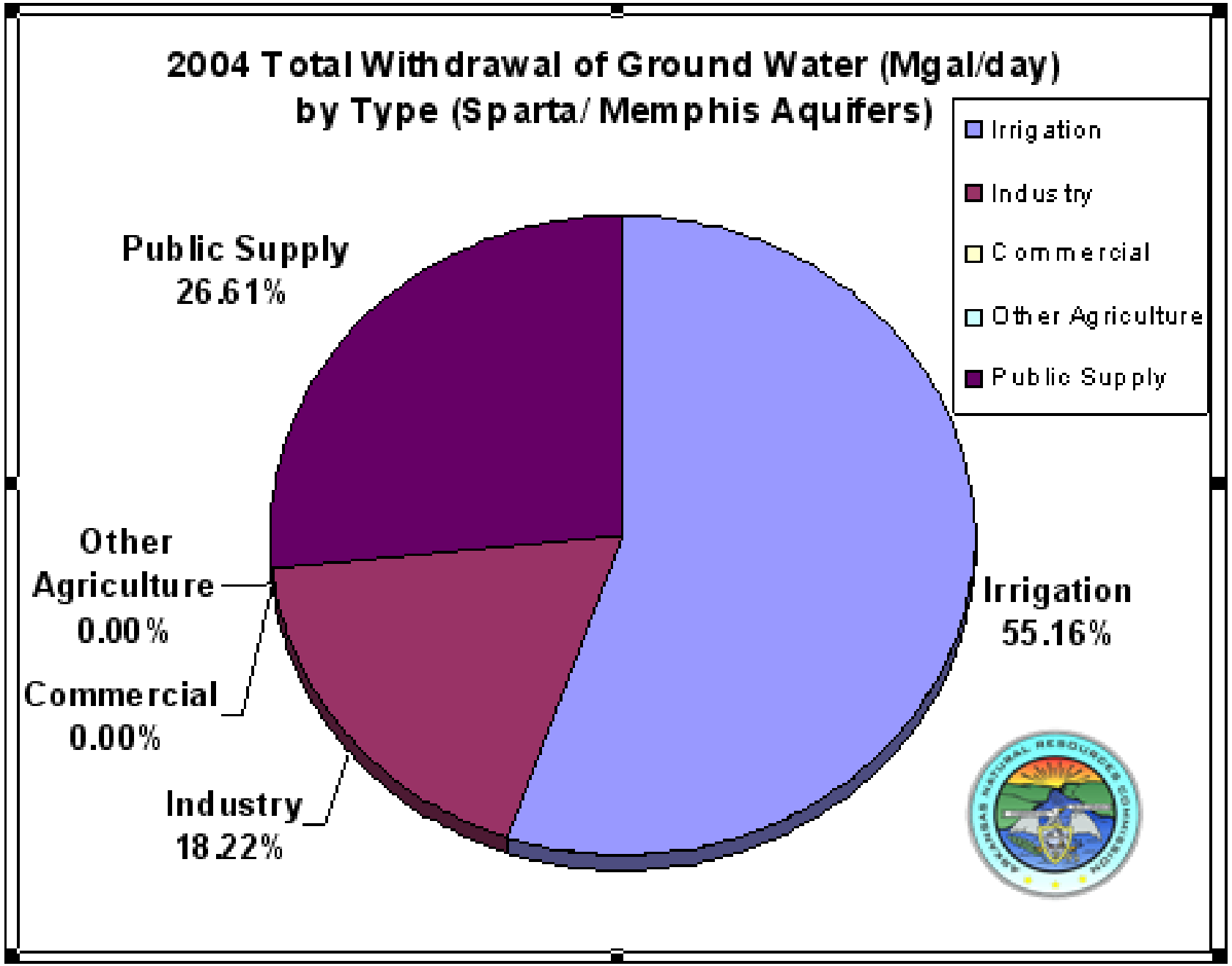

2004 Total Withdrawal of Ground Water (Mgal/day)
by Type (Sparta/ Memphis Aquifers)
Irrigation
Industry
Commercial
Other Agriculture
Public Supply
Public Supply
26.61%
Other
Agriculture
0.00%
Commercial
0.00%
Industry
18.22%
Irrigation
55.16%

Fig. 44

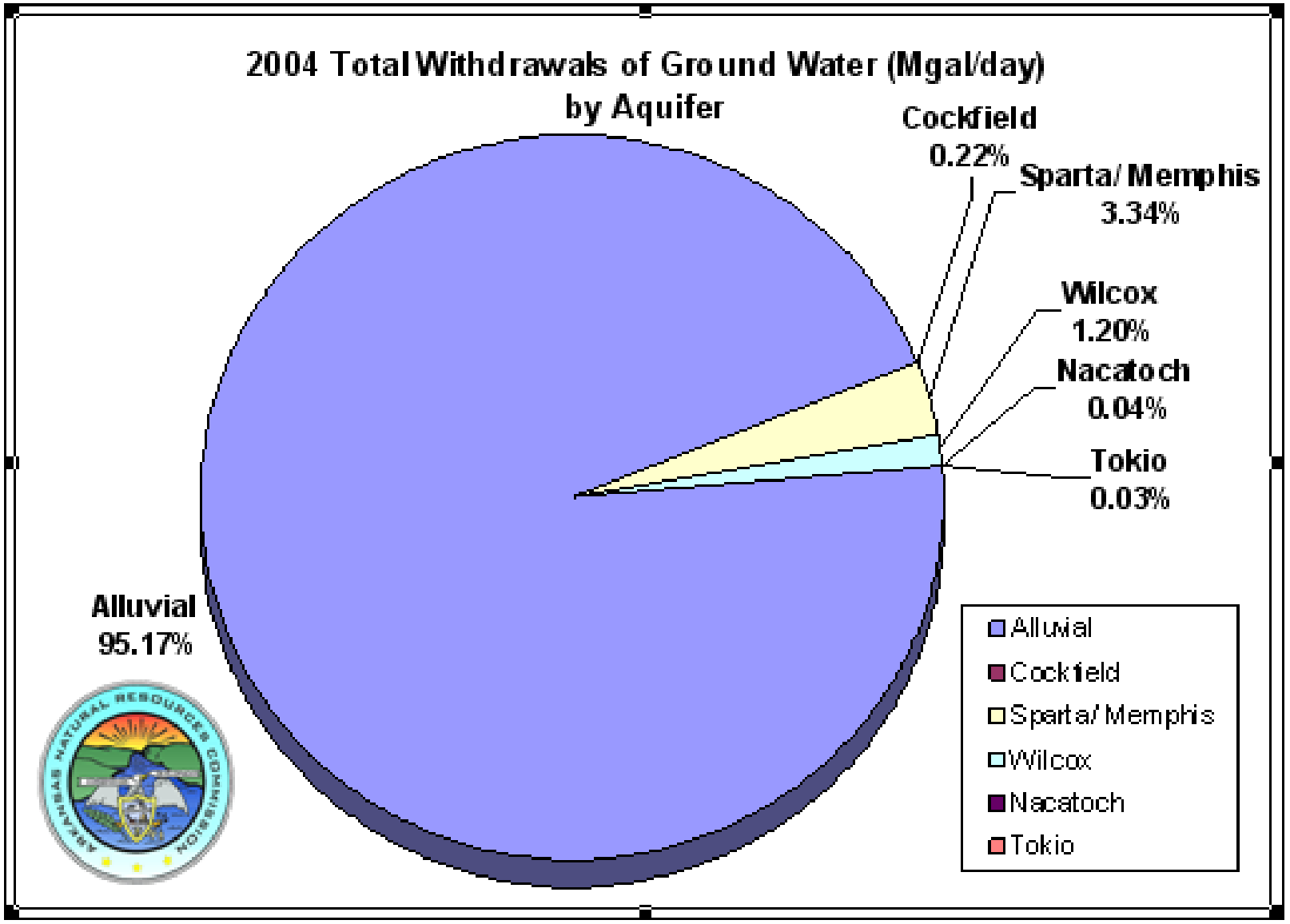

2004 Total Withdrawals of Ground Water (Mgal/day)
by Aquifer
Cockfield
0.22%
Sparta/ Memphis
3.34%
Wilcox
1.20%
Nacatoch
0.04%
Tokio
0.03%
Alluvial
95.17%
Alluvial
Cockfield
Sparta/ Memphis
Wilcox
Nacatoch
Tokio

Fig. 45

Ground-Water Modeling and Sustainable Yield

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 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.

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. 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 latest USGS model report, “Simulation of Various Management Scenarios of the Mississippi River Valley Alluvial Aquifer in Arkansas” (Czarnecki, 2006), provides essential information for proper evaluation of sustainable yield. Figure 46 shows the estimated sustainable yield for the alluvial aquifer in a portion of eastern Arkansas, based on current State water policy. 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 over 10,000 new wells drilled in the alluvial aquifer since 1997.

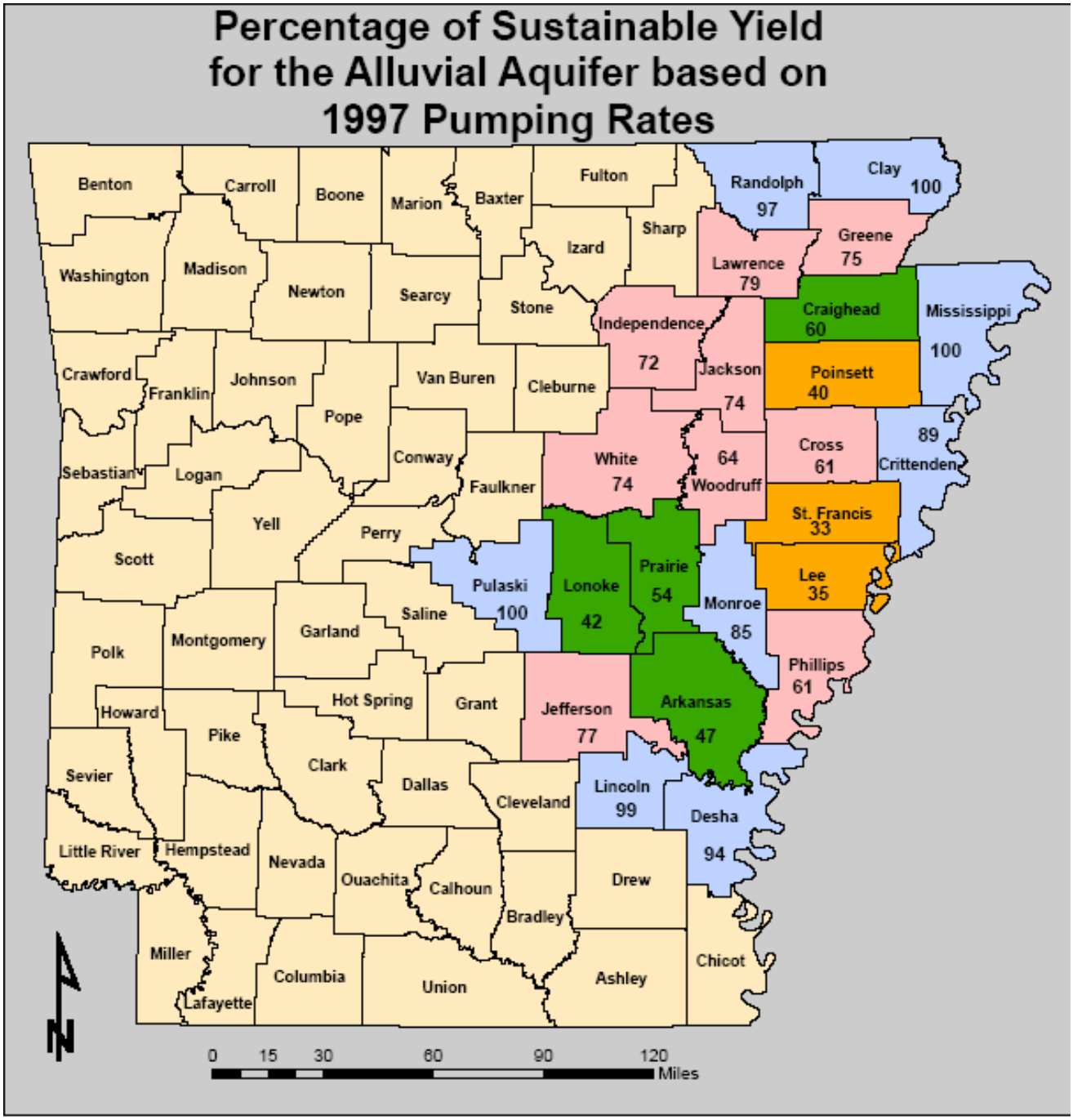

Percentage of Sustainable Yield
for the Alluvial Aquifer based on
1997 Pumping Rates
Benton
Carroll
Boone
Marion
Baxter
Fulton
Randolph
97
Clay
100
Sharp
Izard
Greene
75
Washington
Madison
Newton
Searcy
Stone
Lawrence
79
Craighead
60
Mississippi
100
Independence
72
Jackson
74
Poinsett
40
Crawford
Franklin
Johnson
Pope
Van Buren
Cleburne
Cross
61
89
Crittenden
White
74
64
Woodruff
Conway
Faulkner
Sebastian
Logan
Yell
Perry
St. Francis
33
Scott
Prairie
54
Lee
35
Pulaski
100
Lonoke
42
Monroe
85
Saline
Garland
Montgomery
Polk
Phillips
61
Hot Spring
Grant
Jefferson
77
Arkansas
47
Howard
Pike
Clark
Dallas
Cleveland
Lincoln
99
Desha
94
Sevier
Little River
Hempstead
Nevada
Ouachita
Calhoun
Bradley
Drew
Miller
Columbia
Union
Ashley
Chicot
Lafayette
N
0
15
30
60
90
120
Miles
Legend
21 - 40%
41 - 60%
61 - 80%
81 - 100%
County Boundaries
* Modified from USGS Report 2006-5052

Fig. 46

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 2005 to 2006 provided short term data indicating an overall average decline in water levels, probably because of the below average precipitation in 2005. Also 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 Boeuf-Tensas 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. These hydrographs for both the alluvial and Sparta/Memphis aquifers are included as appendix B and appendix D respectively.

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
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Arkansas	02S04W11DBB1	343232.9	912415.21	4/10/2006	100.70	112.34	113.24	113.04	116.51	-0.90	-0.70	-4.17
Arkansas	02S05W15AAB1	343212.7	913126.72	4/10/2006	105.10	107.90	106.60			1.30		
Arkansas	02S05W31BBB1	342936.7	913536.22	4/10/2006	39.75	158.25						
Arkansas	03S02W27ABB1	342447.9	911251.01	4/6/2006	67.53	129.47	129.20	123.00	135.96	0.27	6.47	-6.49
Arkansas	03S03W05CCD1	342737	912131.83	4/10/2006	98.18	102.82	103.40			-0.58		
Arkansas	03S03W18CCC1	342553	912251	3/28/2006	98.71	97.29						
Arkansas	03S03W27BBC1	342454.7	911944.08	4/10/2006	91.65	103.35	104.10	105.00		-0.75	-1.65	
Arkansas	03S04W02BBB1	342831	912454	4/10/2006	92.23	105.40	105.78			-0.38		
Arkansas	03S04W03DCA16	342753	912515.37	5/2/2006	100.45	104.55	105.20	105.80	105.97	-0.65	-1.25	-1.42
Arkansas	03S04W03DDA1	342750	912459.88	4/10/2006	100.05	101.95						
Arkansas	03S05W03CCC1	342752.2	913227.43	4/10/2006	104.40	110.60						
Arkansas	03S05W13AC1	342630	913307	3/28/2006	105.75	105.25						
Arkansas	03S06W35ADD1	342411.4	913651.67	4/7/2006	52.89	137.11	137.20		129.89	-0.09		7.22
Arkansas	04S01W04ACD2	342233.4	910732.62	4/6/2006	5.74	149.26			148.21			1.05
Arkansas	04S01W31DCB1	341753	910947	4/6/2006	52.65	126.35	126.95			-0.60		
Arkansas	04S02W11AAA1	342208.6	911123.27	4/6/2006	69.10	125.98	128.68		131.06	-2.70		-5.08
Arkansas	04S02W29CCC1	341846.4	911538.5	4/6/2006	86.52	104.48	107.05		110.87	-2.57		-6.39
Arkansas	04S03W17ADD1	342101.9	912058.11	4/10/2006	107.72	92.28	92.87	95.10	98.72	-0.59	-2.82	-6.44
Arkansas	04S03W32BCB1	341820.3	912202.18	4/10/2006	116.45	75.55	75.90		90.22	-0.35		-14.67
Arkansas	04S04W02ABB1	342313.2	912423.69	4/10/2006	108.63	91.37	91.50		95.16	-0.13		-3.79
Arkansas	04S04W35ABC1	341835	912437	4/12/2006	106.00	91.00	91.50	90.80		-0.50	0.20	
Arkansas	04S05W16CDC1	342044.7	913320.89	4/7/2006	69.35	131.65	131.90		130.91	-0.25		0.74
Arkansas	04S05W24DAA1	342001.3	912929.57	4/10/2006	90.01	107.99	107.70			0.29		
Arkansas	04S06W15DBB1	342122.4	913826.67	4/7/2006	33.06	156.94	158.40			-1.46		
Arkansas	05S01W16BAB1	341551.6	910729.49	4/6/2006	51.05	131.95	137.50		156.50	-5.55		-24.55
Arkansas	05S02W16ABD1	341551.8	911357.77	4/6/2006	83.30	106.70	107.00		115.81	-0.30		-9.11
Arkansas	05S03W16ABB1	341551	912019	4/5/2006	115.50	80.50	82.10	81.00	75.00	-1.60	-0.50	5.50
Arkansas	05S04W04BAA	341750	912654	4/5/2006	92.00	94.00	94.50	91.50	83.00	-0.50	2.50	11.00
Arkansas	05S04W07CCC1	341555.4	912931.61	4/6/2006	74.27	119.73	119.55		117.13	0.18		2.60
Arkansas	05S04W14AAD1	341549	912411	4/14/2006	92.80	93.20	93.50	90.80	87.00	-0.30	2.40	6.20
Arkansas	05S04W32BBA1	341316	912821.81	4/6/2006	57.42	133.58	131.87		125.38	1.71		8.20
Arkansas	05S04W34BAC1	341318	912609	4/5/2006	69.15	121.85	122.20		115.00	-0.35		6.85
Arkansas	05S06W02DDD1	341723.7	913650.8	4/7/2006	20.64	162.29	163.08		163.14	-0.79		-0.85
Arkansas	05S06W07DDC1	341641.5	914129.68	4/7/2006	2.39	178.09	177.33	171.48		0.76	6.61	
Arkansas	06S02W23DCD1	340852.6	911206.48	4/6/2006	69.74	118.26	128.50		125.74	-10.24		-7.48
Arkansas	06S03W03ABA1	341228.4	911302.3	4/4/2006	71.90	115.10	118.80		117.00	-3.70		-1.90
Arkansas	06S03W10BBA1	341136	911953.82	4/6/2006	81.98	102.02	102.50		104.88	-0.48		-2.86
Arkansas	06S03W27AAA1	340857.6	911912.78	4/6/2006	66.68	116.46	116.44		119.79	0.02		-3.33

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Arkansas	06S03W32DDA	340740	912115	5/17/2006	55.34	124.66	123.62			1.04		
Arkansas	07S02W04BBB1	340707.2	911451.89	4/6/2006	42.20	133.80	140.00	134.30	153.84	-6.20	-0.50	-20.04
Arkansas	07S02W17BBA1	340707.2	911451.89	4/6/2006	54.51	129.49	135.45		134.25	-5.96		-4.76
Arkansas	07S03W10ACD1	340560	911944	4/5/2006	48.15	138.85	139.40			-0.55		
Arkansas	07S03W18CCD1	340435.3	912316.09	4/6/2006	42.41	143.77	142.18	144.18	146.18	1.59	-0.41	-2.41
Arkansas	07S03W32BBC1	340240	912216	4/6/2006	24.72	152.20	152.11			0.09		
Arkansas	07S04W01DDD1	340625.3	912327.15	4/6/2006	47.10	138.90	139.50		142.13	-0.60		-3.23
Arkansas	08S02W08ACA1	340041	911505.57	4/6/2006	45.13	133.87	139.25	140.25	142.86	-5.38	-6.38	-8.99
Arkansas	08S03WT2299	340147.5	912202.5	4/6/2006	21.47	156.53	157.00		155.96	-0.47		0.57
							Declines/Wells:			**31/41**	**8/13**	**15/30**
							Average Change:			**-1.18**	**0.31**	**-2.93**
Ashley	15S4W23DBD1	332245	912852	3/15/2006	32.00	96.00	96.70		105.40	-0.70		-9.40
Ashley	15S04W26DCC1	332232	912902	3/15/2006	31.09	95.91						
Ashley	15S07W21CBA1	332315.7	915001.37	3/15/2006	6.60	203.40	205.30			-1.90		
Ashley	16S04W10ABB	331902	913002	3/21/2006	35.20	94.80	103.60	95.10		-8.80	-0.30	
Ashley	16S06W08CAA1	331941	914438	3/15/2006	78.28	106.72						
Ashley	16S06W27BAB1	331729	914240	3/15/2006	83.84	98.16	98.45			-0.29		
Ashley	16S06W35BAD	331624	914143	3/21/2006	72.60	102.40	102.70	103.50		-0.30	-1.10	
Ashley	17S04W03ABB1	331528	913010	3/15/2006	30.22	93.78	98.55	94.20		-4.77	-0.42	
Ashley	17S04W15DDC1	331252.5	912954.09	3/15/2006	26.50	89.50	97.60			-8.10		
Ashley	17S04W21ABA1	331252	913108	3/15/2006	23.56	93.44	99.30			-5.86		
Ashley	17S06W01ADD1	331517.9	913956.26	3/15/2006	83.58	98.42	98.95		102.59	-0.53		-4.17
Ashley	17S06W35CAC1	331049	914136	3/15/2006	72.62	106.38	106.70			-0.32		
Ashley	18S04W08CAD1	330852	913218	3/21/2006	31.20	88.80	92.41	87.60		-3.61	1.20	
Ashley	18S05W01CCD1	330816.6	913537.3	3/25/2006	22.66	95.34	98.60			-3.26		
Ashley	18S05W22DDA1	330712	913555	3/25/2006	21.00	104.00	108.89	104.00	105.50	-4.89	0.00	-1.50
Ashley	18S05W24BDC1	330730	913435	3/21/2006	23.80	94.20	97.65	93.50		-3.45	0.70	
Ashley	18S08W01AAB1	331015	915225.12	3/15/2006	86.63	94.37	94.45		97.05	-0.08		-2.68
Ashley	18S08W28DDD2	330624.8	915528.46	5/9/2006	84.96	78.04	77.80	77.16	75.09	0.24	0.88	2.95
Ashley	19S04W06BAB2	330504	913328.56	3/15/2006	23.67	86.33	90.40		89.85	-4.07		-3.52
Ashley	19S04W09CBB	330346	913146	3/21/2006	22.20	82.80	85.24	81.40		-2.44	1.40	
Ashley	19S05W08ACA1	330405	913815	3/25/2006	17.25	93.75	98.80	97.00		-5.05	-3.25	
Ashley	19S05W16ABB1	330323	913718	3/25/2006	24.00	92.00	95.70	90.00	93.00	-3.70	2.00	-1.00
Ashley	19S05W22DCD1	330139	913615	3/25/2006	23.16	83.84	92.40	83.00	86.00	-8.56	0.84	-2.16
Ashley	19S06W07BCC1	330403.6	914607.92	3/15/2006	31.04	103.66	107.35		106.06	-3.69		-2.40
							Declines/Wells:			**21/22**	**4/11**	**8/9**
							Average Change:			**-3.37**	**0.18**	**-2.65**

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Chicot	13S03W27AAA1	333253	912310	3/27/2006	46.00	92.00	95.00	98.00	123.00	-3.00	-6.00	-31.00
Chicot	13S03W34BAA1	333110.2	912539.38	3/16/2006	40.32	92.68	93.51	95.90	103.29	-0.83	-3.22	-10.61
Chicot	13S03W34CAA1	333135.5	912335.8	3/16/2006	37.08	94.92	94.99			-0.07		
Chicot	13S03W35BAC1	333154.1	912245.53	3/16/2006	39.58	94.42	95.20		111.78	-0.78		-17.36
Chicot	14S02W09BDD1	332859	911729	3/27/2006	29.00	104.00	105.00	104.00	103.00	-1.00	0.00	1.00
Chicot	14S02W18BBA1	332859	912038	4/5/2006	32.00	98.00	97.00	104.00	95.00	1.00	-6.00	3.00
Chicot	14S03W07BBD1	333011	911729	3/16/2006	26.56	107.44	109.19			-1.75		
Chicot	14S03W32CDB2	332613.5	912551.45	3/16/2006	34.86	99.14	98.55			0.59		
Chicot	15S02W20DDC1	332226.6	911919.83	3/16/2006	27.91	98.09	97.80	96.00		0.29	2.09	
Chicot	15S03W18BBB1	332226.6	911919.83	4/6/2006	38.00	87.00	90.00	92.00		-3.00	-5.00	
Chicot	16S03W11ADC1	331919	912233	3/16/2006	28.93	89.07						
Chicot	16S03W24BBC1	331797	912234	3/22/2006	32.50	85.50						
Chicot	17S01W06BCC1	331501.2	911505.22	3/16/2006	21.03	93.97	94.20		94.42	-0.23		-0.45
Chicot	17S01E17CDA1	331258	910716	3/16/2006	20.25	97.75						
Chicot	17S01W18ADA1	331340	910755	3/16/2006	11.04	109.96	117.40			-7.44		
Chicot	17S02W10AAA1	331429	911712	3/16/2006	26.35	87.65	88.90	87.50	86.33	-1.25	0.15	1.32
Chicot	17S02W33DDA1	331021	911820	3/21/2006	31.50	88.50	88.75	87.50		-0.25	1.00	
Chicot	17S03W18CBC1	331257	912736	3/22/2006	33.00	84.00	86.00	84.00	98.00	-2.00	0.00	-14.00
Chicot	17S03W24ABB1	331259	912159	3/21/2006	22.20	97.80	98.58			-0.78		
Chicot	17S03W28DBA1	331126	912441	3/16/2006	24.33	85.67						
Chicot	18S01W19DAB1	330708	911423	3/15/2006	13.07	96.93			96.22			0.71
Chicot	18S01W33BDA1	330543	911245	3/22/2006	18.00	97.00	105.00	100.00	97.00	-8.00	-3.00	0.00
Chicot	18S03W22ABA2	330728	912341	3/15/2006	10.56	92.44	91.40			1.04		
Chicot	19S01W17BBB	330309	911415	3/21/2006	13.70	91.30	95.20	90.00		-3.90	1.30	
Chicot	19S01W17BCC1	330250	911406	3/15/2006	19.76	86.24						
Chicot	19S03W14ABB1	330304	912250	3/15/2006	23.74	87.26						
							Declines/Wells:			**15/19**	**5/11**	**5/10**
							Average Change:			**-1.65**	**-1.70**	**-6.74**
Clay	18N08E03DAB1	361323.2	901153.03	4/18/2006	7.89	249.11	249.70			-0.59		
Clay	18N08E11BAA1	361253	901117	4/12/2006	7.00	252.00	252.40	250.90	252.50	-0.40	1.10	-0.50
Clay	19N03E24AAA1	361655	904157.11	4/18/2006	20.12	257.88	258.20			-0.32		
Clay	19N04E11DAA1	361805	903621	4/12/2006	23.00	257.00	257.60	258.00	263.50	-0.60	-1.00	-6.50
Clay	19N04E19AAA1	361654.4	904049.99	4/18/2006	31.07	250.93	253.00	252.40	256.58	-2.07	-1.47	-5.65
Clay	19N04E19BAA1	361649	904125	4/12/2006	22.00	257.00	258.00	257.60		-1.00	-0.60	
Clay	19N05E15BBD1	361716	903152	4/12/2006	34.00	255.00	256.40	260.50	264.00	-1.40	-5.50	-9.00
Clay	19N06E18DBC1	361642	902815	4/13/2006	37.00	260.00	264.80	266.00	268.00	-4.80	-6.00	-8.00
Clay	19N07E25BCB1	361519	901700	4/12/2006	18.00	250.00	251.70	249.70	251.60	-1.70	0.30	-1.60

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Clay	19N08E08DCA1	361729	901402	4/12/2006	7.00	263.00	262.30	262.50	265.30	0.70	0.50	-2.30
Clay	19N08E27DAA1	361459	901140	4/21/2006	5.20	255.80	257.03	255.50		-1.23	0.30	
Clay	19N09E30BB1	361531	900921	4/12/2006	8.00	257.00	257.50			-0.50		
Clay	20N03E25BAA1	362112	904225	4/13/2006	22.00	266.00	267.50	265.10		-1.50	0.90	
Clay	20N04E02BBC1	362427	903722	4/21/2006	15.70	269.30	269.20	270.00		0.10	-0.70	
Clay	20N04E06BB1	362444.3	904131.25	4/18/2006	19.97	270.03	271.95			-1.92		
Clay	20N05E22CAD1	362118	903132	4/12/2006	31.00	259.00	262.90	265.90	268.80	-3.90	-6.90	-9.80
Clay	20N05E30CAC1	362003	903454	4/12/2006	18.00	265.00	266.20	267.10		-1.20	-2.10	
Clay	20N05E34DBA1	361939.3	903117.17	4/18/2006	29.31	255.69	257.25		267.74	-1.56		-12.05
Clay	20N06E09BB1	362327	902620	4/12/2006	22.00	268.00	270.40	272.50	275.70	-2.40	-4.50	-7.70
Clay	20N06E28CCD1	362005	902630	4/12/2006	29.00	261.00	263.10	266.90	270.30	-2.10	-5.90	-9.30
Clay	20N08E22BDC1	362111	901220	4/12/2006	9.00	266.00	267.10	265.60	267.00	-1.10	0.40	-1.00
Clay	20N08E24DDA1	362057	900933	4/18/2006	9.75	266.25			268.07			-1.82
Clay	20N09E09ABC1	362306	900642	4/12/2006	8.00	271.00	271.50	269.30	271.70	-0.50	1.70	-0.70
Clay	20N09E33DDC1	361904	900628	4/12/2006	7.00	263.00	263.40	263.00		-0.40	0.00	
Clay	21N03E15CBC1	362738	904453	4/13/2006	11.00	281.00	280.00	279.20	283.70	1.00	1.80	-2.70
Clay	21N03E36CDD1	362450	904214	4/13/2006	19.00	271.00	272.40	270.70	274.50	-1.40	0.30	-3.50
Clay	20N04E03AA1	362425	903725	4/13/2006	16.00	274.00	274.20			-0.20		
Clay	21N04E09DBC1	362828	903853	4/13/2006	13.00	278.00	280.20	280.20	282.00	-2.20	-2.20	-4.00
Clay	21N05E17ABB1	362755.5	903328.9	4/17/2006	23.23	274.77	277.00			-2.23		
Clay	21N05E22BAB1	362704	903132	4/13/2006	7.00	281.00	281.50	280.90		-0.50	0.10	
Clay	21N06E11BBB1	362839	902421	4/13/2006	15.00	281.00	284.30	282.90	288.30	-3.30	-1.90	-7.30
Clay	21N06E28BB1	362604.9	902607.97	4/17/2006	19.19	273.31	275.50			-2.19		
Clay	21N07E01DDC1	362835	901607	4/13/2006	26.00	277.00	284.50	281.10	294.30	-7.50	-4.10	-17.30
Clay	21N08E03CD1	362842	901211	4/13/2006	19.00	289.00	289.20			-0.20		
Clay	21N08E18CCC1	362650.9	901550.33	4/17/2006	38.64	285.36	292.50			-7.14		
Clay	21N08E36ABB1	362502	900958	4/18/2006	4.05	278.95	280.40			-1.45		
Clay	21N09E31BDA1	362447	900851	4/12/2006	7.00	277.00	278.30	276.20	279.70	-1.30	0.80	-2.70
							Declines/Wells:			**33/36**	**13/25**	**20/20**
							Average Change:			**-1.64**	**-1.39**	**-5.67**
Craighead	13N01E03AAA1	354739	905753	3/1/2006	54.70	185.30	187.60	187.60	194.70	-2.30	-2.30	-9.40
Craighead	13N01E21CAB	354434	905945	3/1/2006	62.00	178.00	179.30	180.50	186.60	-1.30	-2.50	-8.60
Craighead	13N01E23DAA1	354435.4	905651.69	4/19/2006	71.02	170.98	172.50			-1.52		
Craighead	13N01E26BC1	353832	905800	3/1/2006	68.50	176.50	180.50			-4.00		
Craighead	13N02E02AAB1	354731	905032	3/1/2006	92.20	158.80	164.70	165.50	174.90	-5.90	-6.70	-16.10
Craighead	13N02E03AAA1	354733	905129	3/1/2006	86.90	163.10	165.50	167.60	174.40	-2.40	-4.50	-11.30

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Craighead	13N03E23CDA1	354419	904434	3/2/2006	79.60	169.40	170.80	169.50	169.00	-1.40	-0.10	0.40
Craighead	13N03E28CDB1	354322	904652	3/2/2006	109.00	141.00	148.30	149.50	158.10	-7.30	-8.50	-17.10
Craighead	13N03E29AAA1	354403.3	904712.98	4/19/2006	103.79	147.21	148.80			-1.59		
Craighead	13N03E35AAA1	354308	904401	3/2/2006	94.00	155.00	157.80			-2.80		
Craighead	13N04E12ABB1	354635	903656	4/19/2006	23.82	207.18	209.10		211.10	-1.92		-3.92
Craighead	13N04E15DBA1	354521	903857	3/2/2006	26.60	203.40	206.00	203.90	208.70	-2.60	-0.50	-5.30
Craighead	13N04E26BCC1	354340	903829	3/2/2006	26.50	198.50	199.40	196.70	201.50	-0.90	1.80	-3.00
Craighead	13N05E02CCC1	354648	903202	3/2/2006	12.90	217.10	218.10	216.90	218.00	-1.00	0.20	-0.90
Craighead	13N05E06DCC1	354637	903547	3/2/2006	20.00	209.00	210.50	206.20	211.20	-1.50	2.80	-2.20
Craighead	13N05E22BAD1	354449	903243	4/19/2006	15.39	210.61	214.40			-3.79		
Craighead	13N05E24BAC1	354451	903045	3/2/2006	12.20	212.80	216.70	217.10	215.90	-3.90	-4.30	-3.10
Craighead	13N06E21AD1	354421	902743	3/2/2006	10.00	210.00	208.00		213.40	2.00		-3.40
Craighead	13N07E02CAB1	354642	901901	3/2/2006	5.00	221.00	221.30	222.10		-0.30	-1.10	
Craighead	13N07E05ABB1	354716	902158	3/2/2006	12.30	212.70	219.50	218.20	217.80	-6.80	-5.50	-5.10
Craighead	13N07E20BBA1	354439.8	902216.44	4/19/2006	5.42	217.78	220.80	220.40	219.60	-3.02	-2.62	-1.82
Craighead	14N01E03ACB1	355246	905816	3/1/2006	50.90	198.10	199.50	202.80	209.70	-1.40	-4.70	-11.60
Craighead	14N01E10BAB1	355204	905828	3/1/2006	51.10	194.90	195.50	198.40	206.50	-0.60	-3.50	-11.60
Craighead	14N01E31DCA1	354817	910121	3/1/2006	59.10	191.90	191.00	195.70	202.20	0.90	-3.80	-10.30
Craighead	14N02E15DD1	354852	905044	3/1/2006	74.80	180.20	182.90			-2.70		
Craighead	14N02E18BDD1	355040.9	905419.37	4/19/2006	51.76	190.24	191.90			-1.66		
Craighead	14N02E27AA	354918	905125	3/27/2006	78.21	176.79	178.65			-1.86		
Craighead	14N05E25ABB1	354920.9	903025.35	4/19/2006	21.54	216.46	221.00	218.50		-4.54	-2.04	
Craighead	14N06E06BAA1	355234	902934	3/2/2006	22.40	217.60	220.80	217.70	222.00	-3.20	-0.10	-4.40
Craighead	14N06E27AAB1	354911.5	902559.08	4/19/2006	3.10	222.83	224.43		223.72	-1.60		-0.89
Craighead	14N07E14DDC1	354956	901831	3/2/2006	13.50	216.50	226.50	220.40	221.10	-10.00	-3.90	-4.60
Craighead	14N07E26DBB1	354833	901843	4/19/2006	9.76	218.24						
Craighead	15N02E12DCB1	355626	904930	3/1/2006	34.50	215.50	218.00	219.80	226.70	-2.50	-4.30	-11.20
Craighead	15N03E19ADA1	355502.2	904802.05	4/19/2006	49.16	212.84	214.00	218.00		-1.16	-5.16	
Craighead	15N03E31ADA1	355313	904805	3/1/2006	63.90	206.10	211.30		224.40	-5.20		-18.30
Craighead	15N05E22BAB1	355513	903241	3/2/2006	34.80	225.20	225.50	212.50	230.10	-0.30	12.70	-4.90
Craighead	15N06E04BAD1	355744	902706	3/2/2006	15.50	223.50	228.50	226.20	226.70	-5.00	-2.70	-3.20
Craighead	15N06E20DDD1	355426	902739	4/19/2006	11.22	222.78	226.50		227.30	-3.72		-4.52
Craighead	15N07E10DAB1	355622	901934	3/2/2006	9.80	225.20	227.30	227.50	225.70	-2.10	-2.30	-0.50
Craighead	15N07E10DBA1	355627.6	901943.75	4/19/2006	9.44	226.56	230.40			-3.84		
Craighead	15N07E35DCB1	355241	901831	3/2/2006	14.60	216.40	220.00	221.10	218.50	-3.60	-4.70	-2.10
							Declines/Wells:			**38/40**	**22/26**	**27/28**
							Average Change:			**-2.71**	**-2.24**	**-6.39**

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Crittenden	04N07E21AAD1	345643.8	902121.49	3/30/2006	13.49	188.51	194.00			-5.49		
Crittenden	05N07E09BCA1	350410	902138	4/27/2006	22.80	183.20						
Crittenden	05N07E28CBA1	350121.3	902139.85	3/30/2006	19.43	181.57	187.50		184.71	-5.93		-3.14
Crittenden	05N07E34BAB1	350059.4	902029.86	3/30/2006	19.46	183.54	192.20	190.80	187.46	-8.66	-7.26	-3.92
Crittenden	05N07E34CDD1	350010	902028	4/26/2006	19.00	186.00	195.40	189.60	190.64	-9.40	-3.60	-4.64
Crittenden	05N08E11CCD2	350344	901308	3/30/2006	28.32	182.68			185.81			-3.13
Crittenden	06N07E13BAA1	350849.6	901807.57	3/30/2006	20.28	184.72	187.60		189.78	-2.88		-5.06
Crittenden	06N07E13BAB1	350849	901811	4/26/2006	20.40	190.60						
Crittenden	07N06E30AAA1	351227	902923	4/26/2006	39.10	170.90						
Crittenden	07N07E31CCC1	351041.9	902358.97	3/30/2006	34.92	172.08	173.70			-1.62		
Crittenden	07N07E34DDA1	351116	901941	3/31/2006	27.20	187.80	188.40	188.80		-0.60	-1.00	
Crittenden	07N08E04BDC1	351525	902138	4/25/2006	19.10	191.90						
Crittenden	07N09E05CDD1	351453.3	900933.58	3/30/2006	16.94	197.06	207.10		204.05	-10.04		-6.99
Crittenden	08N06E01DCC1	352021	902408	4/25/2006	32.00	183.00	183.10	183.60	187.50	-0.10	-0.60	-4.50
Crittenden	08N06E06BBB1	352114	902912	4/25/2006	30.20	183.80						
Crittenden	08N06E26BBA1	351737	902552	3/24/2006	33.40	181.60	182.50			-0.90		
Crittenden	08N07E13CCC2	351828.3	901811.95	3/30/2006	29.20	191.80	192.60	192.50		-0.80	-0.70	
Crittenden	08N07E14DAA2	351854.4	901832.68	3/30/2006	29.98	189.02	189.85		195.46	-0.83		-6.44
Crittenden	08N07E32DAA1	351618	902146	4/25/2006	29.00	186.00	186.20	196.00	190.00	-0.20	-10.00	-4.00
Crittenden	08N08E06ABB1	352103	901644	4/25/2006	29.00	194.00	191.10	195.40		2.90	-1.40	
Crittenden	09N06E26ABC1	352255	902520	3/29/2006	29.55	180.45	180.90			-0.45		
Crittenden	09N07E02CDB1	352537	901905	4/25/2006	31.70	193.30	192.20	191.50	196.90	1.10	1.80	-3.60
Crittenden	09N07E10DDA1	352447.6	901924.64	3/30/2006	27.85	193.15	192.50			0.65		
Crittenden	09N07E20DDC1	352256	902158	3/24/2006	28.20	186.80	187.00	186.40		-0.20	0.40	
Crittenden	09N07E31AAA1	352200	902245	4/25/2006	31.80	188.20	188.50			-0.30		
Crittenden	09N07E31BAB1	352159.9	902326.57	3/30/2006	32.40	188.60	188.70	189.00		-0.10	-0.40	
Crittenden	09N08E08CCB1	352501	901608	4/25/2006	24.10	189.90	190.60			-0.70		
							Declines/Wells:			**18/21**	**8/10**	**10/10**
							Average Change:			**-2.12**	**-2.28**	**-4.54**
Cross	06N02E11DDB1	350923	905132	4/26/2006	62.00	138.00						
Cross	06N02E12AAA1	350934	904952	4/26/2006	78.00	157.00			165.30			-8.30
Cross	06N04E01DDB1	351028	903656	5/4/2006	37.00	168.00						
Cross	06N05E02BAB1	351039	903202	5/4/2006	30.00	175.00						
Cross	06N05E03CAA1	350934	903228	5/4/2006	39.00	171.00						
Cross	07N01E05BCD1	351550	910726	4/26/2006	73.00	142.00						
Cross	07N01E05CDA1	351517.5	910049.05	3/29/2006	73.64	143.36	144.50	138.70		-1.14	4.66	

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Cross	07N01E06DCD1	351532	910152	4/24/2006	73.00	147.00						
Cross	07N01E06BAA1	351536	910143	4/24/2006	72.00	148.00						
Cross	07N01E11AAA1	351501.3	905705.29	3/29/2006	76.58	140.42	141.60	145.00		-1.18	-4.58	
Cross	07N01E22BBB1	351321	905913	4/24/2006	68.00	147.00						
Cross	07N01E33BBA1	351134	910010	4/24/2006	68.00	147.00	143.00		156.80	4.00		-9.80
Cross	07N02E7BBB1	351439	905539	4/26/2006	75.00	145.00						
Cross	07N02E02CCD1	351544	905140	4/27/2006	80.00	145.00						
Cross	07N02E02CD	351510	905113	3/27/2006	81.37	143.63	144.43			-0.80		
Cross	07N02E04DCD1	351506	905935	4/27/2006	79.00	138.00						
Cross	07N02E10BBB1	351455	905205	4/27/2006	84.00	141.00						
Cross	07N02E12BBB1	351458	900502	4/27/2006	80.00	145.00						
Cross	07N02E15ACA1	351959	904623	4/27/2006	79.00	139.00						
Cross	07N02E28CCC1	351709	903947	4/26/2006	70.00	140.00						
Cross	07N02E29AAA1	351207	905417	4/26/2006	69.00	151.00						
Cross	07N02E29DDC1	351138.1	905409.17	3/29/2006	72.26	147.74	149.00		158.80	-1.26		-11.06
Cross	07N03E05ADA1	351548.9	904738.6	3/29/2006	124.05	129.95	143.20	145.20	149.87	-13.25	-15.25	-19.92
Cross	07N03E32DCC1	351045.3	904810.28	3/29/2006	96.38	154.62	154.30			0.32		
Cross	07N04E03BBD1	361618	903926	5/1/2006	29.00	176.00						
Cross	07N04E04DBB1	351534	904021	5/1/2006	30.00	175.00			179.30			-4.30
Cross	07N04E07AAA1	351457	904234	5/1/2006	45.00	170.00						
Cross	07N04E27ADB1	351221	903908	5/3/2006	27.00	173.00						
Cross	07N05E02AAB1	351600	903103	5/4/2006	41.00	169.00			180.60			-11.60
Cross	07N05E09BAA1	351506	903347	5/4/2006	33.00	177.00						
Cross	07N05E19CCC1	351237.7	903644.91	3/29/2006	37.27	169.73	168.50			1.23		
Cross	07N05E25ABA1	351228.9	903044.79	3/29/2006	36.71	168.29	168.90		176.70	-0.61		-8.41
Cross	07N05E32DDD1	352150	903512	5/4/2006	38.00	167.00						
Cross	08N01E02DDC1	352045	905801	4/27/2006	84.00	136.00						
Cross	08N01E05BBD1	352049	910025	4/24/2006	76.00	149.00						
Cross	08N01E16DBB1	351855	905933	4/27/2006	84.00	141.00	138.00		152.70	3.00		-11.70
Cross	08N01E17CAD1	351926	910056	4/24/2006	74.00	146.00						
Cross	08N01E32BBC1	351640	910116	4/24/2006	71.00	144.00						
Cross	08N02E12DCC1	351938	905002	4/27/2006	88.00	142.00	146.00		151.30	-4.00		-9.30
Cross	08N02E17AAA1	351923	905354	4/27/2006	85.00	140.00	145.00		152.50	-5.00		-12.50
Cross	08N02E29ABD1	351704	905421	4/27/2006	80.00	145.00						
Cross	08N03E09CAC1	351959	904623	4/27/2006	112.00	153.00						
Cross	08N04E27ABB1	351745	903916	5/1/2006	28.00	177.00	177.00			0.00		
Cross	08N05E17AAC1	351922	903448	5/4/2006	30.00	180.00						

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Cross	08N05E32ADD1	351631.7	903440.45	3/29/2006	29.57	174.43	177.40	174.50		-2.97	-0.07	
Cross	09N01E04CDB1	352617	905913	4/24/2006	88.00	137.00						
Cross	09N01E12BBC1	352505	905653	3/23/2006	90.09	135.91						
Cross	09N01E23ABB1	352127	910016	4/26/2006	79.00	146.00						
Cross	09N01E33BBA2	352202.8	910000.6	3/29/2006	81.10	143.90	145.20	140.70	156.94	-1.30	3.20	-13.04
Cross	09N01E36AAB1	352155	905605	4/27/2006	85.00	140.00	143.00		152.90	-3.00		-12.90
Cross	09N02E17ABB1	352438	905359	4/27/2006	94.00	141.00			152.50			-11.50
Cross	09N02E30CBB1	352243	905551	4/27/2006	87.00	138.00	139.00		150.60	-1.00		-12.60
Cross	09N02E32BBB1	352148	905431	4/28/2006	94.00	131.00						
Cross	09N03E03DCC1	352619	904529	4/27/2006	106.00	144.00						
Cross	09N03E17DDC1	352408.8	904725.6	3/29/2006	105.65	145.35	145.10	150.00	151.37	0.25	-4.65	-6.02
Cross	09N03E17DCD1	352422	904753	4/27/2006	99.00	146.00			155.50			-9.50
Cross	09N03E18DBB1	352412	904852	4/27/2006	98.00	112.00						
Cross	09N04E01AAC1	352552	903742	5/4/2006	15.00	190.00						
Cross	09N04E03DBB1	352614	903918	5/4/2006	25.00	190.00	187.00		191.10	3.00		-1.10
Cross	09N04E33DBB1	352205	904041	5/4/2006	37.00	168.00						
Cross	09N05E10DBC1	352451	903312	5/4/2006	23.00	187.00						
Cross	09N05E15CAC1	352419	903312	5/4/2006	23.00	187.00						
Cross	09N05E32BDB1	352150.5	903512.11	3/29/2006	30.63	179.37	179.30	178.20	183.48	0.07	1.17	-4.11
Cross	09N09E20AAA1	352333	905414	4/27/2006	94.00	136.00						
							Declines/Wells:			**12/20**	**4/7**	**18/18**
							Average Change:			**-1.18**	**-2.22**	**-9.87**
Desha	07S01E19ABA1	340428	910303	4/12/2006	21.00	133.00	143.40	141.00	131.08	-10.40	-8.00	1.92
Desha	08S03W33ABD1	335802.9	912338.18	3/17/2006	7.24	157.80	160.20	160.54	158.15	-2.40	-2.74	-0.35
Desha	09S01W08BDA1	335608	911234	4/7/2006	28.00	128.00	138.00	129.00	135.00	-10.00	-1.00	-7.00
Desha	09S01W15CBB1	335501	911055	4/7/2006	36.00	116.00	117.00	117.00		-1.00	-1.00	
Desha	09S02W17CBC1	355502	911920	4/7/2006	32.00	121.00	122.00			-1.00		
Desha	09S02W26DDC1	335256.6	911529.64	5/9/2006	29.33	119.94	120.54	119.18	127.76	-0.60	0.76	-7.82
Desha	09S03W17DCB1	335448.2	912456.66	3/17/2006	32.95	122.13	122.50	121.98	128.77	-0.37	0.15	-6.64
Desha	09S04W02CDA1	335823	912821	4/7/2006	42.00	121.00	125.00			-4.00		
Desha	09S04W06BCA1	335756	913242	3/17/2006	34.92	126.08						
Desha	10S02W11ADD1	335045	911517	4/7/2006	28.00	118.00	119.00	119.00	127.00	-1.00	-1.00	-9.00
Desha	10S02W24DBC1	334849.6	911453.44	3/17/2006	25.53	117.47	117.30			0.17		
Desha	10S03W26CAA1	334806	912144.55	3/17/2006	44.80	110.20	110.80			-0.60		
Desha	10S03W26CCC	334759	912235	4/5/2006	40.90	109.10	109.30	109.00		-0.20	0.10	
Desha	10S04W03ABB1	335208	912931	5/18/2006	33.71	131.29						

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Desha	10S04W03BAB1	335208	912947	5/18/2006	35.09	130.91						
Desha	10S04W09BCD1	335059	913052	3/28/2006	31.00	133.00	133.19			-0.19		
Desha	10S04W11DDA1	335031	912801	5/18/2006	31.50	123.50						
Desha	10S04W12BBB1	335048	912754	3/28/2006	32.00	123.00	123.50			-0.50		
Desha	10S04W19DAC1	334901	913233	3/28/2006	25.80	134.20	134.49			-0.29		
Desha	10S04W21AAA1	334929	913012	3/28/2006	27.00	133.00	133.30			-0.30		
Desha	11S03W31BBA1	334228	912651	3/17/2006	35.14	112.86						
Desha	11S03W21ABB1	334416	912412	4/7/2006	31.00	108.00	108.00			0.00		
Desha	11S02W15BAD1	334446	911635	4/7/2006	34.00	114.00	114.00	116.00	121.00	0.00	-2.00	-7.00
Desha	12S01W23DBC1	333803	911019	4/7/2006	26.00	120.00	130.00			-10.00		
Desha	12S01W33BAA1	333718	911205	3/17/2006	23.92	111.08			116.72			-5.64
Desha	13S02W05CDD1	333535	911938	4/7/2006	45.00	101.00	102.00			-1.00		
Desha	13S02W27CAC1	333224	911734.76	3/17/2006	30.83	102.17	103.30		103.40	-1.13		-1.23
Desha	13S02W32DBD1	333126	911917	4/7/2006	43.00	92.00	97.00	96.00	103.00	-5.00	-4.00	-11.00
Desha	13S03W10DAA1	333505.6	912301.83	3/17/2006	47.12	92.88	92.40		104.25	0.48		-11.37
Desha	13S03W11CAB1	333503	912241	4/7/2006	51.00	91.00	92.00	97.00	103.00	-1.00	-6.00	-12.00
							Declines/Wells:			**20/24**	**8/11**	**11/12**
							Average Change:			**-2.10**	**-2.25**	**-6.43**
Drew	11S04W08DBA1	334532	913136.2	3/16/2006	25.14	134.86	136.50			-1.64		
Drew	11S04W09BBB	334550	913404	4/4/2006	27.70	132.30	133.30	132.50		-1.00	-0.20	
Drew	11S04W35DC1	334144	912842	3/28/2006	26.46	127.54	129.44			-1.90		
Drew	11S05W08CCC1	334546.5	913837.16	3/16/2006	36.48	148.52	149.70		148.84	-1.18		-0.32
Drew	12S04W03ABB1	334133.9	912946.13	3/16/2006	24.23	130.77	132.60			-1.83		
Drew	12S04W25DBB1	333739	912738	3/24/2006	30.00	119.00	122.40	120.00	122.00	-3.40	-1.00	-3.00
Drew	13S04W09ACD1	333512	913034	4/13/2006	19.00	126.00	127.00	126.60	128.60	-1.00	-0.60	-2.60
Drew	13S04W28CDD1	333206	913100	3/16/2006	17.63	121.37						
Drew	13S04W33BAA1	333206	913100	3/16/2006	18.14	119.86	122.30			-2.44		
Drew	13S04W36DCC	333110	912757	3/23/2006	25.60	114.40	115.95	114.50		-1.55	-0.10	
Drew	13S05W29ADA1	333248	913747	3/16/2006	40.50	144.50	140.20			4.30		
Drew	13S06W03DDC1	333544.7	914201.6	3/16/2006	62.17	128.83	133.25		133.44	-4.42		-4.61
Drew	13S06W21DAA1	333324	914258	4/13/2006	74.00	133.00	134.00	134.00	135.80	-1.00	-1.00	-2.80
Drew	14S04W03ADD1	333050	912929	4/13/2006	27.00	114.00		118.00	119.00		-4.00	-5.00
Drew	14S04W03CBA1	333039	912944	3/23/2006	18.20	121.80	119.15	116.00		2.65	5.80	
Drew	14S04W05CBA1	333047	913218	4/13/2006	14.00	117.00	119.00	115.00	122.00	-2.00	2.00	-5.00
Drew	14S04W05CBC1	333042	913226	4/13/2006	15.00	116.00	120.00	119.00		-4.00	-3.00	

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Drew	14S04W22CAA1	332805	912957	4/13/2006	13.00	122.00	115.00	114.00	117.00	7.00	8.00	5.00
Drew	14S05W23DCB1	332801.6	913512.21	3/16/2006	29.77	131.23	132.50			-1.27		
							Declines/Wells:			**14/17**	**7/10**	**7/8**
							Average Change:			**-0.86**	**0.59**	**-2.29**
Greene	16N03E03BA1	360315.9	904515.85	4/18/2006	30.73	229.27	231.20			-1.93		
Greene	16N03E05BBB1	360316	904750	4/11/2006	30.50	226.50	228.10	228.50		-1.60	-2.00	
Greene	16N03E16DDD1	360049	904547	4/11/2006	26.80	231.20	226.40	233.00		4.80	-1.80	
Greene	16N03E19DBC1	360000	904519	4/21/2006	38.60	226.40	228.20	230.00		-1.80	-3.60	
Greene	16N03E29ACC1	355926	904722	4/11/2006	31.50	225.50	227.60	236.00	235.80	-2.10	-10.50	-10.30
Greene	16N06E03CCC1	360224.1	902625.9	4/18/2006	62.39	195.61	216.90	208.00	212.65	-21.29	-12.39	-17.04
Greene	16N06E09ABB1	360215	902651	4/11/2006	49.90	211.10	212.20	210.70	220.20	-1.10	0.40	-9.10
Greene	16N06E21BAA1	360031	902705	4/11/2006	27.10	221.90	225.20	218.80	221.70	-3.30	3.10	0.20
Greene	16N06E28ABB1	355938.3	902657.01	4/18/2006	25.76	225.24	228.60		227.36	-3.36		-2.12
Greene	17N03E02BDB1	360831	904413	4/18/2006	32.60	233.40						
Greene	17N03E02DCC1	360806	904352	4/11/2006	20.20	246.80	235.70	238.30		11.10	8.50	
Greene	17N04E07DDA1	360712	904129	4/11/2006	42.60	228.40	234.10			-5.70		
Greene	17N04E30CDC1	360409.1	904217.57	4/18/2006	37.39	227.61	229.60	228.40	237.50	-1.99	-0.79	-9.89
Greene	17N06E15ABC1	360631	902546	4/11/2006	31.10	236.90		229.50	244.00		7.40	-7.10
Greene	17N07E03CCC1	360744	901951	4/11/2006	5.80	240.20	240.10	239.70	240.00	0.10	0.50	0.20
Greene	17N07E18ABB1	360638	902234	4/18/2006	8.86	236.14						
Greene	17N07E29CBC1	360419	902201	4/11/2006	6.30	238.70	241.70	241.30	239.80	-3.00	-2.60	-1.10
Greene	18N03E24ABA1	361141	904234	4/21/2006	31.40	238.60	240.13	243.30		-1.53	-4.70	
Greene	18N04E04AAC1	361356	903854	4/11/2006	32.60	240.40	241.00	242.90		-0.60	-2.50	
Greene	18N04E21CBD1	361052.3	903724.76	4/18/2006	55.63	238.37	239.70			-1.33		
Greene	18N06E23ACB1	361056	902357	4/11/2006	14.90	262.10	264.40	254.00		-2.30	8.10	
Greene	18N07E17BAB1	361203	902105	4/11/2006	11.30	250.70	255.40	252.90	254.80	-4.70	-2.20	-4.10
Greene	18N07E20BBA1	361110.4	902113.23	4/18/2006	10.92	246.08	251.50		250.15	-5.42		-4.07
Greene	18N07E23CCD1	361022	901747	4/21/2006	8.80	241.20	242.80	243.20		-1.60	-2.00	
Greene	19N03E26AD1	361600.7	904258.43	4/18/2006	29.50	251.50	253.36			-1.86		
Greene	19N03E33DDD1	361418	904516	4/11/2006	36.00	240.00	241.50	244.20		-1.50	-4.20	
Greene	19N05E34AAD1	361437	903102	4/11/2006	34.20	247.80	250.50	251.20		-2.70	-3.40	
							Declines/Wells:			**21/24**	**13/19**	**9/11**
							Average Change:			**-2.28**	**-1.30**	**-5.86**
Independence	11N04W02ABB1	353650	912416	4/4/2006	10.20	216.80	218.00	218.50	216.90	-1.20	-1.70	-0.10

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Independence	12N04W14DD1	353929.4	912236.26	3/23/2006	27.03	203.97	209.50	209.50		-5.53	-5.53	
Independence	12N04W34CBB1	353720.1	912512.5	3/23/2006	23.51	207.49	211.90		206.98	-4.41		0.51
Independence	12N05W36AAA1	353738	912827.22	3/23/2006	25.64	210.36	215.10	225.00	221.60	-4.74	-14.64	-11.24
Independence	12N05W36ABA1	353745	912841	4/4/2006	14.00	217.00						
Independence	14N03W12CCB1	355205	911559	4/4/2006	2.80	234.20	235.10			-0.90		
Independence	14N03W14CBB1	355101	911703	4/4/2006	2.40	232.60	234.50	234.30	233.20	-1.90	-1.70	-0.60
Independence	14N03W14DAA2	355107	911602.11	3/23/2006	4.89	225.11	226.00	227.00		-0.89	-1.89	
Independence	14N03W14DBB1	355106	911640.42	3/23/2006	5.93	224.07	226.40		227.21	-2.33		-3.14
							Declines/Wells:			**8/8**	**5/5**	**4/5**
							Average Change:			**-2.74**	**-5.09**	**-2.91**
Jackson	09N01W15DDD1	352357	910433	4/20/2006	54.60	165.40	161.30	163.50	172.50	4.10	1.90	-7.10
Jackson	09N01W22ADD1	352331.6	910432.57	3/27/2006	61.72	153.28	154.30		215.00	-1.02		
Jackson	09N01W30BAC1	352258	910813	4/20/2006	44.50	173.50	175.50	176.10	183.20	-2.00	-2.60	-9.70
Jackson	09N02W32BBB1	352215	911344	4/20/2006	34.00	186.00	190.40	188.60	195.00	-4.40	-2.60	-9.00
Jackson	09N02W32CBB1	352151.8	911347.79	3/27/2006	30.29	189.71	191.00		193.91	-1.29		-4.20
Jackson	10N01W04DCB1	353114	910602	4/8/2006	54.40	170.60	173.00	175.00		-2.40	-4.40	
Jackson	10N01W05ADD1	353132	910702	4/20/2006	47.30	179.70	181.10	183.40	189.60	-1.40	-3.70	-9.90
Jackson	10N01W10ABA1	353055	910445	4/20/2006	59.20	163.80	166.40	167.60	174.10	-2.60	-3.80	-10.30
Jackson	10N02W29ABB1	352828	911311	3/27/2006	27.94	199.06						
Jackson	11N01W10DA	353358	910428	3/23/2006	53.68	177.32	179.03			-1.71		
Jackson	11N01W26AAD1	353329.8	910323.21	3/24/2006	67.06	159.94	155.70	164.70	169.30	4.24	-4.76	-9.36
Jackson	11N01W29AAD1	353338.7	910635.27	3/24/2006	39.07	185.93	184.95			0.98		
Jackson	11N02W23ADC1	353357	911002	4/20/2006	26.00	195.00	196.00			-1.00		
Jackson	11N1W25BDA1	353322	910228	4/20/2006	66.20	160.80	161.40			-0.60		
Jackson	11N03W05ABA1	353722	912012	4/12/2006	21.10	202.90	212.50			-9.60		
Jackson	11N03W06DAB1	353655.1	912008.5	3/24/2006	22.23	200.77	207.70	210.40		-6.93	-9.63	
Jackson	11N03W07BBD1	353615	912047	4/8/2006	22.23	192.77	199.50	201.47	196.28	-6.73	-8.70	-3.51
Jackson	12N01W11BCB1	354127	910416	4/12/2006	38.20	194.80	195.60	195.60	202.00	-0.80	-0.80	-7.20
Jackson	12N01W30CCC2	353812	910821	4/12/2006	33.00	194.00	195.50	195.10	202.40	-1.50	-1.10	-8.40
Jackson	12N01W36CBC1	353724	910317	4/12/2006	52.90	183.10	184.30	185.00	189.50	-1.20	-1.90	-6.40
Jackson	12N02W25ABB2	353910	910852.17	3/24/2006	33.24	200.76	200.10		208.13	0.66		-7.37
Jackson	13N01W20AAA1	354514.1	910627.47	3/27/2006	39.26	202.74	202.80		213.62	-0.06		-10.88
Jackson	13N01W27DDD1	354327	910435	4/8/2006	36.40	196.60		198.00			-1.40	
Jackson	13N03W15CDD1	354525.9	911749.46	3/27/2006	16.93	215.07	218.40			-3.33		
Jackson	13N03W15DCB1	354540	911718	4/12/2006	17.90	220.10	225.10	219.50	220.80	-5.00	0.60	-0.70
Jackson	13N03W36ABB1	354337	911532	4/12/2006	16.60	224.40	227.80	224.20	228.40	-3.40	0.20	-4.00

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Jackson	14N01W08AAA1	355216	910623	4/12/2006	36.00	216.00	218.70	218.70	225.00	-2.70	-2.70	-9.00
Jackson	14N01W09AAA1	355220.4	910515.16	3/27/2006	42.43	208.57	211.60	211.70		-3.03	-3.13	
Jackson	14N01W19BBB1	355032	910823	4/12/2006	32.00	214.00	216.20	216.10	222.80	-2.20	-2.10	-8.80
Jackson	14N01W26BCB1	354922	910407	4/12/2006	43.30	203.70	202.30	205.90	212.40	1.40	-2.20	-8.70
Jackson	14N01W33CCD1	354759	910610	4/12/2006	39.30	205.70	206.20	207.90	215.30	-0.50	-2.20	-9.60
Jackson	14N02W22BBC1	355026	911145	4/12/2006	28.00	222.00	224.20	222.50	225.20	-2.20	-0.50	-3.20
							Declines/Wells:			**25/30**	**18/21**	**20/20**
							Average Change:			**-1.87**	**-2.64**	**-7.37**
Jefferson	03S08W24BBC1	342620.4	914953.19	4/3/2006	51.03	150.97	153.00			-2.03		
Jefferson	03S09W06DDA1	342839.9	920036.62	4/3/2006	37.94	187.06						
Jefferson	03S09W14BCD1	342712	915712	4/6/2006	56.00	168.00	161.80	180.00	191.00	6.20	-12.00	-23.00
Jefferson	03S09W22AAA1	342639.6	915728.43	4/6/2006	40.70	177.30	175.10	185.00		2.20	-7.70	
Jefferson	03S09W29CBD1	342516.8	920023.32	4/3/2006	29.11	186.89	188.80			-1.91		
Jefferson	03S09W36ACC1	342428	915555	4/7/2006	27.90	186.10	175.00	180.00	185.00	11.10	6.10	1.10
Jefferson	03S09W32CBC1	342415	902248	4/11/2006	31.34	186.66	189.70			-3.04		
Jefferson	03S10W26BBB2	342427	920249	4/6/2006	18.80	196.20	203.50	195.00	200.00	-7.30	1.20	-3.80
Jefferson	03S10W35BBC1	342446	920357	4/6/2006	15.70	199.30						
Jefferson	04S07W08CBB1	342226	914745	4/11/2006	47.75	147.25	145.60			1.65		
Jefferson	04S07W35DDB1	341836	914347	4/6/2006	27.30	157.70	159.20	159.00	162.50	-1.50	-1.30	-4.80
Jefferson	04S08W13DCB1	342122.9	914926.45	4/3/2006	48.34	155.66	163.20			-7.54		
Jefferson	04S09W02CBD1	342325	915717	4/6/2006	33.30	178.70	180.50	176.00		-1.80	2.70	
Jefferson	04S09W32DDA1	341859	920008	4/6/2006	23.00	189.00	193.50	188.00	196.00	-4.50	1.00	-7.00
Jefferson	05S06W31CAA1	341329.9	914206.1	4/4/2006	19.85	169.37	173.42		171.72	-4.05		-2.35
Jefferson	05S07W28CCC1	341412	914651	4/6/2006	14.20	180.80						
Jefferson	05S08W12DAA1	341712	914907	4/3/2006	18.98	175.27	180.25			-4.98		
Jefferson	06S05W15BCA1	341023	913245	4/4/2006	18.58	158.56	159.44	157.29	159.98	-0.88	1.27	-1.42
Jefferson	06S06W23AAD1	341006.7	913712.2	3/3/2006	21.23	167.78	171.41	166.81	169.69	-3.63	0.97	-1.91
Jefferson	06S07W14BAA1	341125	914425	4/4/2006	16.07	182.93						
Jefferson	07S07W16BAA1	340722	914828	4/6/2006	28.00	160.00		159.00			1.00	
Jefferson	07S08W06BAA1	340858.5	915647.26	4/4/2006	18.65	183.66	186.31			-2.65		
							Declines/Wells:			**13/17**	**3/10**	**7/8**
							Average Change:			**-1.45**	**-0.68**	**-5.40**
Lawrence	15N01E11ADD1	355657	905638	4/18/2006	44.40	210.60	211.00	215.60	218.60	-0.40	-5.00	-8.00
Lawrence	15N01W03BAB1	355831	910441	4/18/2006	36.20	222.80	222.60	222.60	232.00	0.20	0.20	-9.20

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Lawrence	15N01E26DDA1	355412	905651	4/17/2006	51.93	199.07	201.40			-2.33		
Lawrence	15N01W35CBB1	355336.2	910356.33	4/17/2006	44.98	205.02	206.30	208.30		-1.28	-3.28	
Lawrence	16N01E11DAC2	360203	905639.37	4/17/2006	46.76	215.24	214.60			0.64		
Lawrence	16N01E27ADC1	355938	905750	4/21/2006	50.50	209.50	213.00	214.50		-3.50	-5.00	
Lawrence	16N01W30DDC1	355936.9	910723.26	4/18/2006	21.60	233.40	233.50	230.00	235.60	-0.10	3.40	-2.20
Lawrence	16N02E09AAD1	360219	905212	4/18/2006	40.30	220.70	222.80	225.90	227.10	-2.10	-5.20	-6.40
Lawrence	16N02E34CBB1	355831	905208	4/18/2006	48.10	206.90	210.20	215.40	217.60	-3.30	-8.50	-10.70
Lawrence	16N02E35AAA1	360409	905004	4/18/2006	49.20	206.80	207.80		217.70	-1.00		-10.90
Lawrence	17N01E02BBA1	360901	905707	4/18/2006	15.00	245.00	247.10	248.00	250.00	-2.10	-3.00	-5.00
Lawrence	17N01E26CCC1	360522	905738	4/21/2006	36.00	229.00	231.80	232.10		-2.80	-3.10	
Lawrence	17N01W36AAB1	360435	910158	4/18/2006	13.10	243.90	246.00	245.80	248.00	-2.10	-1.90	-4.10
Lawrence	17N02E04DCA1	360758	905224	4/18/2006	40.90	229.10	230.60	233.90	238.00	-1.50	-4.80	-8.90
Lawrence	17N02E19CDC1	360515.9	905449.43	4/17/2006	38.94	226.06	226.80	229.00	234.60	-0.74	-2.94	-8.54
Lawrence	17N02E25CBD1	360423	904948	4/18/2006	38.10	226.90	227.60	233.70	236.50	-0.70	-6.80	-9.60
							Declines/Wells:			**14/16**	**11/13**	**11/11**
							Average Change:			**-1.44**	**-3.53**	**-7.59**
Lee	01N01E04AAB1	344358	910015	5/2/2006	29.30	145.70	155.00	149.50	155.20	-9.30	-3.80	-9.50
Lee	01N01E09CCC1	344215	910054	5/2/2006	32.50	149.50	155.50	153.50	159.70	-6.00	-4.00	-10.20
Lee	01N01E21CCC1	344030	910055	5/2/2006	54.00	155.00	157.00			-2.00		
Lee	01N01E24CBD1	344033	905729	5/3/2006	16.30	168.70	175.70	169.00	171.80	-7.00	-0.30	-3.10
Lee	01N02E01ADD1	344330	905016	5/28/2006	28.00	179.00	190.00	175.00	181.00	-11.00	4.00	-2.00
Lee	01N02E11BAB1	344255	905208	4/22/2006	32.00	170.00	185.00	175.00		-15.00	-5.00	
Lee	01N02E12ABB1	344254	905040	5/2/2006	27.00	179.00	188.00	173.00	179.20	-9.00	6.00	-0.20
Lee	01N02E22CBA1	344056	905318	5/2/2006	28.50	171.50	181.50	167.70	174.40	-10.00	3.80	-2.90
Lee	01N02E33CBB1	343858	905434	5/2/2006	16.00	170.00	177.00	171.00	172.60	-7.00	-1.00	-2.60
Lee	01N02E33CCB1	343851	905433	5/2/2006	14.00	171.00	177.00	172.00	172.80	-6.00	-1.00	-1.80
Lee	01N03E02BBC1	344339.3	904601.14	3/21/2006	48.57	187.86	198.03		187.62	-10.17		0.24
Lee	01N03E7BBB1	344258	905044	4/12/2006	18.50	181.50		162.60			18.90	
Lee	01N03E27ADD1	343952	904605	5/2/2006	16.00	188.00	201.00	191.00	190.40	-13.00	-3.00	-2.40
Lee	01N03E35BBA1	343923	904549	3/21/2006	10.24	191.76			190.99			0.77
Lee	02N01E21BAA1	344633	910005	5/2/2006	35.30	149.70	146.00	152.00	160.70	3.70	-2.30	-11.00
Lee	02N01E23BAA2	344631.7	905820.4	3/21/2006	50.18	151.82	152.70		161.18	-0.88		-9.36
Lee	02N01E29ABC1	344542	910108	4/12/2006	51.00	134.00	138.50	138.20		-4.50	-4.20	
Lee	02N01W12BAA1	344828.3	910329.55	3/21/2006	43.52	141.48	142.85			-1.37		
Lee	02N01W34DDC1	344410	910520	5/2/2006	52.00	128.00	133.00	130.00	157.00	-5.00	-2.00	-29.00
Lee	02N02E07ACA1	344752	905602	4/12/2006	46.40	153.60	154.30	156.70		-0.70	-3.10	

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Lee	02N02E08ADC1	344807.3	905338.75	2/15/2006	43.46	157.54	158.50			-0.96		
Lee	02N02E21ABC1	344621.6	905358.16	3/21/2006	37.73	162.27	163.15		169.98	-0.88		-7.71
Lee	02N02E22BBB1	344628	905327	5/2/2006	28.00	172.00	178.00	165.80	170.40	-6.00	6.20	1.60
Lee	02N03E08AAD1	344810	904837	3/21/2006	43.89	167.11						
Lee	02N03E09DDD1	344723	904707	5/2/2006	51.00	169.00	178.00	169.00	172.30	-9.00	0.00	-3.30
Lee	02N03E29CAD1	344500	904846	5/2/2006	50.00	165.00	185.00	168.00	175.00	-20.00	-3.00	-10.00
Lee	02N04E03ABD1	344855	903954	5/3/2006	24.50	167.50	171.00	168.30	169.30	-3.50	-0.80	-1.80
Lee	02N04E15DAC1	344636.7	903950.39	3/21/2006	17.62	174.38	175.70			-1.32		
Lee	03N01E32BCC1	344951	910150	5/2/2006	62.00	138.00	138.00	141.50	148.70	0.00	-3.50	-10.70
Lee	03N01W10DCC1	345201	910455	4/12/2006	71.80	133.20	132.00	139.80		1.20	-6.60	
Lee	03N01E16CBA1	345222	910039	3/21/2006	63.57	138.43						
Lee	03N02E12CDC1	345239	905053	5/2/2006	41.00	169.00	166.00	164.50	170.00	3.00	4.50	-1.00
Lee	03N02E13BBA1	345237.4	905107.32	3/22/2006	49.98	162.02	164.50			-2.48		
Lee	03N02E29DAD1	345013.6	905429.78	3/21/2006	42.71	162.29	162.70		168.73	-0.41		-6.44
Lee	03N03E05CDD1	345327	904837	5/1/2006	49.50	154.50	159.00	160.00	164.00	-4.50	-5.50	-9.50
Lee	03N03E18DAB1	345206	904919	5/2/2006	29.00	167.00	170.00	167.00	176.00	-3.00	0.00	-9.00
Lee	03N03E32CAB1	344932.7	904926.23	3/22/2006	49.92	154.08	158.50			-4.42		
Lee	03N04E07CBB1	345245	904312	5/1/2006	30.00	170.00	175.00	170.00	172.50	-5.00	0.00	-2.50
Lee	03N05E14DDA1	345148.1	903203.25	3/21/2006	13.56	179.44	181.80			-2.36		
Lee	03N05E26ADC1	345020	903215	5/3/2006	7.00	178.00	181.00	176.00	178.20	-3.00	2.00	-0.20
							Declines/Wells:			**32/36**	**16/26**	**23/26**
							Average Change:			**-4.91**	**-0.14**	**-5.52**
Lincoln	07S06W03CCA2	340828	914114	4/12/2006	19.00	171.00	172.00	179.00	173.00	-1.00	-8.00	-2.00
Lincoln	07S07W36CBD1	340411	914529	4/12/2006	38.00	145.00	146.00	138.00	157.00	-1.00	7.00	-12.00
Lincoln	08S04W06ABD1	340341	913116	4/12/2006	20.00	151.00	158.00	158.00	159.00	-7.00	-7.00	-8.00
Lincoln	08S04W08BBB2	340253.9	913100.76	3/20/2006	21.87	149.13	142.00			7.13		
Lincoln	08S04W31CBA1	335901.1	913149.69	3/20/2006	32.63	129.27	128.85	129.20	139.07	0.42	0.07	-9.80
Lincoln	08S05W12DBA1	340229	913222	4/12/2006	22.00	149.00	150.00			-1.00		
Lincoln	08S05W21DCD1	340027	913533	4/12/2006	35.00	134.00	134.00	128.00		0.00	6.00	
Lincoln	08S05W29ABC1	340021	913044	4/12/2006	41.00	135.00	131.00		141.00	4.00		-6.00
Lincoln	08S05W32DCC1	335840	913644	4/12/2006	43.00	129.00	128.00	126.00	138.00	1.00	3.00	-9.00
Lincoln	08S06W02ACB1	340338.8	913957.73	3/20/2006	42.25	138.78	139.93		148.30	-1.15		-9.52
Lincoln	08S07W05DDD1	340301	914903	3/20/2006	29.96	160.04	161.00			-0.96		
Lincoln	09S04W06CBB1	335721	913252	4/12/2006	40.00	123.00	124.00	126.00	136.00	-1.00	-3.00	-13.00
Lincoln	09S05W14ABC1	335553	913439.08	3/20/2006	37.21	135.29	135.30	137.80	142.42	-0.01	-2.51	-7.13
Lincoln	09S05W17BCB1	335551.6	913819.95	3/20/2006	41.09	129.91	134.50			-4.59		

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Lincoln	09S06W04BCD1	335821.4	914345.83	3/20/2006	38.12	142.88	140.90			1.98		
Lincoln	09S06W04BDD1	335759	914335	4/12/2006	36.00	142.00	141.00	139.00	150.00	1.00	3.00	-8.00
Lincoln	09S06W23CDB1	335439.6	914136.37	3/20/2006	29.73	145.27	145.50		147.00	-0.23		-1.73
Lincoln	09S06W24DAA1	335452	913954	4/12/2006	31.00	146.00	144.00			2.00		
Lincoln	10S05W04BBB1	335233	913725	4/4/2006	28.40	141.60	141.70			-0.10		
Lincoln	10S05W05CB	335529	913832	3/22/2006	26.35	145.65	146.70			-1.05		
Lincoln	10S05W06DCC1	335155.3	913907.96	3/20/2006	29.92	145.08	148.85			-3.77		
							Declines/Wells:			**13/21**	**4/9**	**11/11**
							Average Change:			**-0.25**	**-0.16**	**-7.83**
Lonoke	01N08W03DDA1	344411	915050	4/17/2006	139.20	89.80	84.60	101.00	111.20	5.20	-11.20	-21.40
Lonoke	01N09W13DAB1	344235.2	915517.01	4/13/2006	86.74	139.26	138.50			0.76		
Lonoke	01N09W07DAA1	344330	900028	4/17/2006	47.00	193.00	192.20	190.50		0.80	2.50	
Lonoke	01N10W15CDA1	344236	920414	4/17/2006	24.70	215.30	217.60	214.10	218.00	-2.30	1.20	-2.70
Lonoke	01S06W31ABB1	343459.4	914131.48	4/13/2006	78.13	121.87	121.65			0.22		
Lonoke	01S06W32BBB1	343501	914056	4/17/2006	77.00	124.00	119.70	118.90	126.00	4.30	5.10	-2.00
Lonoke	01S07W12ABA1	343834.3	914229.84	4/13/2006	69.13	137.87	145.30			-7.43		
Lonoke	01S08W24CDD1	343605.6	914912.37	4/13/2006	81.00	129.00	129.25			-0.25		
Lonoke	01S09W02DDD1	343857	915623	4/17/2006	83.00	147.00	146.70	143.30		0.30	3.70	
Lonoke	01S09W36CCC1	343435.3	915618.98	4/13/2006	62.51	157.49	158.06	162.60	167.00	-0.57	-5.11	-9.51
Lonoke	01S10W01ACB1	343926.8	920214.96	4/13/2006	45.92	190.08	196.80	190.00		-6.72	0.08	
Lonoke	01S10W11CCB1	343839	920337	3/15/2006	31.87	203.13	204.83			-1.70		
Lonoke	02N07W07DAA1	344845	914707	4/17/2006	140.20	91.80	88.40	106.00	115.30	3.40	-14.20	-23.50
Lonoke	02N07W16BAB1	344815.2	914539.5	4/13/2006	137.64	102.36	102.60			-0.24		
Lonoke	02N08W16ABC1	344806.5	915113.61	4/13/2006	128.39	101.61	111.90	105.20	120.58	-10.29	-3.59	-18.97
Lonoke	02N08W23CAB1	344659	915118	4/17/2006	129.70	99.30	85.60	98.60	106.10	13.70	0.70	-6.80
Lonoke	02N08W34BA1	344543	915106	3/16/2006	128.79	101.21	102.78			-1.57		
Lonoke	02N09W02BDB1	344955.1	915840.93	4/13/2006	126.04	124.96	131.30	123.70	145.27	-6.34	1.26	-20.31
Lonoke	02N10W15ACC1	344807	920352	4/17/2006	31.50	210.50	211.40	210.00	210.90	-0.90	0.50	-0.40
Lonoke	02S07W05CDC1	343326	914715	4/17/2006	70.40	134.60	134.50	139.00		0.10	-4.40	
Lonoke	02S07W10CCB1	343246.5	914524.67	4/13/2006	62.39	138.61	138.70			-0.09		
Lonoke	02S07W20ACD1	343112	914655	4/17/2006	60.60	140.40	141.40	143.10		-1.00	-2.70	
Lonoke	02S08W06AAB1	343430	915447	3/15/2006	67.34	153.66	154.31			-0.65		
Lonoke	02S08W13BBB1	343232	914935	4/13/2006	59.85	140.15						
Lonoke	02S08W28CDC	343008	915237	3/15/2006	60.50	150.50	151.32			-0.82		
Lonoke	02S08W34DBB1	343003	915149.75	4/13/2006	66.62	147.38	149.99			-2.61		
Lonoke	02S09W30CDD1	343014.3	920116.01	4/13/2006	39.44	186.56	189.60		189.30	-3.04		-2.74

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Lonoke	02S09W35AB1	343008	915652	4/17/2006	50.00	167.00	162.20	168.40		4.80	-1.40	
Lonoke	03N07W08BDB1	345406.6	914638.28	5/4/2006	96.59	153.41	157.22	156.78		-3.81	-3.37	
Lonoke	03N07W15DBC2	345252.8	914416.62	4/13/2006	82.43	144.57	145.65		150.78	-1.08		-6.21
Lonoke	03N07W29ADA1	345128.5	914558.4	5/4/2006	94.92	139.08	142.00	147.47		-2.92	-8.39	
Lonoke	03N07W35CDC2	344957.2	914332.11	4/13/2006	116.10	115.90	116.40			-0.50		
Lonoke	03N08W03BAA1	345518.5	915053.52	5/3/2006	94.85	165.15	168.01	173.80		-2.86	-8.65	
Lonoke	03N08W03CCC1	345429.9	915123.2	5/3/2006	102.29	157.71	159.60	166.94		-1.89	-9.23	
Lonoke	03N08W05CCC1	345429.4	915323.47	5/3/2006	80.66	176.34	178.03	180.15		-1.69	-3.81	
Lonoke	03N08W08ABA1	345427	915247.87	5/3/2006	92.19	165.81	167.55	169.03		-1.74	-3.22	
Lonoke	03N08W10ACB1	345414.7	915052.74	5/4/2006	91.13	158.87	162.13	167.70		-3.26	-8.83	
Lonoke	03N08W10ADD1	345401.1	915022.78	5/4/2006	89.83	160.17	160.50	167.66		-0.33	-7.49	
Lonoke	03N08W11ABD1	345419.1	914935.94	5/3/2006	102.95	157.05	157.97	167.55		-0.92	-10.50	
Lonoke	03N08W11ACA1	345412.7	914934.26	5/2/2006	99.77	156.23	156.66	164.02		-0.43	-7.79	
Lonoke	03N08W21BCC1	345157	915224	4/13/2006	81.66	165.34	143.00		197.56	22.34		-32.22
Lonoke	03N08W29BBB1	345147.1	915332.81	5/3/2006	112.01	136.99	137.62	141.72		-0.63	-4.73	
Lonoke	03N08W29BCC1	345125	915333.4	5/3/2006	128.60	121.40	122.75	140.64		-1.35	-19.24	
Lonoke	03N08W32ABB1	345057	915257	5/2/2006	118.35	131.65		135.36			-3.71	
Lonoke	03N08W32ABB2	345057	915258	4/13/2006	118.68	131.32	132.06			-0.74		
Lonoke	03N08W32ABB3	345058.7	915255.43	4/13/2006	56.46	193.54						
Lonoke	03N08W34ADD1	345034.9	915028.32	5/5/2006	118.48	121.52	122.21	125.15		-0.69	-3.63	
Lonoke	04N08W05ACA1	350020.5	915246.51	5/4/2006	45.02	192.98	194.73	193.17		-1.75	-0.19	
Lonoke	04N08W10BDD1	345917.1	915055.45	5/4/2006	29.83	188.17	194.54	193.17		-6.37	-5.00	
Lonoke	04N08W15BCB2	345832.9	915121.25	4/13/2006	34.86	190.14	192.80	192.10	195.08	-2.66	-1.96	-4.94
Lonoke	04N08W16DCC1	345757.3	915154.02	5/4/2006	46.06	178.94	180.16	181.93		-1.22	-2.99	
Lonoke	04N08W19BBB1	345753	915431	5/5/2006	10.82	289.18		284.13			5.05	
Lonoke	04N08W26AAD1	345652.2	914916.76	5/4/2006	72.67	173.33	175.98	179.41		-2.65	-6.08	
Lonoke	04N08W28CAC1	345620.3	915215.78	5/3/2006	55.11	179.89	181.26	184.91		-1.37	-5.02	
Lonoke	04N08W28CAD1	345626.1	915203.96	5/14/2006	70.09	178.91	180.02	183.23		-1.11	-4.32	
Lonoke	04N08W28CCC1	345614.6	915225.31	5/3/2006	60.44	179.56	180.69	184.20		-1.13	-4.64	
Lonoke	04N08W31CBB2	345547.4	915439.07	5/4/2006	26.96	256.04	256.20	252.67		-0.16	3.37	
Lonoke	04N08W36DBB1	345540	914914	5/5/2006	94.09	164.91		171.65			-6.74	
							Declines/Wells:			**42/53**	**30/40**	**13/13**
							Average Change:			**-0.64**	**-3.97**	**-11.67**
Mississippi	10N08E21ABA1	352852	901415	4/18/2006	25.00	199.00	199.00	199.00	202.50	0.00	0.00	-3.50
Mississippi	10N08E21BDC1	352830	901407	4/18/2006	25.00	199.00	200.00	200.00	202.50	-1.00	-1.00	-3.50
Mississippi	10N08E22ABA2	352850.9	901312.16	4/20/2006	24.04	199.96	201.40			-1.44		

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Mississippi	10N09E08ACC1	352949.1	900925.66	4/20/2006	15.84	214.16	217.30	216.10		-3.14	-1.94	
Mississippi	11N09E34BBB1	353217.7	900715.17	4/20/2006	16.70	218.30	222.10		222.67	-3.80		-4.37
Mississippi	11N10E09BCB1	353530	900202	4/14/2006	20.00	216.00	222.00	218.00	222.42	-6.00	-2.00	-6.42
Mississippi	12N08E08BCB1	354047.1	901559.25	4/20/2006	10.07	214.93	219.00		218.97	-4.07		-4.04
Mississippi	12N08E27ACA1	353851	901104	3/24/2006	23.50	201.50	214.30	206.20		-12.80	-4.70	
Mississippi	12N08E28DDB1	353707	901406	4/18/2006	20.00	205.00	213.00	206.50	211.83	-8.00	-1.50	-6.83
Mississippi	12N09E12ABC1	354054	900449	4/14/2006	17.00	215.00	223.00	221.00	221.83	-8.00	-6.00	-6.83
Mississippi	12N10E04CAA1	354124	900136	4/14/2006	20.00	215.00	227.00	222.50	227.50	-12.00	-7.50	-12.50
Mississippi	12N10E07BCD1	354036	900404	4/14/2006	22.00	212.00	223.00	218.50	222.75	-11.00	-6.50	-10.75
Mississippi	12N10E21DBA1	353842	900122	4/14/2006	17.00	219.00	228.00	218.00	223.40	-9.00	1.00	-4.40
Mississippi	13N08E24ABB1	354428	901112	4/18/2006	9.00	221.00	214.00	218.00	219.00	7.00	3.00	2.00
Mississippi	13N09E013DDA1	354437	900425	3/24/2006	7.55	224.45	227.54			-3.09		
Mississippi	13N09E30CCD1	354247.8	901028.63	4/20/2006	12.88	217.12	223.00		220.69	-5.88		-3.57
Mississippi	13N10E34DBB1	354218	900024	4/20/2006	8.58	226.42	229.40			-2.98		
Mississippi	14N08E12DAB1	355104.2	901051.94	4/19/2006	8.38	226.62	231.20		225.03	-4.58		1.59
Mississippi	14N08E20DAA1	354921	901458	4/18/2006	5.00	220.00	215.00	218.50	220.42	5.00	1.50	-0.42
Mississippi	14N08E26DCC1	354803	901235	4/18/2006	5.00	225.00	226.00	226.50	227.00	-1.00	-1.50	-2.00
Mississippi	14N10E18ABC1	355022.4	900345.36	4/19/2006	13.02	222.98	224.57		224.24	-1.59		-1.26
Mississippi	14N11E03BCB1	355158.1	895432.97	4/20/2006	5.26	241.74	244.30		239.67	-2.56		2.07
Mississippi	14N11E17CCB1	354955	895639	4/10/2006	8.00	232.00	236.50	231.00		-4.50	1.00	
Mississippi	14N11E33CAA1	354727	895508	4/10/2006	15.00	225.00	231.50	227.50	229.17	-6.50	-2.50	-4.17
Mississippi	15N08E08DBC2	355605	901526.26	4/19/2006	11.97	224.03	227.50		225.35	-3.47		-1.32
Mississippi	15N10E21ABC1	355447	900135	4/13/2006	13.00	227.00	231.50	223.50	228.50	-4.50	3.50	-1.50
Mississippi	15N10E34AAC1	355259	900018	3/24/2006	8.55	231.45	232.95	231.70		-1.50	-0.25	
Mississippi	15N12E01BCD1	355704	894601	4/13/2006	11.00	247.00	254.00	243.00	247.75	-7.00	4.00	-0.75
Mississippi	16N10E28BBD1	355906.1	900156.03	4/20/2006	11.35	226.65	229.45	227.00	225.75	-2.80	-0.35	0.90
Mississippi	16N11E23ADA1	355947.2	895231.23	4/20/2006	12.70	242.30	244.30		241.03	-2.00		1.27
							Declines/Wells:			**27/30**	**12/19**	**19/23**
							Average Change:			**-4.07**	**-1.14**	**-3.06**
Monroe	01N01W21CDC2	344037.2	910706.66	4/4/2006	36.57	144.43	138.10		150.49	6.33		-6.06
Monroe	01N01W15CBD1	344139	910542	4/4/2006	49.14	135.86	138.06			-2.20		
Monroe	01N02W12CBC1	344242.3	911031.9	4/4/2006	39.21	142.79	144.92			-2.13		
Monroe	01N03W23BAC1	344124	911743	4/14/2006	16.00	154.00	159.50	155.00	154.00	-5.50	-1.00	0.00
Monroe	01N03W24BBB1	344135.2	911650.59	4/4/2006	28.63	156.37	158.60	151.00	160.83	-2.23	5.37	-4.46
Monroe	01N04W33BBB2	343959.5	912648.52	4/4/2006	95.15	122.85	119.90	123.00	128.24	2.95	-0.15	-5.39
Monroe	01S01W13CDD1	343610.9	910340.54	4/4/2006	20.37	157.63	160.20		166.73	-2.57		-9.10

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Monroe	01S01W16DB	343615	910632	4/14/2006	22.00	153.00	153.00	159.00	160.00	0.00	-6.00	-7.00
Monroe	01S01W18DCD1	343617.8	910849.2	4/4/2006	23.05	154.95	156.50			-1.55		
Monroe	01S02W20BBB1	343612.7	911456.1	4/14/2006	13.35	156.65	163.00	158.00	158.00	-6.35	-1.35	-1.35
Monroe	01S03W20BBA1	343538	912117	4/4/2006	73.73	136.27		133.00	135.00		3.27	1.27
Monroe	01S03W20CCD1	343626	912121	4/14/2006	79.00	131.00	133.00			-2.00		
Monroe	01S04W01BAB1	343905.9	912316.73	4/4/2006	68.70	141.30	134.40		136.69	6.90		4.61
Monroe	02N01W19ADD1	344624	910814	4/14/2006	53.00	135.00	136.00	139.00	145.00	-1.00	-4.00	-10.00
Monroe	02N01W19BBA1	344645.2	910912.46	4/4/2006	54.27	136.73	138.40			-1.67		
Monroe	02N03W35BCA1	344455	911745	4/14/2006	34.00	154.00	160.00	157.00	157.00	-6.00	-3.00	-3.00
Monroe	02S02W01BCA1	343321	911031	4/4/2006	12.13	158.87			159.41			-0.54
Monroe	02S01W01BCD1	343305	910408	4/14/2006	19.00	157.00	158.00	159.00	161.00	-1.00	-2.00	-4.00
Monroe	02S02W11DAC1	343209	911100.58	4/4/2006	10.16	153.84	156.30			-2.46		
Monroe	03N01W20ABA1	345201.2	910722.83	4/5/2006	48.07	140.93	142.20	143.40	149.10	-1.27	-2.47	-8.17
Monroe	03N02W31ADC1	344958	911447	4/5/2006	38.53	151.47		154.50	155.61		-3.03	-4.14
Monroe	03N03W36AAA1	345026.7	911547.12	4/5/2006	22.20	153.80	157.90		157.31	-4.10		-3.51
Monroe	04N02W01BCC1	345929	911004	4/13/2006	39.50	135.50	137.00	138.00	141.00	-1.50	-2.50	-5.50
Monroe	04N02W05BBB1	345957	911311	4/13/2006	15.00	173.00	177.00	172.00	174.00	-4.00	1.00	-1.00
Monroe	04N02W27CDD3	345540.2	911149.73	4/5/2006	45.50	154.50	154.80		160.44	-0.30		-5.94
Monroe	04N02W28DDD3	345535.1	911220.68	4/5/2006	32.19	159.81	159.35	162.10	162.33	0.46	-2.29	-2.52
Monroe	04N02W30BBB1	345627.9	911524.71	4/5/2006	14.53	170.63	174.46		169.27	-3.83		1.36
							Declines/Wells:			**19/24**	**11/14**	**17/21**
							Average Change:			**-1.46**	**-1.30**	**-3.54**
Phillips	01S01E20DDB1	343529	910058	4/10/2006	26.00	159.00	167.00	170.00	169.50	-8.00	-11.00	-10.50
Phillips	01S02E09BDC1	343725	910047	4/10/2006	14.80	170.20						
Phillips	01S02E09CBB1	343718.7	905434.06	3/21/2006	14.29	170.71	177.80	174.90	176.50	-7.09	-4.19	-5.79
Phillips	01S02E32BCC1	343350	905526	4/10/2006	37.00	163.00	164.00	169.00	169.75	-1.00	-6.00	-6.75
Phillips	01S03E02ADD1	343814	904511	4/10/2006	16.60	183.40	191.00	191.00	186.67	-7.60	-7.60	-3.27
Phillips	01S03E10ABB1	343741	904634	4/10/2006	18.00	187.00	196.40	191.00	191.00	-9.40	-4.00	-4.00
Phillips	01S03E20BDD1	343533	904846	4/6/2006	33.00	177.00	186.00	179.00	179.25	-9.00	-2.00	-2.25
Phillips	01S04E05DCD1	343802	904151	3/21/2006	48.91	181.09	188.63	187.00	187.67	-7.54	-5.91	-6.58
Phillips	02S01E28CCB1	342916.4	910058.18	4/6/2006	17.95	156.05	159.70		158.92	-3.65		-2.87
Phillips	02S02E29DDD1	342901	905444	4/10/2006	27.60	152.40	160.00	159.00	158.75	-7.60	-6.60	-6.35
Phillips	02S02E33ACC1	342824	905412	4/10/2006	26.00	151.00	157.00	154.00	155.58	-6.00	-3.00	-4.58
Phillips	02S03E15ACD1	343109	904621	5/8/2006	13.78	160.22			160.52			-0.30
Phillips	02S03E34BCD1	342828	904653	4/12/2006	18.00	147.00	152.40	150.00	150.67	-5.40	-3.00	-3.67
Phillips	02S04E27AAC1	342931.6	904001.09	4/10/2006	8.59	170.41	174.10	171.00	170.82	-3.69	-0.59	-0.41

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Phillips	03S02E35DDA1	342256.2	905129.93	3/21/2006	21.23	141.77	144.60			-2.83		
Phillips	03S03E04DAA1	342735	904710	3/21/2006	19.29	151.71	153.95			-2.24		
Phillips	03S04E02CAA1	342732	903918	3/21/2006	16.16	159.84	167.85	162.00	161.82	-8.01	-2.16	-1.98
Phillips	04S01E01AAD1	342238	905700	4/12/2006	22.00	134.00	141.00	144.00	144.58	-7.00	-10.00	-10.58
Phillips	04S01E14CDD1	342014	905837	4/12/2006	15.00	140.00	146.00	144.00	143.83	-6.00	-4.00	-3.83
Phillips	04S01E23CCA1	341931.3	905852.62	3/21/2006	13.40	142.60	147.30			-4.70		
Phillips	04S02E01DBB1	342220	905053	4/12/2006	15.60	147.40	151.00	151.00	155.25	-3.60	-3.60	-7.85
Phillips	05S02E18BDA1	341534	905627	3/21/2006	22.50	133.50			137.26			-3.76
							Declines/Wells:			**19/19**	**15/15**	**18/18**
							Average Change:			**-5.81**	**-4.91**	**-4.74**
Poinsett	10N01E02AAA	353205	905654	4/13/2006	98.00	137.00	138.00	144.00	151.00	-1.00	-7.00	-14.00
Poinsett	10N01E14CC1	352909.8	905813.38	3/28/2006	92.41	138.59	140.60	137.00		-2.01	1.59	
Poinsett	10N01E16CCB1	352921.9	910005.35	3/28/2006	74.99	150.01	152.35			-2.34		
Poinsett	10N01E32CBB1	352657	910053	4/13/2006	74.00	148.00	148.00	172.00	179.00	0.00	-24.00	-31.00
Poinsett	10N01E33ACB1	352746	905931	4/13/2006	77.00	143.00	144.00	147.00	155.00	-1.00	-4.00	-12.00
Poinsett	10N02E13BCC1	352948.5	905026.29	3/28/2006	103.24	133.76	135.60			-1.84		
Poinsett	10N02E15CAA1	352939	905026	4/12/2006	104.50	132.50	135.00			-2.50		
Poinsett	10N02E33AAA1	352726	905231	3/23/2006	99.38	136.62						
Poinsett	10N03E13BCB1	353001	904352	4/13/2006	142.00	128.00	141.00			-13.00		
Poinsett	10N03E14DAB1	352947.2	904404.93	3/28/2006	118.63	144.37	145.70			-1.33		
Poinsett	10N03E19BCB1	352906	904021	4/12/2006	99.50	139.50	142.00			-2.50		
Poinsett	10N03E20BBA1	352405	904810	4/13/2006	112.50	122.50						
Poinsett	10N03E26BBD1	352817	904449	4/13/2006	113.50	143.50	143.00			0.50		
Poinsett	10N03E35CDD1	352656	904435	3/28/2006	124.43	150.57		154.00			-3.43	
Poinsett	10N04E35BBA1	352745	903831	4/17/2006	21.00	194.00	197.00	194.00	195.00	-3.00	0.00	-1.00
Poinsett	10N05E15BDD1	352937	903252	3/29/2006	14.76	192.24			193.97			-1.73
Poinsett	10N07E22AAC1	352847	901935	3/29/2006	27.80	187.20	187.00			0.20		
Poinsett	10N07E28CBB1	352743	902128	4/17/2006	28.50	186.50	186.00			0.50		
Poinsett	11N01E17DDD1	353436.8	910013.21	3/28/2006	78.61	151.39	153.70	156.00	162.00	-2.31	-4.61	-10.61
Poinsett	11N01E26AA1	353340.3	905653.32	3/28/2006	94.72	141.28	146.00	143.90		-4.72	-2.62	
Poinsett	11N01E34AAA	353256	905759	4/13/2006	88.50	140.50	142.00	147.00	153.00	-1.50	-6.50	-12.50
Poinsett	11N02E26AAB1	353350.3	905034.19	3/28/2006	107.55	133.45	135.50		141.75	-2.05		-8.30
Poinsett	11N02E30BBB1	353352	905540	4/17/2006	102.50	136.50	139.00	143.00	142.00	-2.50	-6.50	-5.50
Poinsett	11N02E34CBA1	353238	905222	4/13/2006	109.00	131.00	134.00	146.00	141.00	-3.00	-15.00	-10.00
Poinsett	11N03E10DDA1	353545.7	904456.54	3/28/2006	104.78	138.22	139.65			-1.43		
Poinsett	11N03E17AAA1	353534	904713	4/17/2006	105.00	138.00	139.00			-1.00		

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Poinsett	11N03E18BAB1	353537.8	904852.42	3/28/2006	105.34	137.66	132.70			4.96		
Poinsett	11N04E13DDA1	353447	903631	4/17/2006	15.00	195.00	196.00			-1.00		
Poinsett	11N04E36ABA1	353251	903654	4/17/2006	18.00	193.00	196.00	193.00	194.00	-3.00	0.00	-1.00
Poinsett	11N05E26BDB1	353318	903155	4/17/2006	12.00	201.00	207.00			-6.00		
Poinsett	11N07E18CAB1	353435	902320	3/29/2006	15.37	201.63	203.40			-1.77		
Poinsett	11N07E28CBB1	353250	902125	4/17/2006	20.00	198.00	197.00			1.00		
Poinsett	12N01E07CDA1	354053.7	910141.25	3/28/2006	53.97	182.03	177.75	183.80	187.93	4.28	-1.77	-5.90
Poinsett	12N01E22DAB1	353922	905809	4/13/2006	74.00	161.00	163.00	165.00	171.00	-2.00	-4.00	-10.00
Poinsett	12N02E25DCC1	353820	904944	4/13/2006	112.00	133.00	134.00	141.00	139.00	-1.00	-8.00	-6.00
Poinsett	12N02E26DDA1	353831	905024	3/23/2006	109.25	135.75						
Poinsett	12N02E34CCC1	353724	905230	4/13/2006	112.50	132.50	134.00	138.00	145.00	-1.50	-5.50	-12.50
Poinsett	12N03E01CBD1	354154	904329	4/17/2006	93.00	157.00	158.00	160.00	166.00	-1.00	-3.00	-9.00
Poinsett	12N03E04DAD1	354158	904600.16	3/28/2006	103.52	143.48	144.00	146.00	155.00	-0.52	-2.52	-11.52
Poinsett	12N03E35DDA1	353735	904355	4/17/2006	103.00	142.00	144.00			-2.00		
Poinsett	12N03E36ACB1	353749	904318	3/28/2006	98.57	151.43						
Poinsett	12N04E08CDA	354053	904112	4/17/2006	88.00	162.00	164.00	165.00	170.00	-2.00	-3.00	-8.00
Poinsett	12N05E16ABA1	354039	903333	4/17/2006	12.00	209.00	215.00	209.00	212.00	-6.00	0.00	-3.00
Poinsett	12N05E34ABA1	353805.4	903230.45	3/28/2006	10.65	204.35	210.45	203.50	209.29	-6.10	0.85	-4.94
Poinsett	12N07E04BAA1	354202	902059.69	3/29/2006	6.93	216.07	217.40	217.30	216.65	-1.33	-1.23	-0.58
Poinsett	12N07E10BCC1	354042	902022	4/17/2006	10.00	218.00	220.00	217.00	216.00	-2.00	1.00	2.00
Poinsett	12N07E25DC1	353740	901802	3/23/2006	17.42	208.58	211.68			-3.10		
Poinsett	11N06E34AB1	353224	902646	3/23/2006	13.22	197.78	198.78			-1.00		
							Declines/Wells:			**35/42**	**17/23**	**21/22**
							Average Change:			**-1.88**	**-4.31**	**-8.05**
Prairie	01N06W05CCB1	344353	914049.08	4/11/2006	117.80	102.20	103.20			-1.00		
Prairie	01N06W26CDD1	344014.9	913707.61	4/11/2006	63.78	154.22	141.05		121.62	13.17		32.60
Prairie	01N06W29DDD1	344017.5	913951.46	4/11/2006	116.55	106.45	107.55	109.75		-1.10	-3.30	
Prairie	01S04W28BDB1	343522.7	912629.73	4/11/2006	97.28	107.72	108.40			-0.68		
Prairie	01S05W14BBC1	343722	913108.76	4/11/2006	108.15	102.85	102.75		103.30	0.10		-0.45
Prairie	01S05W31DDA1	343416	913431	4/11/2006	103.60	102.40						
Prairie	01S06W12BAB1	343826	913613	3/17/2006	119.36	108.64	110.03			-1.39		
Prairie	02N04W02BCB1	344916.3	912418.61	4/11/2006	20.27	167.73	172.20		171.45	-4.47		-3.72
Prairie	02N04W32CCB1	344436.4	912737.79	4/11/2006	84.72	136.28	138.80		152.42	-2.52		-16.14
Prairie	02N05W06BAB1	344957.6	913420.77	4/11/2006	89.19	131.81	132.83			-1.02		
Prairie	02N05W13AAB1	344805.5	912854.34	4/11/2006	81.74	141.26	148.30	166.00		-7.04	-24.74	

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Prairie	02N05W21CB1	344649	913300	3/17/2006	108.15	116.85	117.43			-0.58		
Prairie	02N05W24ACB	344659	912937	3/17/2006	90.70	134.30	138.26			-3.96		
Prairie	02N05W29DDB2	344544	913308	4/11/2006	118.84	109.16	110.40			-1.24		
Prairie	02N05W32AAA1	344534	913305	3/25/2006	129.90	95.10	110.30			-15.20		
Prairie	02N06W17ABB1	344809.5	913959.44	4/11/2006	124.26	110.74	112.80			-2.06		
Prairie	02S06W14BBB1	343213.4	913728.62	4/11/2006	74.29	126.71	123.10			3.61		
Prairie	02N06W21DAA1	344653	913827	3/25/2006	116.20	108.80	109.39			-0.59		
Prairie	02N06W24CAA1	344651	913551	3/25/2006	118.10	114.90	115.26			-0.36		
Prairie	03N04W03AAC1	345439.2	912424.37	4/11/2006	28.30	158.70	167.00		169.09	-8.30		-10.39
Prairie	03N05W03BDD2	345444.1	913115.35	4/11/2006	67.70	139.30	144.80			-5.50		
Prairie	03N06W01BCB1	345454.5	913601.39	4/11/2006	79.08	136.92	135.00	133.00	129.32	1.92	3.92	7.60
Prairie	03N06W19BDD1	345207	914110	4/12/2006	86.73	134.27						
Prairie	04N04W07ADC1	345850.3	912733.07	4/11/2006	26.73	168.27	174.55		179.68	-6.28		-11.41
Prairie	04N05W07CDC1	345042.6	913440.92	4/12/2006	76.54	135.46	136.60		139.97	-1.14		-4.51
Prairie	04N06W05CCC1	345933.8	914017.96	4/11/2006	78.35	127.65	146.00			-18.35		
Prairie	04N07W03DCB1	345942.1	914412.48	4/12/2006	87.33	167.67	168.40			-0.73		
Prairie	04N07W20DDB1	345709.2	914607.27	5/5/2006	104.93	150.07	145.67	151.84		4.40	-1.77	
Prairie	04N07W28BBA1	345700.5	914544.88	4/12/2006	95.77	162.23	163.10			-0.87		
Prairie	05N05W14DCD1	350252.4	913034.06	4/12/2006	39.62	165.38	172.50	165.00	172.73	-7.12	0.38	-7.35
							Declines/Wells:			**23/28**	**3/5**	**7/9**
							Average Change:			**-2.44**	**-5.10**	**-1.53**
Pulaski	01S10W29CC1	343537.8	920707.66	4/3/2006	18.02	220.98	225.50			-4.52		
Pulaski	02S10W14DC1	343204.7	920333.75	4/3/2006	24.90	200.10	203.50	201.30		-3.40	-1.20	
Pulaski	02S10W16CCA1	343217	920549.36	4/3/2006	27.27	203.49	212.46			-8.97		
							Declines/Wells:			**3/3**		
							Average Change:			**-5.63**		
Randolph	18N01E28AAD1	361040	905820	4/24/2006	22.00	243.00	243.50	247.50	246.40	-0.50	-4.50	-3.40
Randolph	18N01E34AAC1	360942.7	905729.13	4/17/2006	18.18	247.82	251.10		252.52	-3.28		-4.70
Randolph	18N02E03DAD1	361336	905043	4/24/2006	56.00	224.00	225.50	245.30	250.30	-1.50	-21.30	-26.30
Randolph	18N02E17CBB1	361204	905356	4/24/2006	23.00	242.00	242.00	248.00	255.20	0.00	-6.00	-13.20
Randolph	18N02E20BDA1	361125	905332	4/24/2006	42.50	231.50	232.00	235.40	245.50	-0.50	-3.90	-14.00
Randolph	18N02E22DCD1	361045.8	905104.7	4/17/2006	37.47	235.53	236.98			-1.45		
Randolph	18N02E34BAB1	360933	905150	4/24/2006	31.00	239.00	239.00	237.10	242.00	0.00	1.90	-3.00

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Randolph	19N02E09ABD1	361826	905157	4/17/2006	11.23	254.77		255.00	265.50		-0.23	-10.73
Randolph	19N02E09DCA1	361759	905158	4/25/2006	18.00	249.00	255.70		257.64	-6.70		-8.64
Randolph	19N02E22DAB1	361622	905049	4/24/2006	15.50	250.50	251.50	260.60	262.40	-1.00	-10.10	-11.90
Randolph	20N02E33CCB1	361940	904605	4/24/2006	26.00	259.00	259.00			0.00		
Randolph	20N02E01ADD1	362424.2	904811.39	4/17/2006	13.93	266.07	269.60			-3.53		
Randolph	20N02E06DAD1	362410	905339	4/25/2006	22.00	259.00	261.00	268.00		-2.00	-9.00	
Randolph	20N02E12BAA1	362352	904848	4/25/2006	12.00	269.00	274.00	271.60	274.90	-5.00	-2.60	-5.90
Randolph	20N02E14DAB1	362232	904930	4/25/2006	14.00	260.00	262.00	260.60	254.70	-2.00	-0.60	5.30
Randolph	20N02E21CDD1	362117	905107	4/25/2006	12.00	258.00	257.00	259.60	265.40	1.00	-1.60	-7.40
Randolph	20N03E28BA1	362113.5	904537.97	4/17/2006	12.86	263.14	266.00			-2.86		
							Declines/Wells:			**12/16**	**10/11**	**11/12**
							Average Change:			**-1.83**	**-5.27**	**-8.66**
St. Francis	04N01E13ADA1	345754	905638	3/22/2006	60.34	145.66						
St. Francis	04N01W17CBC1	345735	910801	3/27/2006	59.08	148.92	149.10			-0.18		
St. Francis	04N01W20BBB1	345716	910759	5/15/2006	59.00	141.00	142.00	142.00	143.00	-1.00	-1.00	-2.00
St. Francis	04N01W25DBD1	345549	910303	5/15/2006	76.00	123.00	125.00	132.00	131.00	-2.00	-9.00	-8.00
St. Francis	04N01W28CDD1	345535.3	910633.55	3/22/2006	71.42	136.58	136.45	140.50		0.13	-3.92	
St. Francis	04N02E16ACD1	345733	905341	5/15/2006	41.00	168.00	159.00	161.00		9.00	7.00	
St. Francis	04N02E19BBB1	345701	905633	3/22/2006	60.16	148.84	149.40			-0.56		
St. Francis	04N02E27AAA1	345604	905220	5/15/2006	48.00	163.00	164.00	166.50		-1.00	-3.50	
St. Francis	04N03E21DAD1	345623	904655	3/22/2006	58.14	177.86						
St. Francis	04N04E15ABA1	345752	903948	5/15/2006	34.00	167.00	168.00	169.00	164.00	-1.00	-2.00	3.00
St. Francis	04N05E22BBB1	345650	903356	3/22/2006	27.02	172.98						
St. Francis	05N01E15BCB1	350302.6	905942.41	3/22/2006	67.19	141.81	143.20			-1.39		
St. Francis	05N01E27BBA1	350135.7	905928.78	3/22/2006	66.93	142.07	142.50			-0.43		
St. Francis	05N02E20ADC1	350156.9	905437.16	3/22/2006	54.79	156.21	157.00			-0.79		
St. Francis	05N03E20AAA2	350214.3	904800.83	3/22/2006	103.87	146.13	154.50			-8.37		
St. Francis	05N05E19DCA1	350128	903629	3/22/2006	32.77	170.23	171.14			-0.91		
St. Francis	05N05E33BCC1	350004	903506	5/15/2006	29.00	167.00	167.00	167.00		0.00	0.00	
St. Francis	05N06E34CAB1	350025.6	902656.87	3/22/2006	27.69	172.31	174.90	171.60	174.68	-2.59	0.71	-2.37
St. Francis	05N01E06DA1	350446	910156	5/15/2006	71.00							
St. Francis	06N01E16CCC1	350804	905403	5/15/2006	66.50	143.50	145.50			-2.00		
St. Francis	06N01E33ACA2	350552.3	905941.6	3/22/2006	67.14	143.86	141.40		150.46	2.46		-6.60
St. Francis	06N02E13DCA1	350812.6	905002.71	3/22/2006	73.85	157.15	159.10			-1.95		
St. Francis	06N02E15BDD1	350841.9	905247.31	3/22/2006	60.15	154.49	155.44		164.00	-0.95		-9.51
St. Francis	06N02E24AAA1	350755.2	905002.42	3/22/2006	71.46	160.54	157.60	162.90	168.68	2.94	-2.36	-8.14

Alluvial Aquifer
96-01-05-06 WL Change

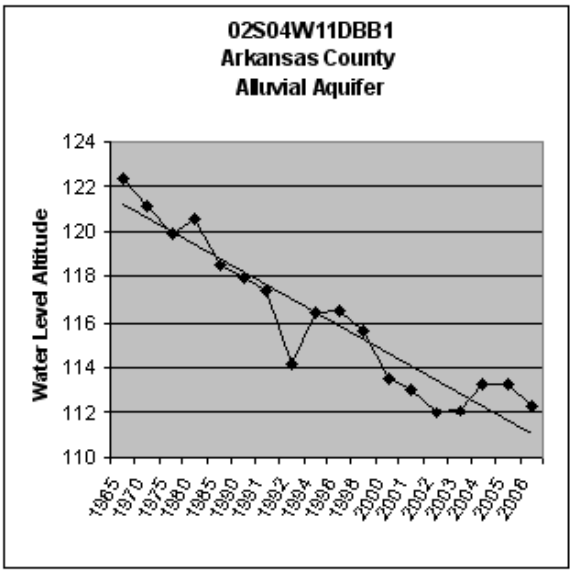
County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
St. Francis	06N05E22ACC1	350723	903252	3/22/2006	40.63	159.37		159.30			0.07	
St. Francis	06N06E17DD1	350812	902853	5/15/2006	34.00	166.00	166.00	168.00		0.00	-2.00	
St. Francis	06N06E20ABB2	350747.1	902841.2	3/22/2006	36.75	163.25	165.10			-1.85		
							Declines/Wells:			**16/22**	**7/11**	**6/7**
							Average Change:			**-0.57**	**-1.45**	**-4.80**
White	05N07W09AAA1	350446.9	914441.48	3/23/2006	14.32	190.68	190.87	193.50	191.46	-0.19	-2.82	-0.78
White	05N07W10CCC1	350400.2	914436	3/23/2006	9.01	193.99	194.80		196.88	-0.81		-2.89
White	05N08W16BD1	350346	915151	4/6/2006	30.50	199.50	201.30			-1.80		
White	05N08W21DB1	350301	915139	4/6/2006	20.90	197.10	198.90			-1.80		
White	06N06W04AAD1	351037	913839	4/6/2006	35.50	181.50	178.76	176.00		2.74	5.50	
White	06N06W04BAA1	351047.2	913909.91	3/23/2006	35.47	184.53	185.75			-1.22		
White	06N06W04BAD1	351037	913903	4/25/2006	40.80	174.20	177.30	172.70	171.40	-3.10	1.50	2.80
White	06N06W13DBB1	350918	913552	4/25/2006	47.30	165.70	163.90	166.30	169.70	1.80	-0.60	-4.00
White	06N06W18BBC1	350851.3	914151.92	3/23/2006	18.13	191.87	196.80			-4.93		
White	06N06W18BCA1	350835	914150	4/25/2006	20.30	189.70	193.00	185.80	183.60	-3.30	3.90	6.10
White	06N06W34AAB1	350623.6	913753.55	3/23/2006	60.63	152.37	152.80			-0.43		
White	06N07W17DCC1	350822.5	914634.73	3/23/2006	15.70	201.30	206.50	201.50	202.28	-5.20	-0.20	-0.98
White	06N08W13ABA1	350907.7	914824.37	3/23/2006	13.60	214.40	221.42	218.00	217.19	-7.02	-3.60	-2.79
White	06N08W26DDB1	350639	914931	3/23/2006	14.47	215.53						
White	07N05W01AAA1	351552	912858	3/23/2006	17.52	187.48						
White	07N05W26AAA1	351224	913003	4/6/2006	22.40	177.60	184.21	178.90		-6.61	-1.30	
White	07N05W32BAB1	351136.6	913406.19	3/23/2006	32.64	181.06	188.90		183.89	-7.84		-2.83
White	08N04W06CCB1	352028.2	912846.51	3/23/2006	20.50	193.50	198.50			-5.00		
White	08N05W32CBC1	351615.7	913416.96	3/23/2006	4.17	194.83	197.60			-2.77		
							Declines/Wells:			**15/17**	**5/8**	**6/8**
							Average Change:			**-2.79**	**0.30**	**-0.67**
Woodruff	04N03W03AB1	350020.9	911819.87	3/28/2006	14.61	170.39	175.40			-5.01		
Woodruff	05N01W13CDC1	350244	910331	4/5/2006	74.60	135.40	134.60	140.90	144.70	0.80	-5.50	-9.30
Woodruff	05N01W31CCC1	350106	910900	4/5/2006	59.10	150.90	152.20	153.70	156.10	-1.30	-2.80	-5.20
Woodruff	05N02W20DCB1	350207.8	911356.19	3/28/2006	15.25	176.75	181.00			-4.25		
Woodruff	05N03W25DDB1	350133	911531	4/5/2006	12.70	177.30	181.50	177.00	176.10	-4.20	0.30	1.20
Woodruff	05N04W12DBA1	350426.8	912210.78	3/27/2006	6.16	179.84	182.07	183.20	181.51	-2.23	-3.36	-1.67
Woodruff	06N01W06BAB1	351048	910834	3/28/2006	34.53	167.47						
Woodruff	06N01W10BC1	350910	910542	4/5/2006	65.80	154.20						

Alluvial Aquifer
96-01-05-06 WL Change

County	Station ID	Latitude	Longitude	Date	06 WL	WL	WL	WL	WL	05-06	01-06	96-06
				Measured	Meas.	Alt. 06	Alt. 05	Alt. 2001	Alt. 1996	Change	Change	Change
Woodruff	06N01W11AAB1	350944	910354	3/23/2006	61.30	153.70						
Woodruff	06N02W19AAA1	350802	911419	4/5/2006	45.50	179.50	181.00	179.00	179.30	-1.50	0.50	0.20
Woodruff	06N03W12BAA1	350955	911607	4/6/2006	6.05	178.95	180.45			-1.50		
Woodruff	06N03W15BAB1	350903.1	911807.41	3/27/2006	6.63	182.16	184.59			-2.43		
Woodruff	06N03W31BCB1	350623	912144	3/27/2006	2.86	182.14	183.56	183.00		-1.42	-0.86	
Woodruff	06N04W22BDA1	350807	912428	4/5/2006	5.90	180.10	182.80	180.40	180.60	-2.70	-0.30	-0.50
Woodruff	07N01W04ACB1	351541	910626	4/5/2006	60.90	164.10		166.00	170.70		-1.90	-6.60
Woodruff	07N03W06BAC1	351607	912109	4/5/2006	24.40	186.60	189.57	185.00	192.60	-2.97	1.60	-6.00
Woodruff	07N03W19AAA1	351335	912025.42	3/27/2006	12.95	189.64	193.49			-3.85		
Woodruff	07N03W31BBA1	351152	912103	4/5/2006	11.90	178.10	178.90	178.60	181.10	-0.80	-0.50	-3.00
Woodruff	08N01W06DDD1	352028	910747	3/28/2006	44.57	173.43	174.90			-1.47		
Woodruff	08N02W27DDB1	351711	911107	4/5/2006	27.00	186.00	187.50	186.30	186.60	-1.50	-0.30	-0.60
Woodruff	08N02W31DDD1	351611	911411	3/28/2006	4.02	190.53	190.80		190.13	-0.27		0.40
Woodruff	08N03W04BBB1	352128	911919	3/23/2006	19.00	202.00	206.92			-4.92		
Woodruff	08N03W31AAD1	351655	912028	3/27/2006	21.95	190.05	190.50	187.60	193.06	-0.45	2.45	-3.01
Woodruff	08N04W27AAA1	351757	912341	3/27/2006	13.10	186.90	189.95		186.54	-3.05		0.36
Woodruff	09N03W29AAD1	352258	911921	3/27/2006	22.53	197.47	201.10			-3.63		
Woodruff	09N03W32ACA1	352205	911936	4/5/2006	21.60	195.40	201.30	197.30		-5.90	-1.90	
							Declines/Wells:			**21/22**	**9/13**	**9/13**
							Average Change:			**-2.48**	**-0.97**	**-2.59**
							Total Declines/Wells:			**561/668**	**269/387**	**333/383**
							Total Average Change:			**-2.14**	**-2.09**	**-5.54**
										84.00%	**70.00%**	**87.00%**

Appendix B

Selected Alluvial Aquifer Well Hydrographs


02S04W11DBB1
Arkansas County
Alluvial Aquifer
Water Level Altitude
124
122
120
118
116
114
112
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1965
1970
1975
1980
1985
1990
1991
1992
1994
1996
1998
2000
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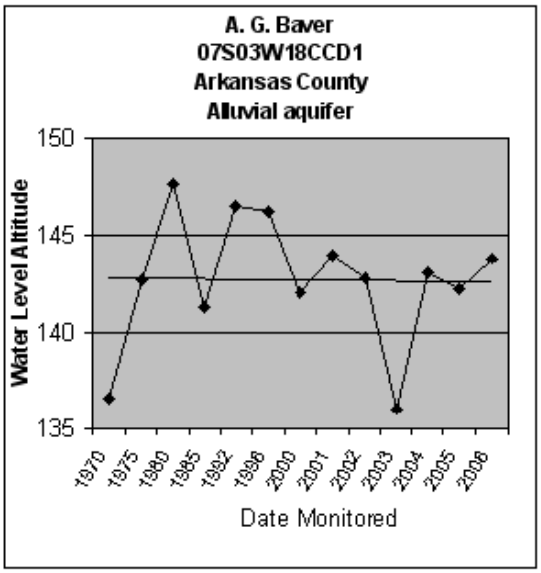
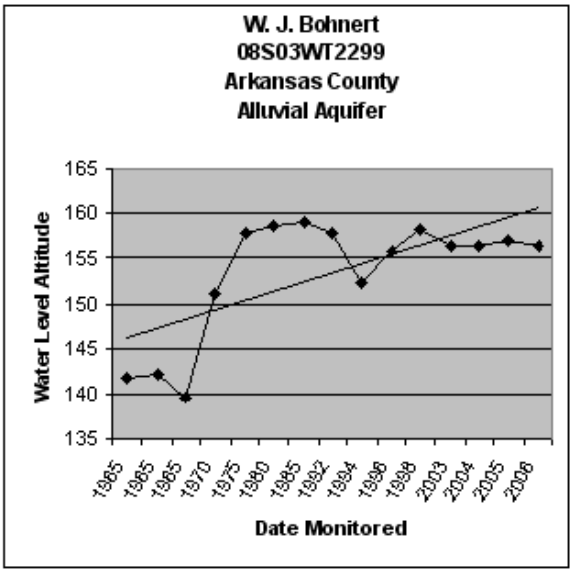
2003
2004
2005
2006


A. G. Baver
07S03W18CCD1
Arkansas County
Alluvial aquifer
Water Level Altitude
150
145
140
135
1970
1975
1980
1985
1992
1996
2000
2001
2002
2003
2004
2005
2006
Date Monitored


W. J. Bohnert
08S03WT2299
Arkansas County
Alluvial Aquifer
Water Level Altitude
165
160
155
150
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140
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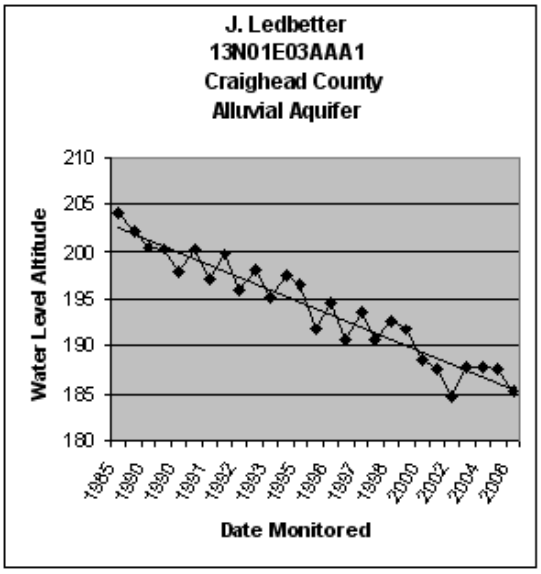
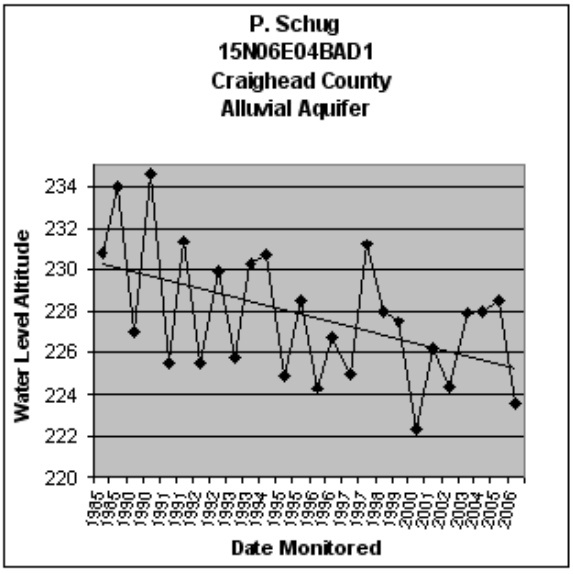
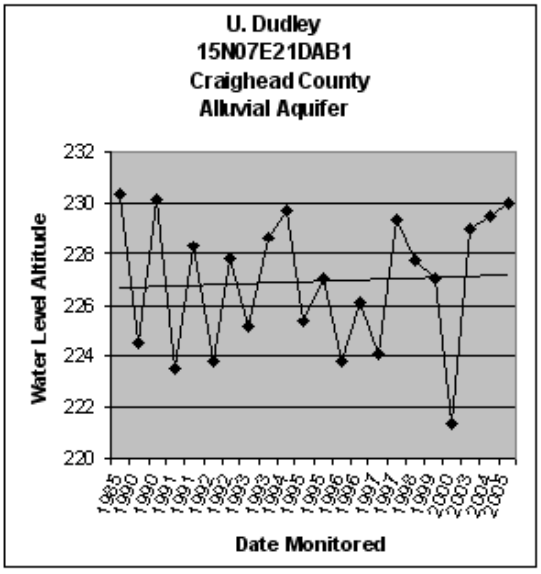
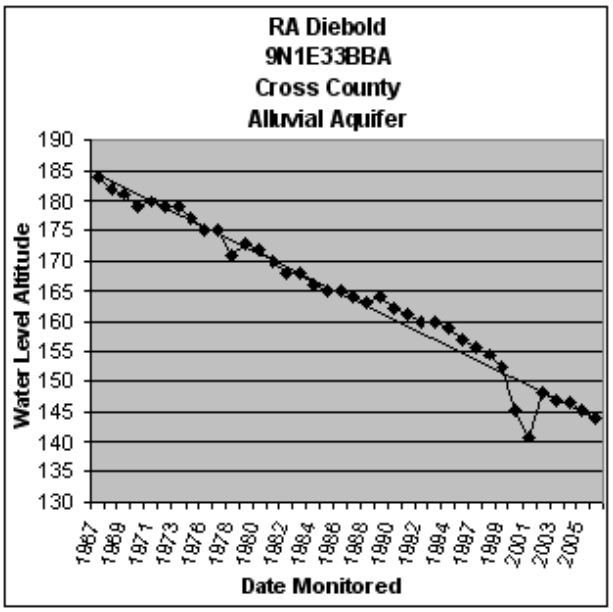
1965
1965
1965
1970
1975
1980
1985
1992
1994
1996
1998
2003
2004
2005
2006
Date Monitored


J. Ledbetter
13N01E03AAA1
Craighead County
Alluvial Aquifer
Water Level Altitude
210
205
200
195
190
185
180
1985
1990
1990
1991
1992
1993
1995
1996
1997
1998
2000
2002
2004
2006
Date Monitored


P. Schug
15N06E04BAD1
Craighead County
Alluvial Aquifer
Water Level Altitude
234
232
230
228
226
224
222
220
Date Monitored


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


RA Diebold
9N1E33BBA
Cross County
Alluvial Aquifer
Water Level Altitude
190
185
180
175
170
165
160
155
150
145
140
135
130
1967
1969
1971
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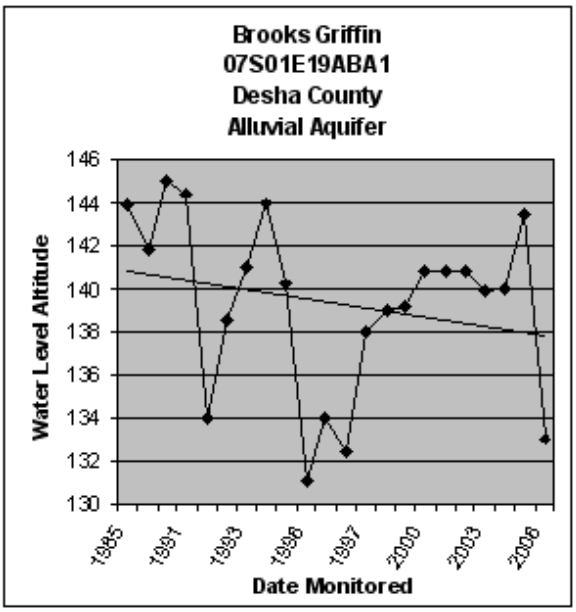
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1997
1999
2001
2003
2005
Date Monitored


Brooks Griffin
07S01E19ABA1
Desha County
Alluvial Aquifer
Water Level Altitude
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142
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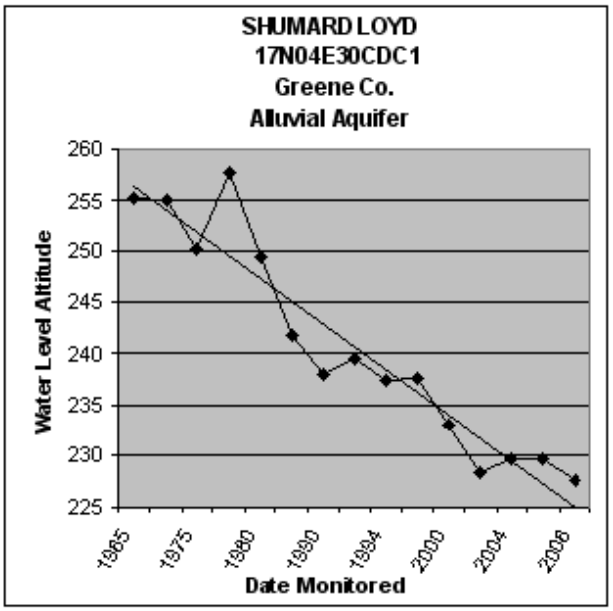
138
136
134
132
130
1985
1991
1993
1996
1997
2000
2003
2006
Date Monitored


SHUMARD LOYD
17N04E30CDC1
Greene Co.
Alluvial Aquifer
Water Level Altitude
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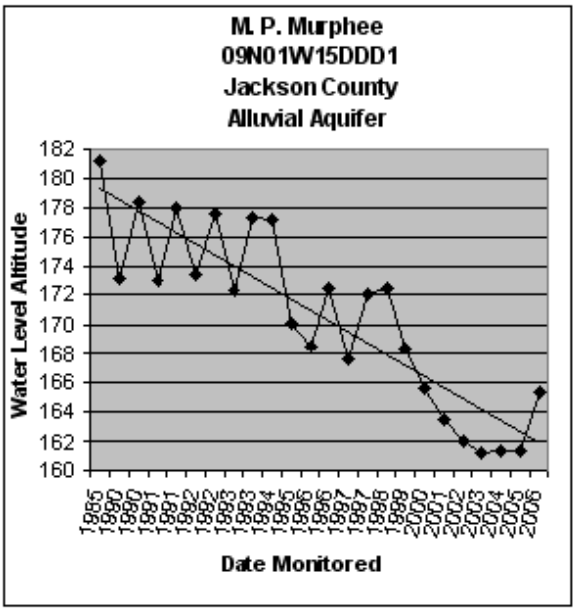
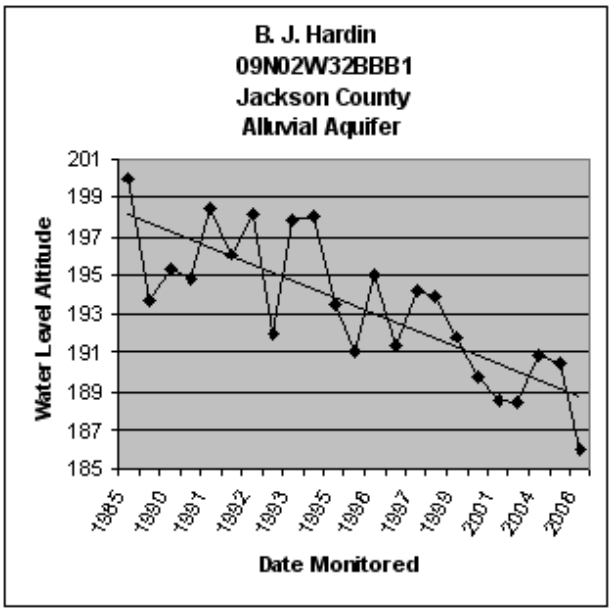
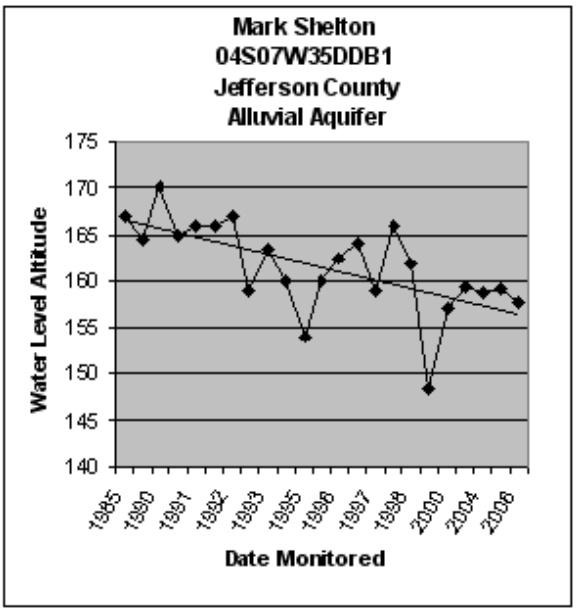
255
250
245
240
235
230
225
1965
1975
1980
1990
1994
2000
2004
2006
Date Monitored


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
1990
1991
1991
1992
1992
1993
1993
1994
1995
1996
1996
1997
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
Date Monitored


B. J. Hardin
09N02W32BBB1
Jackson County
Alluvial Aquifer
Water Level Altitude
201
199
197
195
193
191
189
187
185
1985
1990
1991
1992
1993
1995
1996
1997
1999
2001
2004
2006
Date Monitored


Mark Shelton
04S07W35DDB1
Jefferson County
Alluvial Aquifer
Water Level Altitude
175
170
165
160
155
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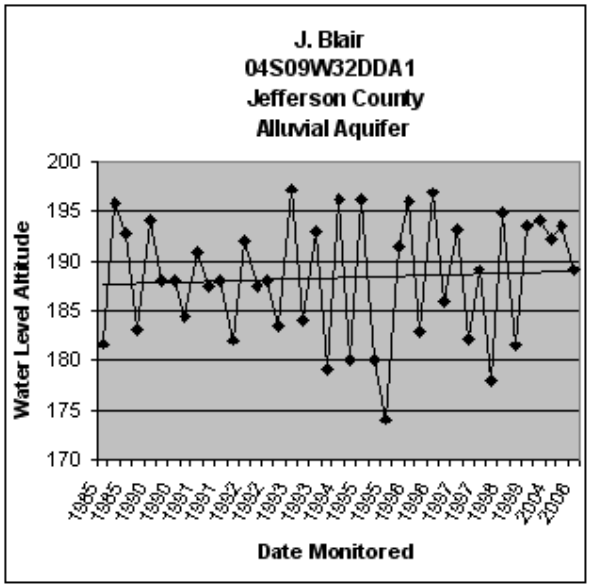
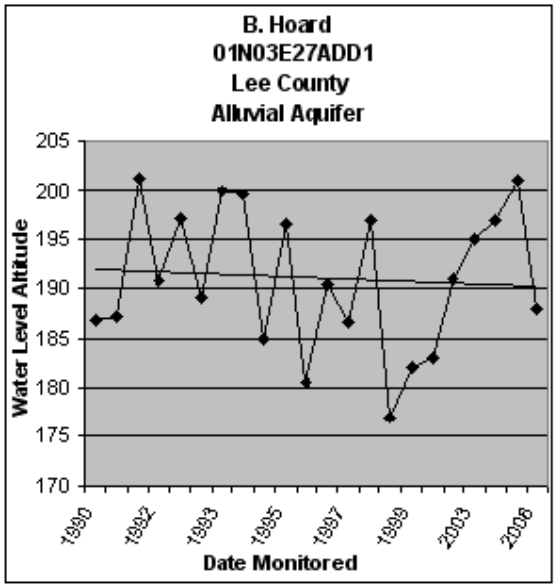
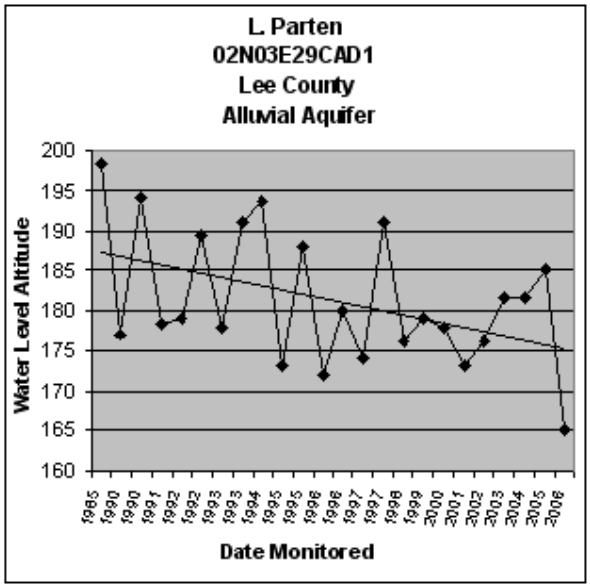
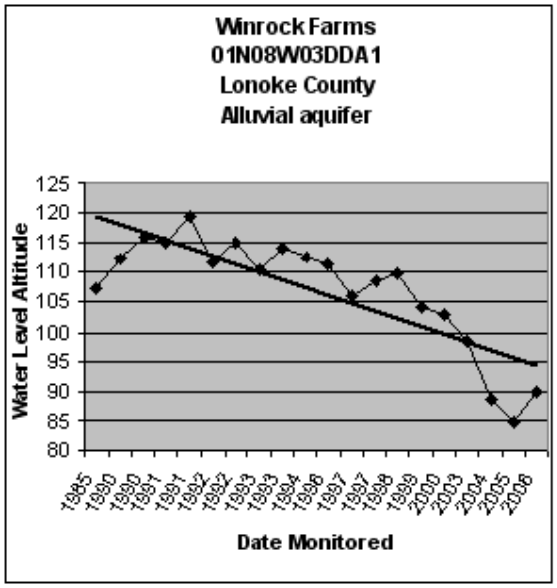
145
140
1985
1990
1991
1992
1993
1995
1996
1997
1998
2000
2004
2006
Date Monitored


J. Blair
04S09W32DDA1
Jefferson County
Alluvial Aquifer
Water Level Altitude
Date Monitored


B. Hoard
01N03E27ADD1
Lee County
Alluvial Aquifer
Water Level Altitude
Date Monitored


L. Parten
02N03E29CAD1
Lee County
Alluvial Aquifer
Water Level Altitude
Date Monitored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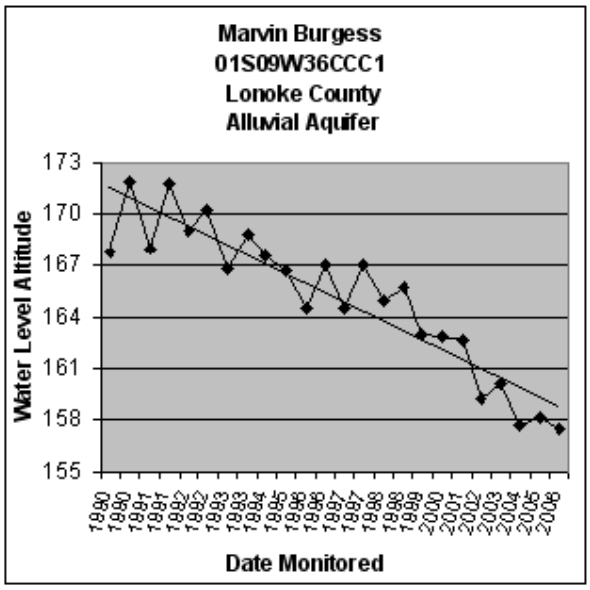
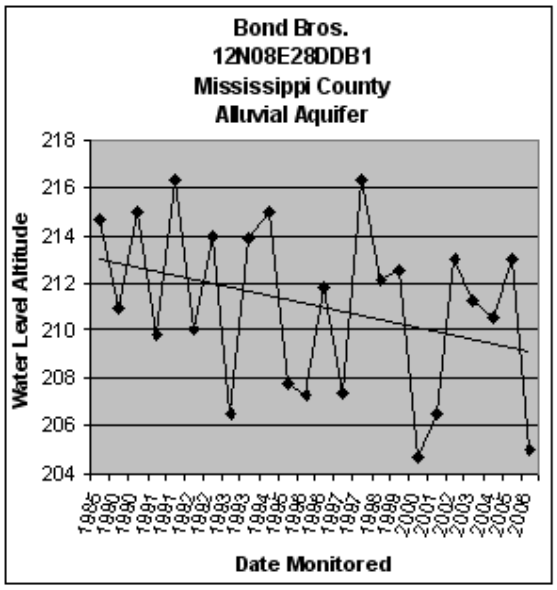
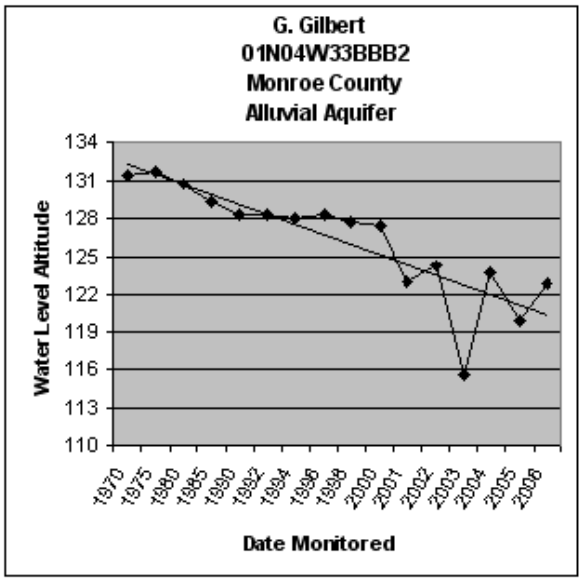
01N08W03DDA1
Lonoke County
Alluvial aquifer
Water Level Altitude
Date Monitored


Marvin Burgess
01S09W36CCC1
Lonoke County
Alluvial Aquifer
Water Level Altitude
Date Monitored


Bond Bros.
12N08E28DDB1
Mississippi County
Alluvial Aquifer
Water Level Altitude
Date Monitored


G. Gilbert
01N04W33BBB2
Monroe County
Alluvial Aquifer
Water Level Altitude
134
131
128
125
122
119
116
113
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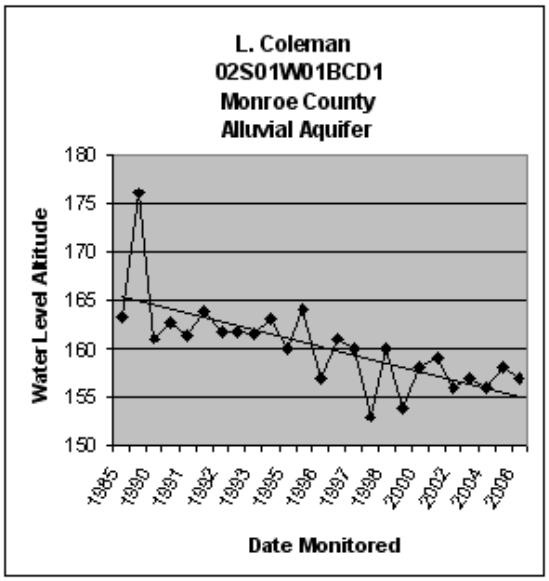
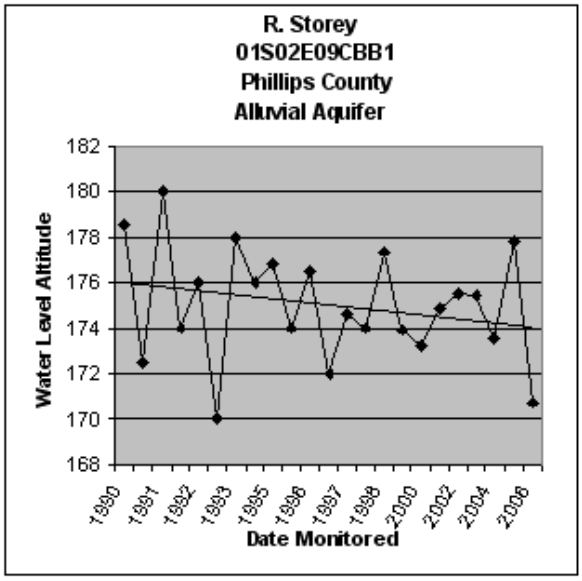
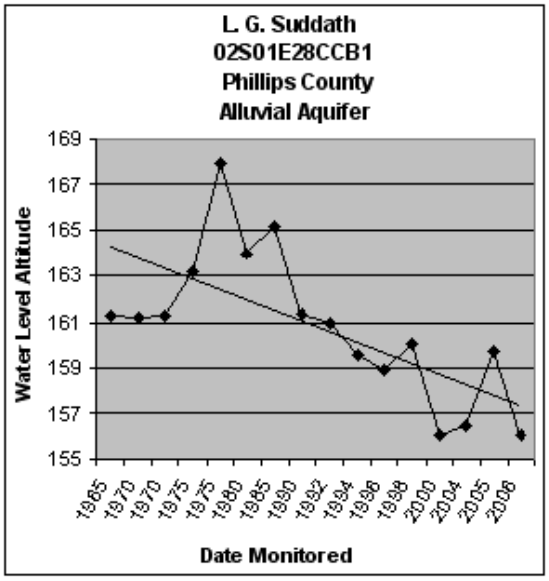
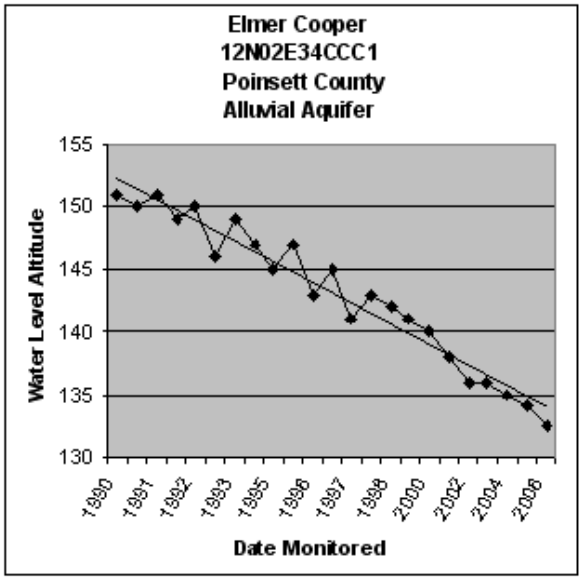
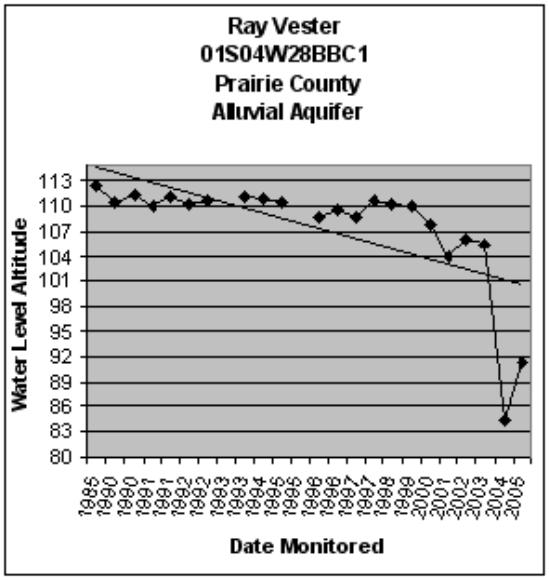
1970
1975
1980
1985
1990
1992
1994
1996
1998
2000
2001
2002
2003
2004
2005
2006
Date Monitored


L. Coleman
02S01W01BCD1
Monroe County
Alluvial Aquifer
Water Level Altitude
180
175
170
165
160
155
150
1985
1990
1991
1992
1993
1995
1996
1997
1998
2000
2002
2004
2006
Date Monitored


R. Storey
01S02E09CBB1
Phillips County
Alluvial Aquifer
Water Level Altitude
182
180
178
176
174
172
170
168
1990
1991
1992
1993
1995
1996
1997
1998
2000
2002
2004
2006
Date Monitored


L. G. Suddath
02S01E28CCB1
Phillips County
Alluvial Aquifer
Water Level Altitude
169
167
165
163
161
159
157
155
1965
1970
1970
1975
1975
1980
1985
1990
1992
1994
1996
1998
2000
2004
2005
2006
Date Monitored


Elmer Cooper
12N02E34CCC1
Poinsett County
Alluvial Aquifer
Water Level Altitude
155
150
145
140
135
130
1990
1991
1992
1993
1995
1996
1997
1998
2000
2002
2004
2006
Date Monitored


Ray Vester
01S04W28BBC1
Prairie County
Alluvial Aquifer
Water Level Altitude
113
110
107
104
101
98
95
92
89
86
83
80
1986
1990
1990
1991
1992
1992
1993
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1994
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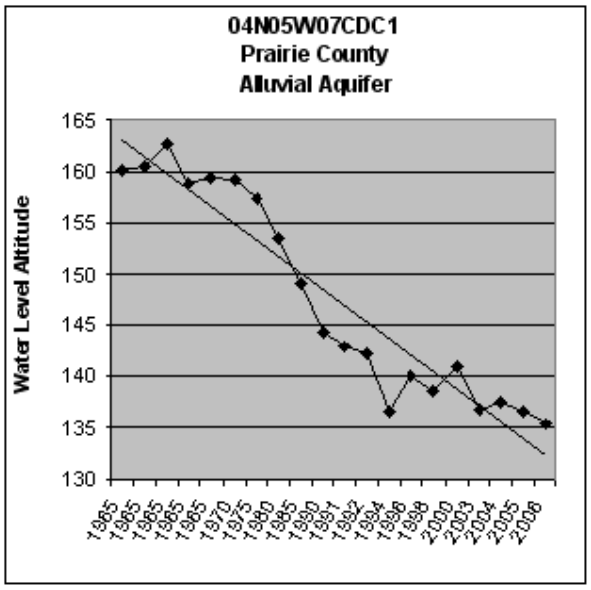
2002
2003
2004
2006
Date Monitored


04N05W07CDC1
Prairie County
Alluvial Aquifer
Water Level Altitude
165
160
155
150
145
140
135
130
1965
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1965
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1965
1970
1975
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1985
1990
1991
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1994
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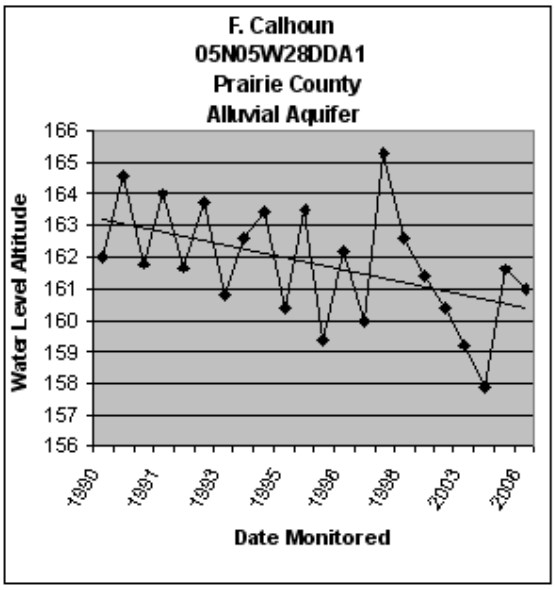
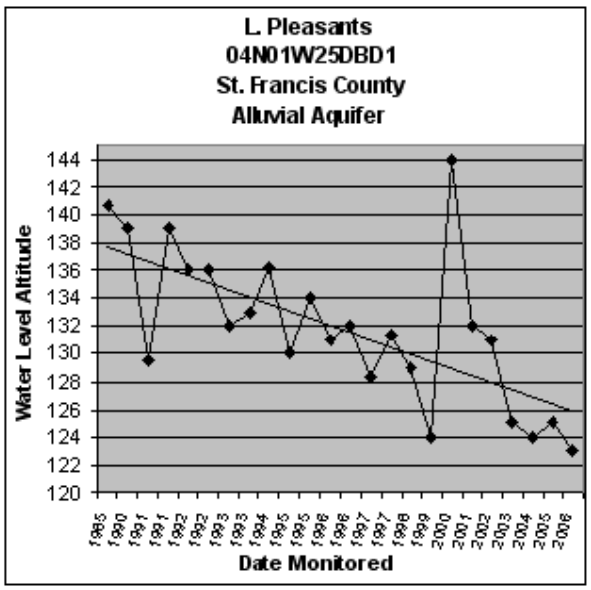
2003
2004
2005
2006


F. Calhoun
05N05W28DDA1
Prairie County
Alluvial Aquifer
Water Level Altitude
166
165
164
163
162
161
160
159
158
157
156
1990
1991
1993
1995
1996
1998
2003
2006
Date Monitored


L. Pleasants
04N01W25DBD1
St. Francis County
Alluvial Aquifer
Water Level Altitude
144
142
140
138
136
134
132
130
128
126
124
122
120
1985
1990
1991
1991
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1992
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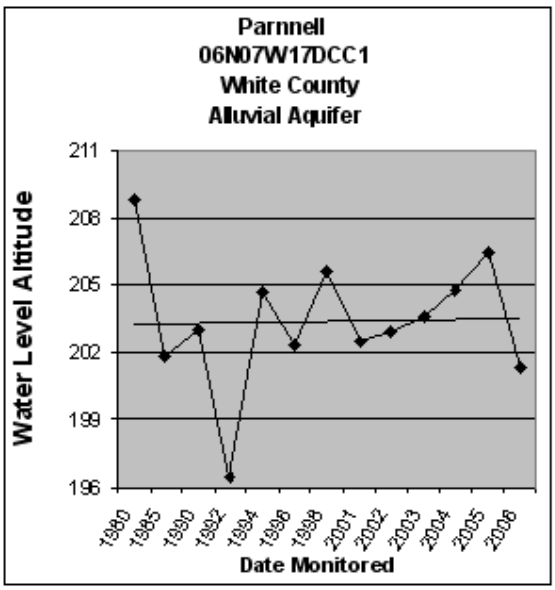
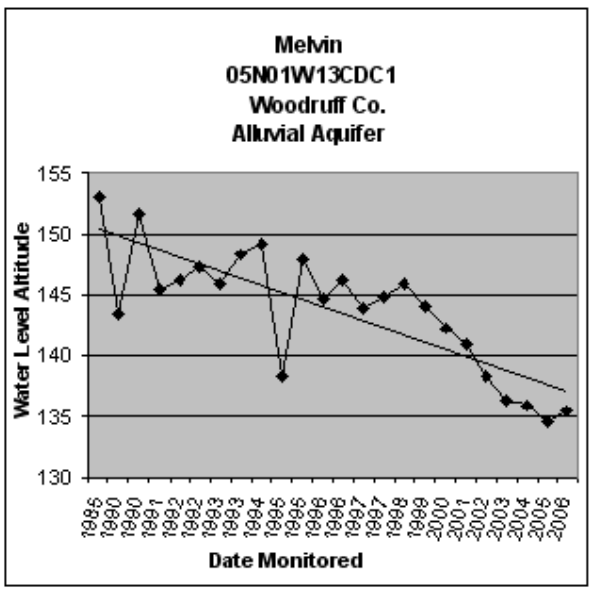
2004
2005
2006
Date Monitored


Parnnell
06N07W17DCC1
White County
Alluvial Aquifer
Water Level Altitude
211
208
205
202
199
196
1980
1985
1990
1992
1994
1996
1998
2001
2002
2003
2004
2005
2006
Date Monitored


Melvin
05N01W13CDC1
Woodruff Co.
Alluvial Aquifer
Water Level Altitude
155
150
145
140
135
130
1985
1990
1990
1991
1992
1992
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1993
1994
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1997
1998
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2001
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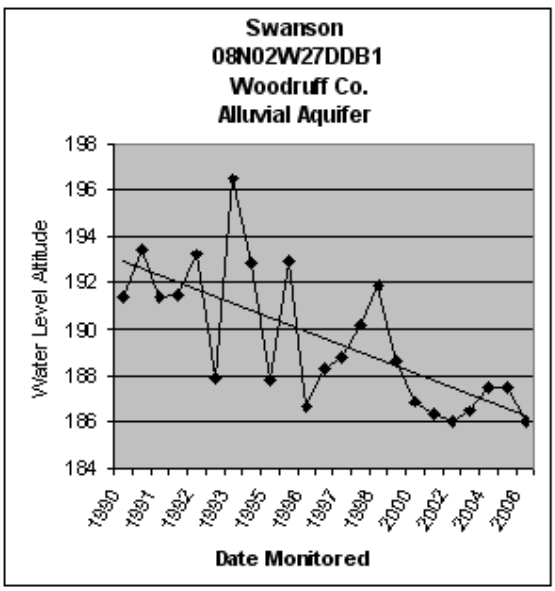
2003
2004
2005
2006
Date Monitored


Swanson
08N02W27DDB1
Woodruff Co.
Alluvial Aquifer
Water Level Altitude
198
196
194
192
190
188
186
184
1990
1991
1992
1993
1995
1996
1997
1998
2000
2002
2004
2006
Date Monitored

Appendix C

Sparta / Memphis Aquifer Water Level Monitoring Data

Sparta/Memphis Aquifer
Water Level Data
06-05-01-96

County	Station	Latitude	Longitude	LSD Alt	WL Date	06 WL Meas	WL ALT 2006	WL ALT 2005	WL ALT 2001	05-06 Change	01-06 Change
Arkansas	02S04W06CDB1	343311.54	912849.29	212.00	3/27/2006	160.20	51.80	57.48	45.48	-5.68	6.32
Arkansas	02S04W23DAA1	343044.22	912354.53	208.00	3/28/2006	148.50	59.50	64.39	59.60	-4.89	-0.10
Arkansas	02S04W33BBB1	342922.14	912702.68	205.00	3/28/2006	157.70	47.30	55.04	42.02	-7.74	5.28
Arkansas	02S05W16CBC1	343143	913318	213.00	3/28/2006	173.80	39.20	44.90	24.88	-5.70	14.32
Arkansas	02S05W27BBB1	343028.45	913230.47	216.00	3/30/2006	178.05	37.95	51.74		-13.79	
Arkansas	02S05W34BDA1	342924.58	913148.02	216.00	3/30/2006	178.20	37.80	41.36	30.39	-3.56	7.41
Arkansas	02S05W35AAB1	342929.98	913035.31	216.00	3/28/2006	173.40	42.60	44.95	32.12	-2.35	10.48
Arkansas	03S03W18CCC1	342553	912251	196.00	3/28/2006	144.20	51.80				
Arkansas	03S04W02CCB1	342747.58	912458.04	202.00	3/28/2006	151.50	50.50	57.95	46.42	-7.45	4.08
Arkansas	03S04W33BAA1	342416	912645	201.00	3/28/2006	164.80	36.20		37.48		-1.28
Arkansas	03S05W02AAB1	342842.19	913033.71	210.00	3/30/2006	173.80	36.20	44.39	30.86	-8.19	5.34
Arkansas	03S05W15CBB1	342633.21	913229.33	206.00	3/28/2006	171.60	34.40	42.46	29.52	-8.06	4.88
Arkansas	03S05W18CAB1	342629.37	913524.68	196.00	3/30/2006	163.40	32.60	39.72	27.32	-7.12	5.28
Arkansas	03S06W21ACC1	342554	913925	195.00	3/30/2006	159.95	35.05	69.44		-34.39	
Arkansas	03S06W30BBD1	342515.54	914216.15	191.00	4/5/2006	162.00	29.00	29.73	29.37	-0.73	-0.37
Arkansas	04S01W04CBD1	342225.42	910808.42	196.00	4/5/2006	110.81	85.19	88.48	82.00	-3.29	3.19
Arkansas	04S01W28BAA1	341929	910739	190.00	4/4/2006	104.30	85.70		83.24		2.46
Arkansas	04S02W09DDC	342123	911331	175.00	3/29/2006	65.70	109.30	109.95	175.00	-0.65	
Arkansas	04S04W11BCC1	342156.96	912501.52	198.00	3/28/2006	152.40	45.60	46.94	198.00	-1.34	
Arkansas	04S04W22DAA1	342006.89	912515.15	195.00	3/28/2006	154.50	40.50	39.49	36.22	1.01	4.28
Arkansas	04S05W01BAA1	342322.23	912956.46	196.00	3/26/2006	173.50	22.50	7.44	28.95	15.06	-6.45
Arkansas	04S05W05ACC1	342302.67	913412.84	186.00	3/30/2006	157.70	28.30	34.95	24.40	-6.65	3.90
Arkansas	04S05W15AAA1	342132.16	913133.29	201.00	3/28/2006	165.85	35.15	41.83	31.33	-6.68	3.82
Arkansas	04S05W34DAA1	341819	913134	192.00	3/28/2006	156.60	35.40				
Arkansas	04S05W36DCC1	341752.00	913003.63	196.00	3/28/2006	159.95	36.05	42.15	31.44	-6.10	4.61
Arkansas	05S01W17BAA1	341550.68	910745.34	176.00	3/28/2006	91.80	84.20	86.92	81.77	-2.72	2.43
Arkansas	05S03W04ADB1	341734.14	912007.11	188.00	4/10/2006	135.90	52.10				
Arkansas	05S04W26ACA1	341358	912435	188.00	3/23/2006	139.00	49.00	68.22	56.90	-19.22	-7.90
Arkansas	05S05W26CDD1	341324	913119	188.00	3/30/2006	37.45	150.55	157.61		-7.06	
Arkansas	05S05W36DAA	341247	912946	180.00	3/30/2006	142.00	38.00	46.13	37.73	-8.13	0.27
Arkansas	06S02W06ABB1	341227.90	911620.01	181.00	3/29/2006	117.50	63.50	78.68	65.77	-15.18	-2.27
Arkansas	06S02W17ADA1	341022.67	911453.14	188.00	3/29/2006	112.70	75.30	83.17	74.81	-7.87	0.49
Arkansas	06S02W22CDB1	340904	911331.06	186.00	3/29/2006	110.00	76.00	87.88	73.71	-11.88	2.29
Arkansas	06S03W27BAA1	340859.22	912008.98	181.00	3/29/2006	118.70	62.30	68.49	60.94	-6.19	1.36
Arkansas	07S02W28ABA1	340339.67	911411.01	181.00	3/29/2006	104.90	76.10	82.77	75.74	-6.67	0.36

Sparta/Memphis Aquifer
Water Level Data
06-05-01-96

County	Station	Latitude	Longitude	LSD Alt	WL Date	06 WL Meas	WL ALT 2006	WL ALT 2005	WL ALT 2001	05-06 Change	01-06 Change
Arkansas	07S03W06ABC1	340701.89	912247.68	185.00	4/11/2006	126.30	58.70	62.16	58.15	-3.46	0.55
Arkansas	08S02W09BCC1	340031.06	911447.66	174.00	3/29/2006	100.20	73.80	78.12	74.30	-4.32	-0.50
							Declines/Wells:			**30/32**	**7/29**
							Average Change:			**-6.59**	**2.57**
Ashley	15S07W32CDD1	332117.77	915101.06	190.00	3/21/2006	138.70	51.30	51.28	56.45	0.02	-5.15
Ashley	17S09W15ACC1	331333.66	920116.44	100.00	3/23/2006	20.30	79.70	82.03	78.76	-2.33	0.94
Bradley	12S09W31CCB1	333711.24	920444.21	231.00	2/9/2006	174.85	56.15	44.64		11.51	
Bradley	12S10W10BCA1	334103	920707	163.00	2/9/2006	124.40	38.60		41.93		-3.33
Bradley	13S11W17BCD1	333453.65	921607.25	250.00	3/22/2006	191.20	58.80	48.98	59.39	9.82	-0.59
Bradley	14S11W31DBB1	332715	921015	150.00	2/8/2006	94.68	55.32	50.30	58.50	5.02	-3.18
Bradley	16S12W21CAA1	331839	922052	100.00	2/8/2006	78.20	21.80	25.74	26.38	-3.94	-4.58
							Declines/Wells:			**1/4**	**4/4**
							Average Change:			**5.60**	**-2.92**
Calhoun	11S14W12CAC3	334630.25	922928.17	313.00	2/1/2006	130.22	182.78	166.49	168.27	16.29	14.51
Calhoun	13S12W31DAA1	333233	922224	200.00	3/1/2006	57.35	142.65				
Calhoun	13S13W32CDA1	333226.81	922741.66	208.00	2/1/2006	185.75	22.25	37.73	38.51	-15.48	-16.26
Calhoun	14S13W05BBD1	333206.66	922801.55	189.00	2/2/2006	159.20	29.80	32.64		-2.84	
Calhoun	14S13W12CCB1	333040.05	922403.54	205.00	2/8/2006	177.04	27.96	34.11	36.99	-6.15	-9.03
Calhoun	14S13W29DAC1	332811	922722	148.00	2/1/2006	15.11	132.89				
Calhoun	15S13W20BDC1	332410.97	922806.59	115.00	2/1/2006	24.20	90.80	90.25	80.58	0.55	10.22
Calhoun	15S13W32BBD1	332230	922821	102.00	2/1/2006	128.00	-26.00	-31.40		5.40	
							Declines/Wells:			**3/6**	**2/4**
							Average Change:			**-0.37**	**-0.14**
Chicot	13S03W22DAD1	333312.37	912307.62	135.00	3/23/2006	71.50	63.50	66.72	66.75	-3.22	-3.25
Chicot	15S02W33CBA1	332100	911854	124.00	2/22/2006	39.70	84.30				
Cleveland	08S09W06BBA1	340349	900237	300.00	4/5/2006	265.00	35.00				

Sparta/Memphis Aquifer
Water Level Data
06-05-01-96

County	Station	Latitude	Longitude	LSD Alt	WL Date	06 WL Meas	WL ALT 2006	WL ALT 2005	WL ALT 2001	05-06 Change	01-06 Change
Cleveland	08S12W13BDD1	340132.58	921637.61	259.00	4/4/2006	131.35	127.65	113.94		13.71	
Cleveland	09S11W01DCA1	335729.02	921133.93	230.00	4/4/2006	198.90	31.10	22.79	25.18	8.31	5.92
Cleveland	09S11W11CDB1	335622.66	921250.52	233.00	4/4/2006	162.47	70.53	71.06	72.88	-0.53	-2.35
Cleveland	10S09W23CDC1	334917.94	920020.5	220.00	4/5/2006	163.70	56.30	57.44	59.98	-1.14	-3.68
Cleveland	10S09W35CCA1	334758	915956	232.00	4/5/2006	177.90	54.10				
Cleveland	11S11W16AAB1	334543.01	921423.47	303.00	4/4/2006	204.20	98.80	99.17	108.79	-0.37	-9.99
							Declines/Wells:			**3/5**	**3/4**
							Average Change:			**4.00**	**-2.52**
Columbia	15S20W20CCB1	332453.37	931215.01	372.00	1/27/2006	216.75	155.25	155.87	149.75	-0.62	5.50
Columbia	16S20W08DCC1	332114.08	931141.34	402.00	3/23/2006	327.60	74.40	84.77		-10.37	
Columbia	16S20W18ACD1	332052.93	931237.40	337.00	3/23/2006	270.20	66.80	74.50	51.79	-7.70	15.01
Columbia	16S21W14CBB1	332049.37	931517.28	281.00	1/26/2006	181.15	99.85	82.69	66.34	17.16	33.51
Columbia	16S21W15CBC1	332041	931622	288.00	3/10/2006	195.00	93.00		77.01		15.99
Columbia	16S22W22CCD1	331947.61	932224.89	340.00	1/26/2006	134.20	205.80	193.13	191.74	12.67	14.06
Columbia	17S19W15ABD1	331537	930328	325.00	1/27/2006	247.60	77.40	52.13		25.27	
Columbia	17S19W17ACA1	331538.06	930536.26	275.00	1/27/2006	275.65	-0.65		9.62		-10.27
Columbia	17S19W18CBD1	331516.81	930655.59	305.00	1/27/2006	289.54	15.46	35.93	30.35	-20.47	-14.89
Columbia	17S19W30ABB1	331406.12	930650.14	248.00	1/23/2006	215.90	32.10	26.26	28.07	5.84	4.03
Columbia	17S20W13CB1	331533	930807	312.00	1/26/2006	323.40	-11.40		-13.48		2.08
Columbia	17S20W17CDA1	331519.76	931200.69	325.10	1/27/2006	299.58	25.52	7.86	16.76	17.66	8.76
Columbia	17S21W01BBC1	331743.07	931423.65	305.00	1/27/2006	264.97	40.03	35.25	-4.53	4.78	44.56
Columbia	17S21W08DCA1	331613.42	931758.30	298.00	1/26/2006	119.00	179.00				
Columbia	17S21W11DCC2	331608.55	931448.61	303.00	1/26/2006	289.83	13.17	24.43	15.55	-11.26	-2.38
Columbia	17S21W17BAA1	331607	931818	311.00	1/26/2006	214.68	96.32	107.73	103.95	-11.41	-7.63
Columbia	17S22W21ABD1	331516	932303	242.00	1/26/2006	83.10	158.90	160.38		-1.48	
Columbia	17S22W22ABC1	331521	932209	318.00	1/26/2006	137.13	180.87	181.00	176.02	-0.13	4.85
Columbia	17S22W23BBB1	331519	932136	318.00	1/26/2006	141.50	176.50	181.89	178.34	-5.39	-1.84
Columbia	18S20W06DDC1	331142	931248	300.00	1/26/2006	284.79	15.21		1.16		14.05
Columbia	18S20W08CBC1	331114.79	931227.04	263.00	1/26/2006	282.46	-19.46	-10.44	-9.62	-9.02	-9.84
Columbia	18S20W10CAA1	331054.37	931015.76	290.00	1/26/2006	275.71	14.29	12.49	12.80	1.80	1.49
Columbia	18S22W27DDD1	330834.57	932158.59	312.00	1/27/2006	133.78	178.22	178.36	174.66	-0.14	3.56
Columbia	18S23W26BAC1	330920	932748	286.00	3/7/2006	4.90	281.10		264.80		16.30
Columbia	19S20W34BDD1	330239.09	931030.67	290.00	1/25/2006	211.78	78.22		80.35		-2.13
Columbia	19S23W10ABD1	330643.92	932833.33	242.00	2/22/2006	44.79	197.21	198.48	196.15	-1.27	1.06
Columbia	19S23W11CDA2	330609.39	932744.02	248.00	1/25/2006	53.20	194.80	195.55	194.67	-0.75	0.13
Columbia	19S23W11DDB1	330604.93	932722.12	246.00	1/25/2006	57.16	188.84	191.97	190.84	-3.13	-2.00

Sparta/Memphis Aquifer
Water Level Data
06-05-01-96

County	Station	Latitude	Longitude	LSD Alt	WL Date	06 WL Meas	WL ALT 2006	WL ALT 2005	WL ALT 2001	05-06 Change	01-06 Change
Columbia	19S23W14BAB2	330555.24	932752.38	244.00	1/26/2006	50.17	193.83	193.54	201.55	0.29	-7.72
Columbia	20S22W11ACD1	330109.20	932133.20	271.00	1/25/2006	114.30	156.70	163.87	162.95	-7.17	-6.25
							Declines/Wells:			**15/23**	**10/26**
							Average Change:			**-0.21**	**4.62**
Craighead	13N03E23CDD1	354404.17	904432.83	248.00	4/24/2006	87.90	160.10	160.85	161.87	-0.75	-1.77
Craighead	14N04E22CBD1	354928.92	903920.99	256.00	4/24/2006	59.20	196.80	200.73	197.32	-3.93	-0.52
Craighead	14N04E28DBD1	354836.94	903953.27	254.00	4/24/2006	54.20	199.80	193.69	192.96	6.11	6.84
Craighead	14N05E36CBC1	354750.84	903100.18	220.00	4/24/2006	13.50	206.50	209.24	205.58	-2.74	0.92
Craighead	14N05E34ADD1	354748	903414	230.00	4/24/2006	17.20	212.80		210.18		2.62
Craighead	15N03E13ABA1	355614	904301	329.00	4/24/2006	-1.70	330.70		327.07		3.63
Craighead	15N03E31ADA1	355313.63	904807.26	270.00	4/24/2006	57.20	212.80	214.10	217.00	-1.30	-4.20
Craighead	15N04E20ADB1	355506.01	904043.21	438.00	4/24/2006	118.75	319.25	319.82	317.29	-0.57	1.96
Craighead	15N06E18ACA1	355544.42	902858.20	230.00	4/24/2006	19.50	210.50	214.69	210.52	-4.19	-0.02
							Declines/Wells:			**6/7**	**4/9**
							Average Change:			**-1.05**	**1.05**
Crittenden	05N08E11CCA2	350344.68	901300.21	211.00	3/2/2006	29.00	182.00	188.06	182.44	-6.06	-0.44
Crittenden	06N07E01DAD2	350958.04	901738.42	209.00	3/31/2006	26.60	182.40	186.47	183.27	-4.07	-0.87
Crittenden	06N09E08DCC1	350849.72	900921.78	215.00	3/31/2006	9.10	205.90	206.90	206.81	-1.00	-0.91
Crittenden	07N07E35BCC1	351629	901933	221.00	3/24/2006	35.00	186.00	188.93		-2.93	
Crittenden	07N09E14BAC1	351348.14	900628.23	217.00	5/2/2006	32.20	184.80	189.58		-4.78	
							Declines/Wells:			**5/5**	**3/3**
							Average Change:			**-3.77**	**-0.74**
Cross	07N05E04ADD1	351538.11	903329.85	209.00	4/27/2006	34.70	174.30	172.92	175.57	1.38	-1.27
Cross	08N02E18BDB1	351908.19	905538.47	228.00	4/19/2006	89.00	139.00	145.28		-6.28	
Cross	09N01E16CAC1	352405.00	905950.75	234.00	4/26/2006	90.00	144.00	152.63	156.24	-8.63	-12.24
Cross	09N01E25AAD1	352244.31	905554.00	227.00	4/19/2006	87.80	139.20	140.47		-1.27	
Cross	09N03E22AAB2	352403.82	904518.39	277.00	4/26/2006	127.60	149.40	150.08	152.29	-0.68	-2.89
Cross	09N04E30DCA1	352231	904215	429.32	4/24/2006	279.20	150.12	163.65	167.66	-13.53	-17.54
							Declines/Wells:			**5/6**	**4/4**
							Average Change:			**-4.83**	**-8.48**

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County	Station	Latitude	Longitude	LSD Alt	WL Date	06 WL Meas	WL ALT 2006	WL ALT 2005	WL ALT 2001	05-06 Change	01-06 Change
Dallas	07S14W30DCC1	340430.87	923359.85	335.00	2/15/2006	120.63	214.37	215.35	215.37	-0.98	-1.00
Dallas	07S16W20CAB1	340559	924541	322.00	2/16/2006	26.40	295.60	297.03	296.66	-1.43	-1.06
Dallas	08S15W34BDC1	335853	923658	240.00	2/15/2006	30.23	209.77	214.37	214.48	-4.60	-4.71
Dallas	08S16W18ACC1	940152	922446	252.00	2/16/2006	23.05	228.95	235.97	236.84	-7.02	-7.89
Dallas	08S16W27DDD1	335935	924307	272.00	2/16/2006	34.50	237.50	239.23	238.81	-1.73	-1.31
Dallas	09S13W35CCD1	335304	922413	200.00	2/15/2006	71.70	128.30	128.64	129.41	-0.34	-1.11
Dallas	09S14W01BDC1	335753.63	922918.78	265.00	2/15/2006	79.30	185.70	186.34	186.69	-0.64	-0.99
Dallas	09S16W19CAA1	335605.48	924701.17	260.00	2/16/2006	11.00	249.00	253.97	254.39	-4.97	-5.39
Dallas	10S13W34ACA2	334829.46	922457.61	272.00	3/29/2006	152.45	119.55	120.53	122.50	-0.98	-2.95
Dallas	10S14W27CDB1	334907.60	923137.99	270.00	2/15/2006	23.30	246.70	238.07	242.21	8.63	4.49
Dallas	10S15W18BCC1	335119.53	924120.08	328.00	2/16/2006	77.45	250.55	252.22	250.44	-1.67	0.11
Dallas	10S15W24AAB1	335041	923505	242.00	2/15/2006	17.70	224.30				
Dallas	10S16W25BAC1	334952	924203	270.00	2/16/2006	32.75	237.25				
							Declines/Wells:			**10/11**	**9/11**
							Average Change:			**-1.43**	**-1.98**
Desha	09S02W26AAC1	335346.00	911520.82	153.00	3/29/2006	73.40	79.60	84.09	81.68	-4.49	-2.08
Desha	09S04W28DDD1	335309.60	913006.71	165.00	3/29/2006	112.50	52.50	52.46	49.27	0.04	3.23
Desha	10S02W26CCC2	334750.23	911623.99	148.00	3/22/2006	73.10	74.90	76.76	77.01	-1.86	-2.11
Desha	10S04W11CBC1	335034.41	912905.14	161.00	3/29/2006	99.80	61.20	58.10	70.14	3.10	-8.94
Desha	11S01W31BBB1	334223	911421	141.00	3/29/2006	105.00	36.00				
Desha	11S02W03CCA1	334615.78	911711.03	139.00	3/22/2006	70.50	68.50	69.98	70.82	-1.48	-2.32
Desha	12S03W26CBB1	333748.60	912259.18	138.00	3/29/2006	97.60	40.40	42.61	46.92	-2.21	-6.52
Desha	12S03W34DAD1	333643.44	912305.04	147.00	3/29/2006	89.10	57.90	69.50	46.18	-11.60	11.72
							Declines/Wells:			**5/7**	**5/7**
							Average Change:			**-2.64**	**-1.00**
Drew	11S04W02ACA2	334631.87	912826.56	153.00	3/28/2006	96.90	56.10	59.53	62.18	-3.43	-6.08
Drew	11S04W25DAA1	334249.46	912706.98	148.00	3/28/2006	98.40	49.60	62.13		-12.53	
Drew	12S06W30BBD1	333807.15	914543.08	257.00	3/24/2006	251.50	5.50	33.17	36.58	-27.67	-31.08
Drew	12S06W32DAD1	333649.09	914401.96	227.00	3/24/2006	166.70	60.30	56.65	67.32	3.65	-7.02
Drew	13S05W36ACB1	333150.88	913407.59	169.00	3/24/2006	89.50	79.50	78.69	80.17	0.81	-0.67
Drew	14S06W21BDC1	332846	914338	212.00	3/24/2006	109.95	102.05				
Drew	15S04W12DDA1	332429.38	912723.69	125.00	3/28/2006	63.20	61.80	62.68	64.10	-0.88	-2.30
							Declines/Wells:			**4/6**	**5/5**
							Average Change:			**-6.68**	**-9.43**

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County	Station	Latitude	Longitude	LSD Alt	WL Date	06 WL Meas	WL ALT 2006	WL ALT 2005	WL ALT 2001	05-06 Change	01-06 Change
Grant	03S13W12AAA1	342845.65	922106.24	361.00	2/15/2006	132.00	229.00	229.99	229.84	-0.99	-0.84
Grant	03S15W26DAA1	342600.52	923447.01	337.00	3/28/2006	8.10	328.90	327.13	328.07	1.77	0.83
Grant	05S13W03DBC1	341843.97	922400.47	260.00	3/28/2006	87.80	172.20	177.91	170.47	-5.71	1.73
Grant	05S13W03CDA4	341837.64	922401.95	281.00	3/28/2006	111.10	169.90	170.37	166.32	-0.47	3.58
Grant	05S13W07BCA1	341810	922649.75	258.00	3/28/2006	81.90	176.10	198.57		-22.47	
Grant	05S14W06DCC1	341842.5	923326.69	293.00	3/28/2006	87.40	205.60	206.53	202.18	-0.93	3.42
Grant	05S15W05ABD1	341923.78	923826.87	232.00	3/28/2006	14.50	217.50	215.03	215.39	2.47	2.11
Grant	06S11W05ACA1	341340.82	921413.01	280.00	3/30/2006	196.10	83.90	70.26	75.37	13.64	8.53
Grant	06S15W26ACA1	341021.99	923537.59	280.00	3/29/2006	67.20	212.80	214.47	211.86	-1.67	0.94
Grant	07S12W21BDB1	340558.11	921952.7	223.00	3/30/2006	3.14	219.86	220.88	219.79	-1.02	0.07
							Declines/Wells:			**7/10**	**1/9**
							Average Change:			**-1.54**	**2.26**
Jefferson	03S08W19BAD1	342623.76	915443.67	217.00	4/13/2006	171.50	45.50	45.53		-0.03	
Jefferson	03S08W19BBD1	342628.36	915504.54	215.00	4/13/2006	172.80	42.20	48.26	39.57	-6.06	2.63
Jefferson	03S09W23BBD1	342626.95	915712.96	224.00	3/21/2006	168.40	55.60	58.55	46.32	-2.95	9.28
Jefferson	03S10W27AAD1	342502.05	920433.81	222.00	4/13/2006	125.80	96.20	95.75	74.19	0.45	22.01
Jefferson	04S07W17BCC1	342139.61	914741.85	200.00	4/14/2006	176.50	23.50	31.60	13.61	-8.10	9.89
Jefferson	05S08W30CBA1	341446.21	915526.54	207.46	4/14/2006	292.40	-84.94	-83.47	-87.09	-1.47	2.15
Jefferson	05S09W24DBD1	341529.68	915555.60	208.17	4/14/2006	278.60	-70.43	-68.95	-72.92	-1.48	2.49
Jefferson	05S09W31DDC1	341336.69	920109.42	227.00	4/11/2006	279.00	-52.00	-49.94	-55.54	-2.06	3.54
Jefferson	05S09W19BAA1	341605	920131	226.00	4/14/2006	299.40	-73.40				
Jefferson	05S10W16BAD1	341700.48	920548.64	277.00	3/8/2006	247.50	29.50	35.33	31.58	-5.83	-2.08
Jefferson	05S10W16DBB1	341634.59	920542.79	315.00	3/8/2006	292.45	22.55	20.77	20.73	1.78	1.82
Jefferson	05S10W16DBD1	341634	920534	300.00	3/8/2006	284.30	15.70	16.11	20.21	-0.41	-4.51
Jefferson	06S08W16CCC1	341143.07	915517.06	202.42	4/14/2006	257.60	-55.18	-53.32	-53.78	-1.86	-1.40
Jefferson	06S08W25ADC1	341024.86	915116.18	203.48	4/14/2006	227.10	-23.62	-22.17	-22.69	-1.45	-0.93
Jefferson	06S09W17CAD1	341158.70	920206.91	233.00	4/11/2006	282.60	-49.60		-40.06		-9.54
Jefferson	06S10W23ACA2	341123.09	920503.93	235.00	4/11/2006	232.50	2.50	11.32	-1.03	-8.82	3.53
Jefferson	07S07W24BAB1	340632.68	914522.99	188.00	4/13/2006	161.00	27.00	23.16	22.56	3.84	4.44
Jefferson	07S10W24CAC1	340548.70	920420.81	311.00	4/11/2006	288.00	23.00				
							Declines/Wells:			**12/15**	**5/15**
							Average Change:			**-2.30**	**2.89**

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County	Station	Latitude	Longitude	LSD Alt	WL Date	06 WL Meas	WL ALT 2006	WL ALT 2005	WL ALT 2001	05-06 Change	01-06 Change
Lafayette	16S23W12CAD1	332142.57	932608.59	322.00	5/3/2006	61.90	260.10	247.15	250.28	12.95	9.82
Lafayette	16S24W26AAC1	331950.2	933302.96	267.00	5/3/2006	55.40	211.60	212.35	215.14	-0.75	-3.54
Lafayette	18S23W29ACC1	330910.83	933039.27	255.00	5/4/2006	15.80	239.20	242.77	244.64	-3.57	-5.44
Lafayette	19S23W29BDB1	330351.94	933103.37	250.00	5/4/2006	41.00	209.00	208.44	209.19	0.56	-0.19
Lafayette	20S23W05ADB1	330223.35	933036.08	242.00	5/4/2006	39.00	203.00	201.85	202.15	1.15	0.85
							Declines/Wells:			**2/5**	**3/5**
							Average Change:			**2.07**	**0.30**
Lee	01N04E09DCC4	344203	904116	204.00	4/12/2006	61.50	142.50		149.02		-6.52
Lee	02N04E35DBC1	344357	903858	185.00	4/12/2006	55.00	130.00				
Lee	03N03E28CDB1	345005.93	904748.84	207.00	4/12/2006	52.15	154.85	145.03	153.45	9.82	1.40
Lincoln	07S07W30CDC1	340443.93	915042.86	208.00	3/30/2006	176.10	31.90	27.62	28.76	4.28	3.14
Lincoln	08S04W22AAA1	340104.86	912752.79	167.00	2/28/2006	117.40	49.60	47.13	50.86	2.47	-1.26
Lincoln	08S05W03BAA2	340309.54	913453.58	180.00	3/29/2006	143.70	36.30	32.42	38.66	3.88	-2.36
							Declines/Wells:			**0/3**	**2/3**
							Average Change:			**5.11**	**-1.12**
Lonoke	01N07W03BCC1	344425.34	914503.28	223.00	4/7/2006	129.50	93.50	95.09	95.93	-1.59	-2.43
Lonoke	01S08W02DBD1	343854.72	914959.73	210.00	4/7/2006	112.75	97.25	112.68	114.06	-15.43	-16.81
Lonoke	02N07W09AAA1	344906.42	914500.30	232.00	3/15/2006	100.30	131.70	133.23		-1.53	
Lonoke	02N07W22DBA1	344651.49	914425.68	227.00	3/16/2006	129.85	97.15	98.55	103.52	-1.40	-6.37
Lonoke	02N07W32DDD1	344453.26	914618.97	226.00	3/15/2006	132.80	93.20	96.67	102.43	-3.47	-9.23
Lonoke	02S09W15BBB2	343246.5	915825.0	226.00	4/9/2006	72.00	154.00	154.65		-0.65	
Lonoke	03N07W03CAA1	345444.90	914426.30	235.00	3/15/2006	78.45	156.55	156.72	158.09	-0.17	-1.54
Lonoke	03N08W23DDD1	345152.18	915025.08	235.00	4/7/2006	94.90	140.10	138.76	138.15	1.34	1.95
							Declines/Wells:			**7/8**	**5/6**
							Average Change:			**-2.86**	**-5.74**
Monroe	01N01W15CBD1	344139	910542	185.00	3/7/2006	62.20	122.80	125.30		-2.50	
Monroe	01N03W14CCB1	344143.93	911801.12	172.00	3/7/2006	70.20	101.80	99.27	100.43	2.53	1.37
Monroe	03N01W33CDD1	345446.34	910635.08	210.00	3/6/2006	69.60	140.40	141.99	144.75	-1.59	-4.35
Monroe	03N02W26DAB1	345043	911026	192.00	3/6/2006	49.04	142.96	144.87	144.96	-1.91	-2.00
Monroe	04N02W28DDD4	345535	911221	192.00	3/6/2006	32.40	159.60	161.51	161.40	-1.91	-1.80

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County	Station	Latitude	Longitude	LSD Alt	WL Date	06 WL Meas	WL ALT 2006	WL ALT 2005	WL ALT 2001	05-06 Change	01-06 Change
Monroe	04N02W30BAC1	345617.03	911503.95	180.00	3/6/2006	10.10	169.90	165.41	165.19	4.49	4.71
Monroe	04N02W30BAD1	345617.24	911514.62	182.00	4/4/2006	14.00	168.00	172.14	171.82	-4.14	-3.82
							Declines/Wells:			**5/7**	**4/6**
							Average Change:			**-0.72**	**-0.98**
Nevada	14S20W29BCA1	332931.28	931151.57	369.00	3/8/2005	372.00	0.00	358.94	364.82		
Nevada	14S21W04CCB1	333251.22	931708.33	360.00	4/12/2006	59.90	300.10	301.56	300.88	-1.46	-0.78
Ouachita	11S15W27ABD1	334440.87	923725.58	200.00	1/18/2006	72.20	127.80	128.28	131.97	-0.48	-4.17
Ouachita	11S17W14CAC1	334631.35	924927.46	146.00	1/18/2006	20.97	125.03	127.30	129.65	-2.27	-4.62
Ouachita	12S15W09BBA1	334223.32	923922.44	213.00	1/18/2006	63.15	149.85	142.43	118.26	7.42	31.59
Ouachita	12S16W25BDC1	333929.4	924210.82	140.00	1/19/2006	36.20	103.80	106.18		-2.38	
Ouachita	12S16W26ABD1	333945.55	924304.12	134.00	1/19/2006	31.38	102.62	99.31		3.31	
Ouachita	12S18W19CDC1	334018	925948	235.00	2/16/2006	27.40	207.60		198.31		9.29
Ouachita	12S18W25CAB1	333937.19	925441.87	187.00	5/4/2006	79.40	107.60	109.57	110.54	-1.97	-2.94
Ouachita	12S19W09BAB1	334251.46	930351.94	290.00	2/17/2006	18.30	271.70	279.99	283.23	-8.29	-11.53
Ouachita	12S19W14AAA1	334143.44	930104.54	237.00	2/17/2006	6.40	230.60	231.97	234.19	-1.37	-3.59
Ouachita	12S19W35BDD1	333901.13	930145.97	350.00	5/4/2006	159.10	190.90	193.77	193.38	-2.87	-2.48
Ouachita	13S16W28ADD1	333416.22	924450.63	106.00	1/19/2006	29.75	76.25	73.81	51.44	2.44	24.81
Ouachita	13S18W31BDD1	333340	925958	242.00	1/10/2006	71.70	170.30	171.98	175.53	-1.68	-5.23
Ouachita	13S19W28BCD1	333433.86	930417.81	230.00	2/23/2006	39.80	190.20	193.78	193.96	-3.58	-3.76
Ouachita	14S16W32BDB1	332815.62	924639.52	231.00	1/19/2006	37.14	193.86	211.47	225.12	-17.61	-31.26
Ouachita	14S17W02ABB1	333252	924926	120.00	1/19/2006	21.10	98.90				
Ouachita	14S17W05CAD1	333238.01	925254.64	157.00	2/9/2006	39.34	117.66	120.07	120.27	-2.41	-2.61
Ouachita	14S17W19DBB1	333002.20	925345.44	259.00	2/16/2006	33.55	225.45	247.78	252.92	-22.33	-27.47
Ouachita	14S17W32CAD1	332803.41	925251.18	220.00	1/18/2006	81.26	138.74	138.14	134.44	0.60	4.30
Ouachita	14S18W27BDC1	332917.60	925703.97	309.00	1/20/2006	43.06	265.94	265.63	269.78	0.31	-3.84
Ouachita	14S19W29ABB1	332941.45	930513.43	280.00	2/23/2006	87.20	192.80	192.48	192.96	0.32	-0.16
Ouachita	15S15W32DBB2	332233.72	924027.13	119.00	2/16/2006	173.50	-54.50	-57.39	-56.61	2.89	2.11
Ouachita	15S16W07DDC1	332553	924716	230.00	2/16/2006	35.10	194.90	201.42		-6.52	
Ouachita	15S18W36ADD1	332310.75	925436.06	160.00	1/18/2006	94.55	65.45	64.57	64.28	0.88	1.17
Ouachita	15S19W10DCC1	332618.38	930318.37	210.00	3/1/2006	69.70	140.30	136.75	146.47	3.55	-6.17
Ouachita	15S19W21CDD2	332438.02	930431.9	280.00	2/9/2006	189.96	90.04	81.62	87.56	8.42	2.48
							Declines/Wells:			**13/23**	**14/21**
							Average Change:			**-1.90**	**-1.62**

Sparta/Memphis Aquifer
Water Level Data
06-05-01-96

County	Station	Latitude	Longitude	LSD Alt	WL Date	06 WL Meas	WL ALT 2006	WL ALT 2005	WL ALT 2001	05-06 Change	01-06 Change
Phillips	01S02E32DDC1	343324.32	905455.41	211.00	5/2/2006	76.30	134.70	130.21	130.12	4.49	4.58
Phillips	02S02E01ADC1	343323.48	905056.27	176.00	5/5/2006	31.00	145.00	139.38	137.19	5.62	7.81
Phillips	02S04E02DBA1	343242.87	903906.98	250.00	5/5/2006	105.30	144.70	137.16	143.74	7.54	0.96
Phillips	02S05E16BCB1	343108.32	903525.64	190.00	5/3/2006	34.00	156.00	156.48	151.42	-0.48	4.58
Phillips	02S05E29CCC1	342850.81	903635.44	179.00	5/5/2006	26.75	152.25	144.04	147.91	8.21	4.34
Phillips	03S03E30DAA1	342402.88	904914.59	172.00	5/5/2006	41.90	130.10	128.12	128.57	1.98	1.53
Phillips	04S02E25CCC1	341824.20	905121.49	166.00	5/5/2006	37.00	129.00	130.01	130.35	-1.01	-1.35
							Declines/Wells:			**2/7**	**1/7**
							Average Change:			**3.76**	**3.21**
Poinsett	10N01E12BDC1	353026.35	905629.57	234.00	4/18/2006	97.50	136.50	138.90	142.61	-2.40	-6.11
Poinsett	10N01E15DBB1	352930.54	905825.14	232.00	4/19/2006	95.90	136.10	137.26	138.74	-1.16	-2.64
Poinsett	10N01E33ABA1	352724.90	905924.05	221.00	3/23/2006	77.50	143.50	145.56	147.01	-2.06	-3.51
Poinsett	10N01E34BAA1	352724	905846	231.00	3/23/2006	94.80	136.20				
Poinsett	10N03E23CAC1	352844	904433	258.00	3/23/2006	114.00	144.00	146.31	149.44	-2.31	-5.44
Poinsett	11N02E16CCC1	353448.21	905321.22	243.00	4/18/2006	107.30	135.70	137.51	141.33	-1.81	-5.63
Poinsett	11N3E25ACC1	353225	904316	273.00	4/18/2006	124.60	148.40	152.29	141.44	-3.89	6.96
Poinsett	12N03E35DDA1	353727.35	904353.06	247.00	3/23/2006	102.90	144.10	145.64	148.26	-1.54	-4.16
							Declines/Wells:			**7/7**	**6/7**
							Average Change:			**-2.17**	**-2.93**
Prairie	01N05W19CDC1	344113.1	913505.27	212.00	3/25/2006	150.20	61.80	72.53	45.06	-10.73	16.74
Prairie	01N06W02ABB1	344442.4	913700.96	221.00	3/17/2006	125.50	95.50	105.35	78.18	-9.85	17.32
Prairie	01N06W34CBB1	343943.01	913846.17	226.00	3/17/2006	163.65	62.35	70.21	56.12	-7.86	6.23
Prairie	01S05W06BCB1	343903.98	913531.63	220.00	3/25/2006	155.55	64.45	71.35	53.12	-6.90	11.33
Prairie	01S05W20ABB1	343639.91	913351.89	220.00	3/17/2006	167.00	53.00	61.15	44.77	-8.15	8.23
Prairie	01S06W01BDD2	343859.48	913612.77	226.00	3/17/2006	161.34	64.66	62.02	51.76	2.64	12.90
Prairie	01S06W11DBD1	343748.99	913654.24	226.00	3/7/2006	170.50	55.50	61.28	47.16	-5.78	8.34
Prairie	01S06W12BAB1	343826	913613	228.00	3/17/2006	164.18	63.82	69.67		-5.85	
Prairie	02N05W24ACA1	344659	912937	225.00	3/17/2006	102.90	122.10	126.30		-4.20	
Prairie	02N06W19AAB1	344718.24	914049.95	236.00	3/25/2006	150.07	85.93	97.79	96.15	-11.86	-10.22
Prairie	02N06W20BCB1	344706.57	914032.97	236.00	3/25/2006	157.80	78.20	94.00	97.12	-15.80	-18.92
Prairie	02N06W21DAD1	344644.15	913829.47	232.00	3/25/2006	122.00	110.00	112.13		-2.13	
Prairie	02N06W24CAA1	344651	913551	232.90	3/25/2006	117.18	115.72	118.15		-2.43	

Sparta/Memphis Aquifer
Water Level Data
06-05-01-96

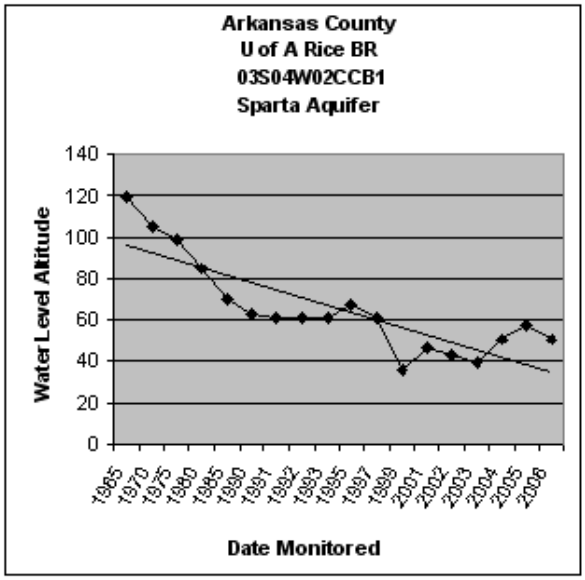
County	Station	Latitude	Longitude	LSD Alt	WL Date	06 WL Meas	WL ALT 2006	WL ALT 2005	WL ALT 2001	05-06 Change	01-06 Change
Prairie	03N05W03ADA2	345451.65	913042.51	205.00	3/25/2006	74.20	130.80	144.97	141.92	-14.17	-11.12
Prairie	03N06W20CDD1	345140.24	914003.93	225.00	3/25/2006	85.72	139.28	141.21	142.34	-1.93	-3.06
							Declines/Wells:			**14/15**	**4/11**
							Average Change:			**-7.00**	**3.43**
Pulaski	01S10W22BBB1	343713	920420	278.00	5/17/2006	20.00	258.00				
St. Francis	04N04E18BAB1	345743.38	904319.00	220.00	3/27/2006	67.15	152.85	156.72	151.71	-3.87	1.14
Union	16S14W15CAB1	331944.03	923218.09	94.00	2/14/2006	161.39	-67.39	-66.88	-61.71	-0.51	-5.68
Union	16S15W20DAA1	331859.92	923957.97	190.00	2/14/2006	274.50	-84.50	-98.32	-96.15	13.82	11.65
Union	16S15W31ACC1	331717.09	924128.90	168.00	2/7/2006	298.25	-130.25	-126.15	-141.60	-4.10	11.35
Union	16S16W02ABC1	332205	924330	116.00	1/10/2006	167.81	-51.81	-52.36	-57.24	0.55	5.43
Union	16S16W03CBB1	332138	924507	200.00	2/9/2006	224.97	-24.97	-25.20		0.23	
Union	16S18W22DCD1	331910	925707	224.00	2/8/2006	25.15	198.85				
Union	16S18W34ABC2	331805	925709	250.00	3/1/2006	192.80	57.20	44.74	38.18	12.46	19.02
Union	17S12W32BBC1	331202.09	922219.02	231.00	2/14/2006	247.54	-16.54	-19.58	-18.84	3.04	2.30
Union	17S14W10DCC1	331456.79	923203.26	186.00	2/13/2006	96.14	89.86	92.98	91.38	-3.12	-1.52
Union	17S14W15ABA1	331451.3	923159.8	169.00	2/13/2006	55.18	113.82	79.04	74.80	34.78	39.02
Union	17S14W22BAB1	331354.37	923224.17	201.00	1/10/2006	309.35	-108.35	-116.24		7.89	
Union	17S15W06BAA1	331645.6	924133.99	170.00	2/7/2006	250.50	-80.50	-84.95	-91.99	4.45	11.49
Union	17S15W08CDD1	331504.77	924027.41	174.92	2/7/2006	303.20	-128.28	-150.66	-173.72	22.38	45.44
Union	17S15W18DBB1	331438.96	924129.21	182.93	1/10/2006	327.27	-144.34	-148.17	-177.89	3.83	33.55
Union	17S15W28DCC1	331223	923922	285.00	2/28/2006	440.39	-155.39		-175.82		20.43
Union	17S15W29CDC1	331228.71	924039.39	220.00	2/28/2006	363.16	-143.16	-153.46	-192.08	10.30	48.92
Union	17S15W31DCA1	331145.05	924116.74	272.00	3/1/2006	411.61	-139.61	-153.27	-178.84	13.66	39.23
Union	17S16W01BAA1	331649.04	924232.96	188.84	2/1/2006	305.75	-116.91	-119.69	-143.38	2.78	26.47
Union	17S16W24BDB1	331357.24	924248.47	205.00	3/8/2006	374.10	-169.10	-189.04	-196.68	19.94	27.58
Union	17S17W25DBA2	331256	924837	250.00	1/10/2006	349.73	-99.73	-104.30		4.57	
Union	17S17W30DCD1	331257.41	925355.54	280.00	3/1/2006	311.70	-31.70	-41.93	-36.28	10.23	4.58
Union	18S12W33BBB1	330650.66	922119.92	112.00	2/9/2006	111.60	0.40	-29.18	-24.18	29.58	24.58
Union	18S14W06CCA1	331040	923531	225.00	3/1/2006	343.10	-118.10				
Union	18S15W03DAB1	331103.78	923802.12	240.00	1/10/2006	349.73	-109.73	-133.72		23.99	
Union	18S15W33ADA1	330659.32	923858.48	253.00	2/9/2006	374.39	-121.39	-121.03	-124.80	-0.36	3.41
Union	18S15W35DAC1	330635	923707	201.00	2/9/2006	292.97	-91.97	-89.20	-102.26	-2.77	10.29

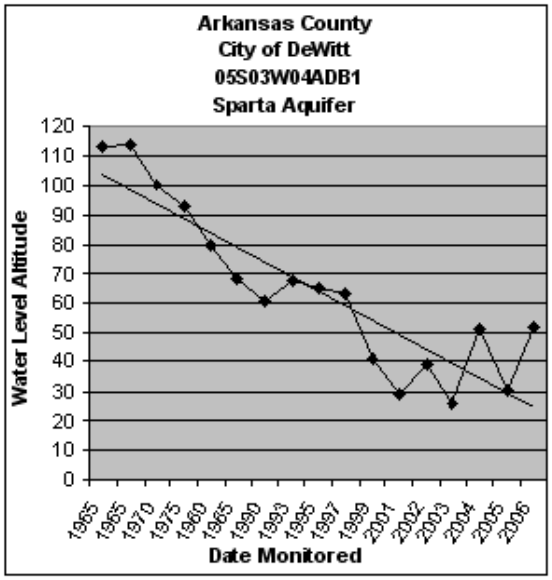
Sparta/Memphis Aquifer
Water Level Data
06-05-01-96

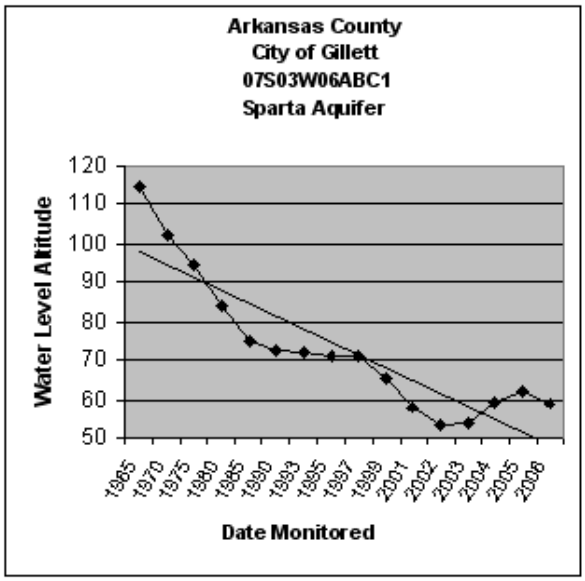
County	Station	Latitude	Longitude	LSD Alt	WL Date	06 WL Meas	WL ALT 2006	WL ALT 2005	WL ALT 2001	05-06 Change	01-06 Change
Union	18S16W11DAB1	331011.23	924316.37	270.00	3/2/2006	421.40	-151.40	-152.53	-161.40	1.13	10.00
Union	18S16W12ACB1	331028.75	924231.85	230.00	3/2/2006	435.35	-205.35		-196.23		-9.12
Union	18S16W28BBB1	330809.22	924611.13	225.00	3/2/2006	328.27	-103.27	-106.22	-111.26	2.95	7.99
Union	18S17W22BDD1	330855.91	925056.48	285.00	2/7/2006	351.02	-66.02	-68.54	-86.20	2.52	20.18
Union	18S18W11ACD2	331050.91	925615.1	239.00	2/9/2006	286.88	-47.88	-32.33	-45.76	-15.55	-2.12
Union	19S10W16CBC1	330329	920903	82.00	2/14/2006	90.51	-8.51	-4.64	-1.80	-3.87	-6.71
Union	19S11W23ACA1	330255.38	921228.80	142.00	2/9/2006	154.01	-12.01	-9.98	-4.78	-2.03	-7.23
Union	19S11W25AAA1	330217.84	921113.03	135.00	2/9/2006	153.26	-18.26	-17.27	-18.34	-0.99	0.08
Union	19S12W13AAA1	330411.26	921716.78	191.00	2/14/2006	157.22	33.78	33.17	38.89	0.61	-5.11
Union	19S15W01CCA1	330534.81	923645.01	188.00	2/9/2006	68.90	119.10	119.58	109.52	-0.48	9.58
Union	19S16W35DDC1	330108.86	924325.54	175.00	2/9/2006	239.50	-64.50	-72.08	-72.48	7.58	7.98
Union	19S18W14ADA1	330451.70	925607.90	243.00	2/7/2006	193.00	50.00	51.62	58.50	-1.62	-8.50
							Declines/Wells:			**11/34**	**8/32**
							Average Change:			**5.82**	**12.33**
Woodruff	05N01W11ABA1	350425.81	910407.19	211.00	4/6/2006	50.60	160.40	155.24	155.01	5.16	5.39
Woodruff	05N01W17DBB1	350310.68	910727.11	210.00	4/6/2006	46.35	163.65	164.39	165.27	-0.74	-1.62
Woodruff	05N02W31DCB3	350026.9	911455.9	193.00	4/5/2006	14.55	178.45	181.36	179.45	-2.91	-1.00
Woodruff	06N01W13ABA1	350851	910255	212.00	4/6/2006	70.65	141.35	148.96		-7.61	
Woodruff	06N01W13ADC1	350827.39	910246.74	212.00	4/6/2006	66.80	145.20	145.97		-0.77	
Woodruff	07N01W12BCB1	351441.58	910326.17	222.00	4/6/2006	65.30	156.70	160.48	159.98	-3.78	-3.28
Woodruff	08N01W12CDA1	351932	910310	225.00	4/6/2006	72.90	152.10	152.96	149.48	-0.86	2.62
							Declines/Wells:			**6/7**	**3/5**
							Average Change:			**-1.64**	**0.42**
							Total Declines/Wells:			**177/259**	**116/240**
							Total Average Change:			**-1.19**	**2.03**
										68.00%	**48.00%**

Appendix D

Selected Sparta / Memphis Aquifer Well Hydrographs


Arkansas County
U of A Rice BR
03S04W02CCB1
Sparta Aquifer
Water Level Altitude
Date Monitored


Arkansas County
City of DeWitt
05S03W04ADB1
Sparta Aquifer
Water Level Altitude
Date Monitored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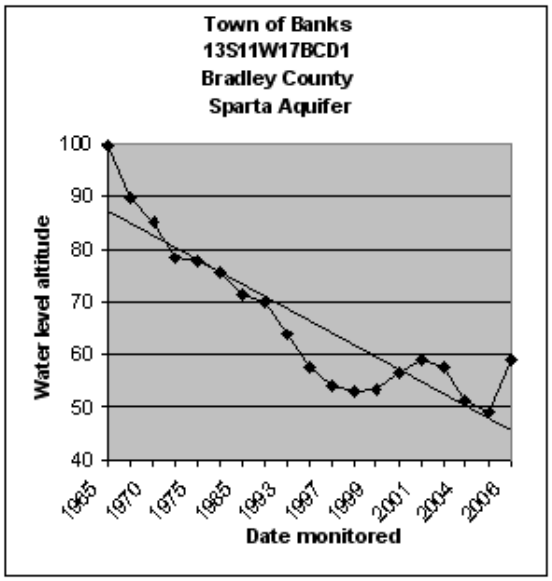
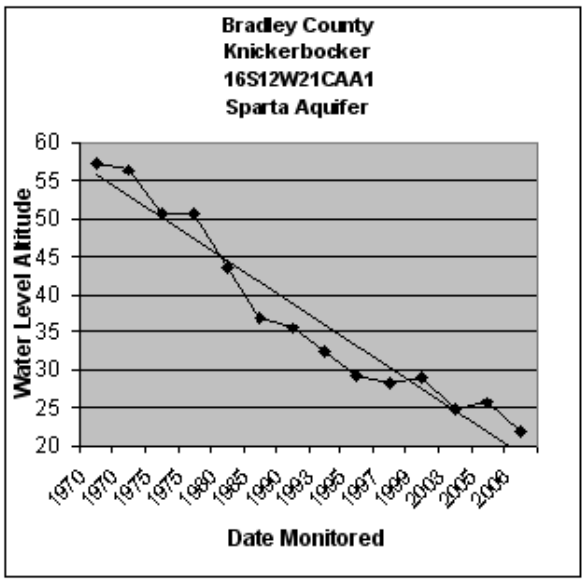
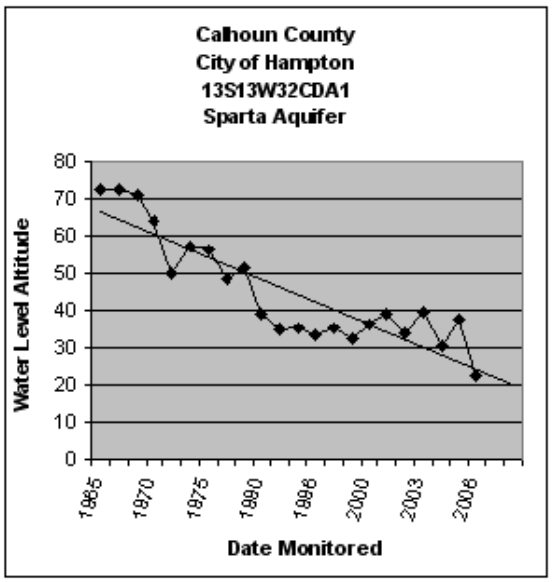
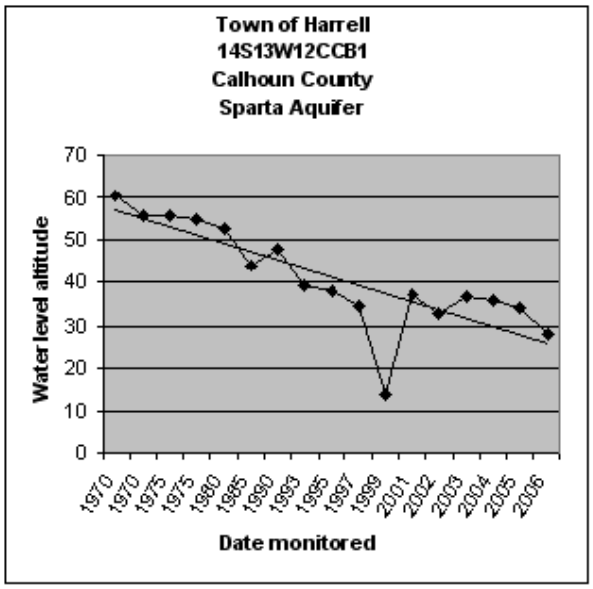
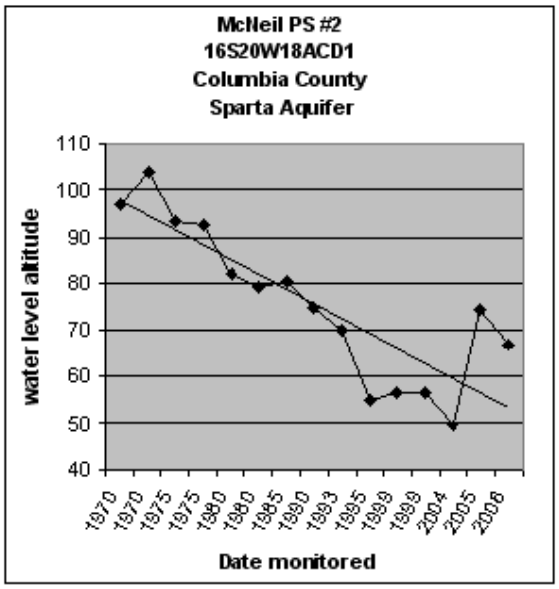
City of Gillett
07S03W06ABC1
Sparta Aquifer
Water Level Altitude
Date Monitored

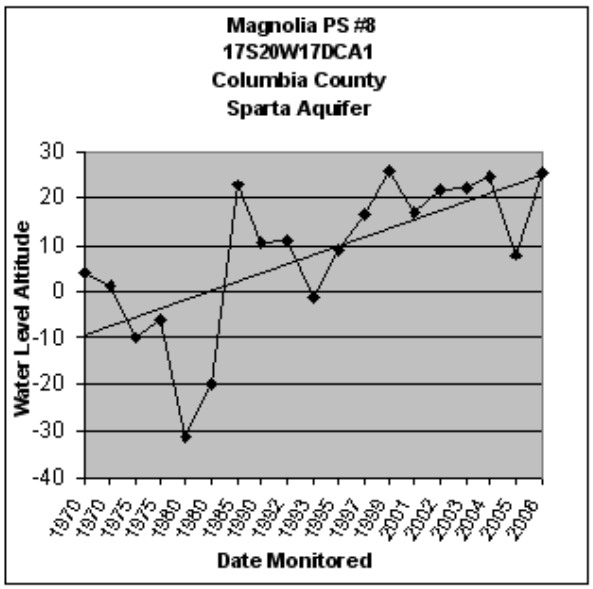

Town of Banks
13S11W17BCD1
Bradley County
Sparta Aquifer
Water level altitude
Date monitored


Bradley County
Knickerbocker
16S12W21CAA1
Sparta Aquifer
Water Level Altitude
Date Monitored


Calhoun County
City of Hampton
13S13W32CDA1
Sparta Aquifer
Water Level Altitude
Date Monitored


Town of Harrell
14S13W12CCB1
Calhoun County
Sparta Aquifer
Water level altitude
70
60
50
40
30
20
10
0
1970 1970 1975 1975 1980 1985 1990 1993 1995 1997 1999 2001 2002 2003 2004 2005 2006
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 2006
Date monitored


Magnolia PS #8
17S20W17DCA1
Columbia County
Sparta Aquifer
Water Level Altitude
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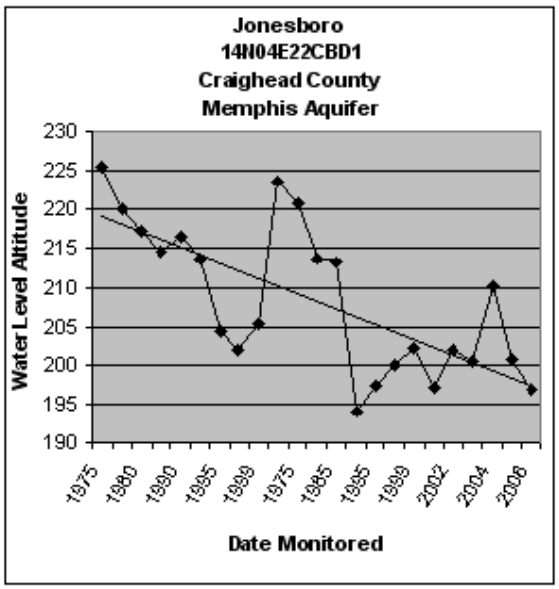
20
10
0
-10
-20
-30
-40
1970 1970 1975 1975 1980 1980 1985 1990 1992 1993 1995 1997 1999 2001 2002 2003 2004 2005 2006
Date Monitored


Jonesboro
14N04E22CBD1
Craighead County
Memphis Aquifer
Water Level Altitude
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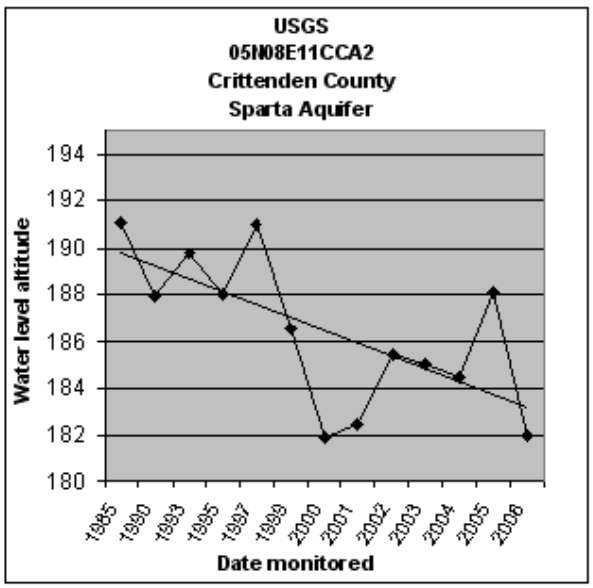
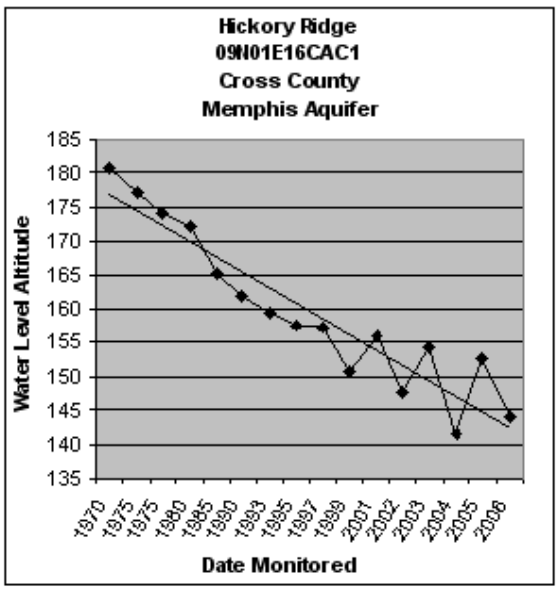
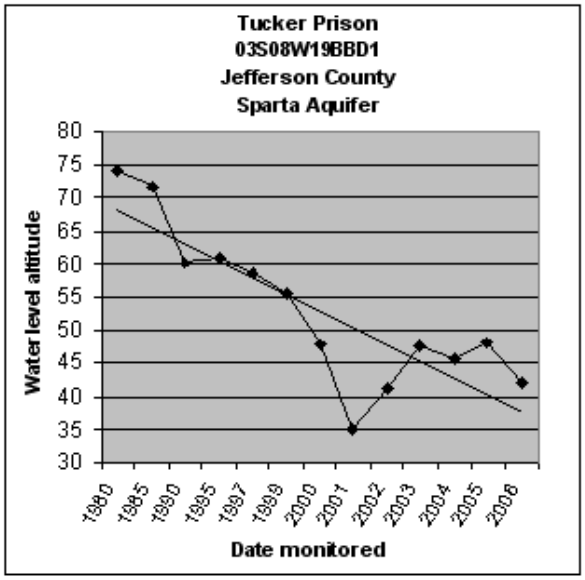
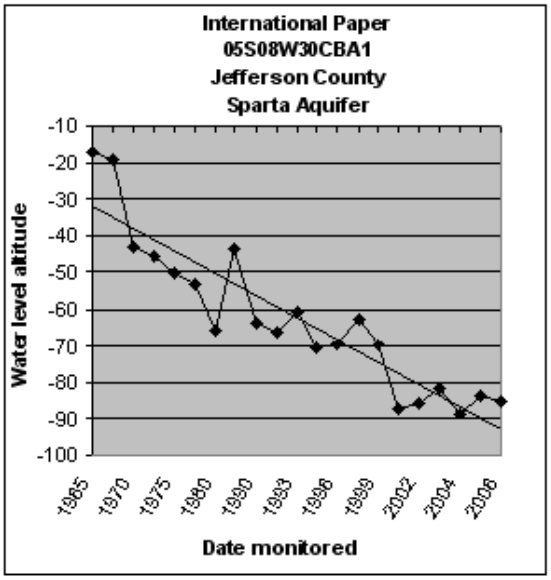
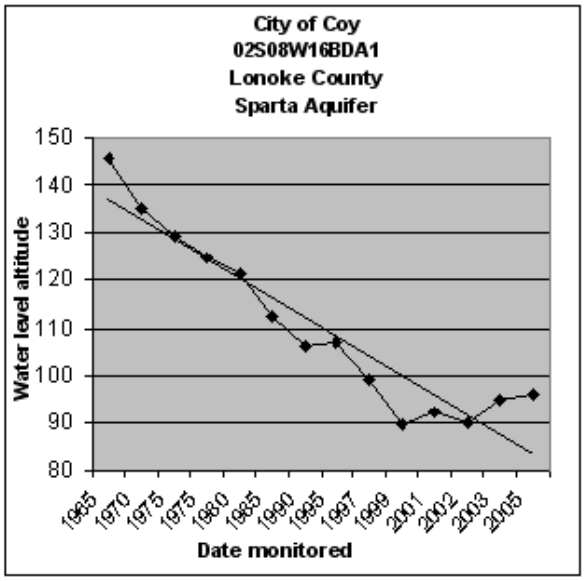
225
220
215
210
205
200
195
190
1975 1980 1990 1995 1998 1975 1985 1995 1999 2002 2004 2006
Date Monitored


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 2006
Date monitored


Hickory Ridge
09N01E16CAC1
Cross County
Memphis Aquifer
Water Level Altitude
185
180
175
170
165
160
155
150
145
140
135
1970 1975 1975 1980 1985 1990 1993 1995 1997 1998 2001 2002 2003 2004 2005 2006
Date Monitored


Tucker Prison
03S08W19BBD1
Jefferson County
Sparta Aquifer
Water level altitude
80
75
70
65
60
55
50
45
40
35
30
1980
1985
1990
1995
1997
1999
2000
2001
2002
2003
2004
2005
2006
Date monitored


International Paper
05S08W30CBA1
Jefferson County
Sparta Aquifer
Water level altitude
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
1965
1970
1975
1980
1990
1993
1996
1999
2002
2004
2006
Date monitored


City of Coy
02S08W16BDA1
Lonoke County
Sparta Aquifer
Water level altitude
150
140
130
120
110
100
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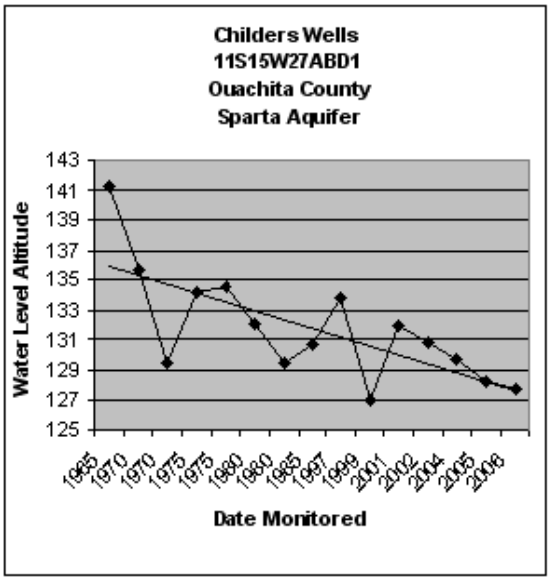
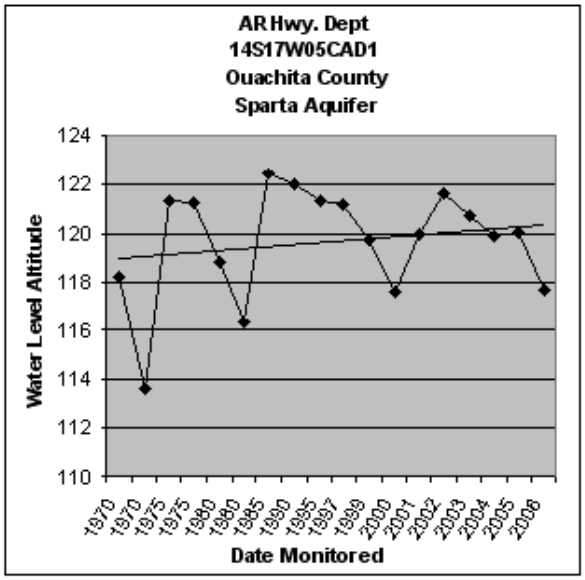
80
1965
1970
1975
1975
1980
1985
1990
1995
1997
1999
2001
2002
2003
2005
Date monitored


Childers Wells
11S15W27ABD1
Ouachita County
Sparta Aquifer
Water Level Altitude
143
141
139
137
135
133
131
129
127
125
1965
1970
1970
1975
1975
1980
1980
1985
1997
1999
2001
2002
2004
2005
2006
Date Monitored


AR Hwy. Dept
14S17W05CAD1
Ouachita County
Sparta Aquifer
Water Level Altitude
124
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112
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1980
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1990
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1997
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2000
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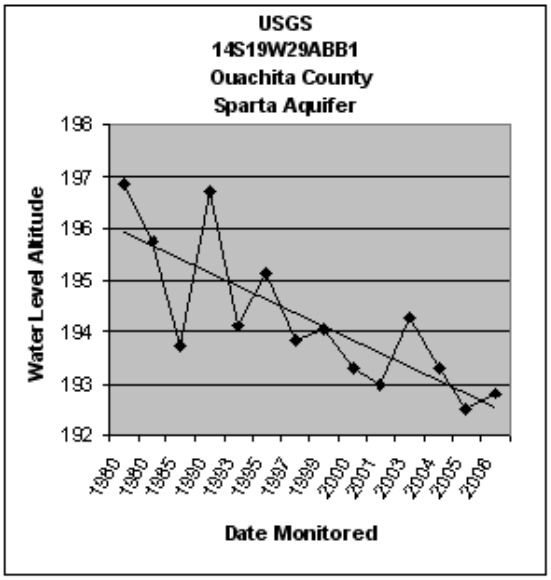
2002
2003
2004
2005
2006
Date Monitored


USGS
14S19W29ABB1
Ouachita County
Sparta Aquifer
Water Level Altitude
198
197
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1995
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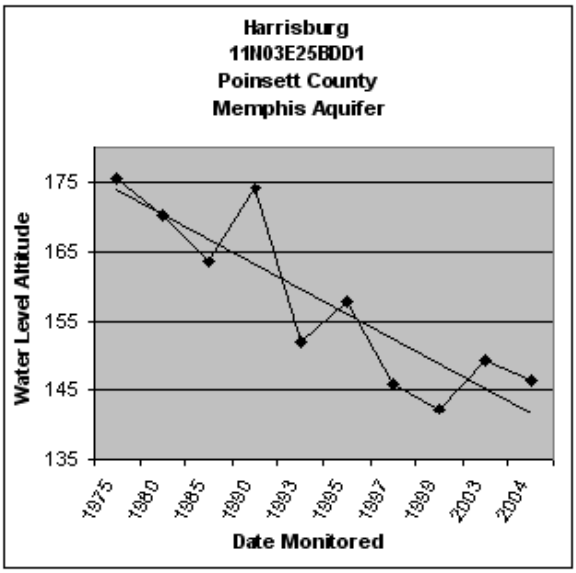
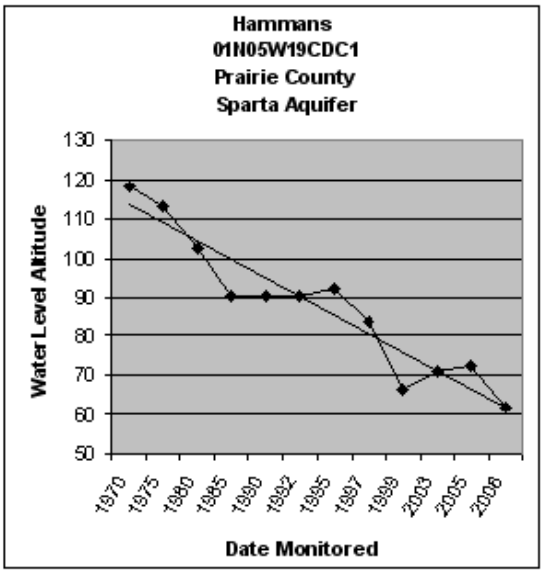
1998
2000
2001
2003
2004
2005
2006
Date Monitored


Harrisburg
11N03E25BDD1
Poinsett County
Memphis Aquifer
Water Level Altitude
175
165
155
145
135
1975
1980
1985
1990
1993
1995
1997
1999
2003
2004
Date Monitored


Hammans
01N05W19CDC1
Prairie County
Sparta Aquifer
Water Level Altitude
130
120
110
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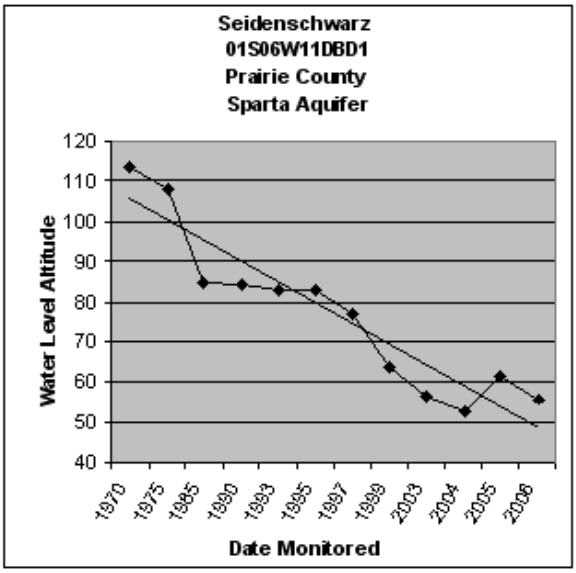
1975
1980
1985
1990
1992
1995
1997
1999
2003
2005
2006
Date Monitored


Seidenschwarz
01S06W11DBD1
Prairie County
Sparta Aquifer
Water Level Altitude
120
110
100
90
80
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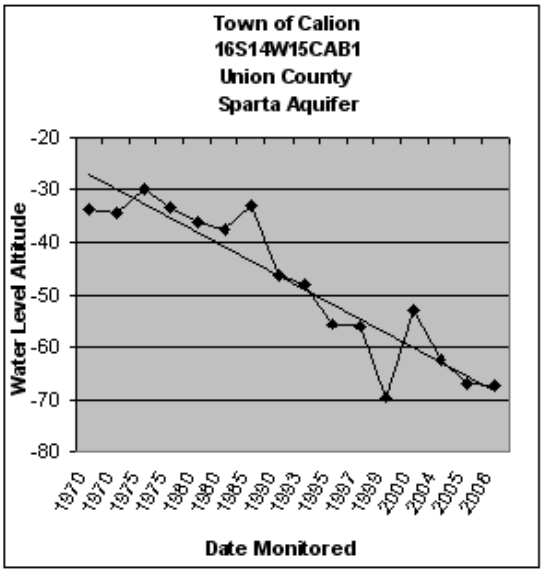
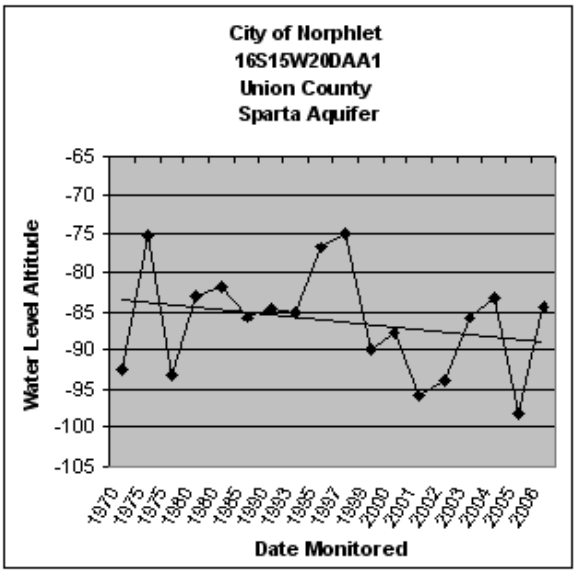
60
50
40
1970
1975
1985
1990
1993
1995
1997
1999
2003
2004
2005
2006
Date Monitored


Town of Calion
16S14W15CAB1
Union County
Sparta Aquifer
Water Level Altitude
-20
-30
-40
-50
-60
-70
-80
1970
1970
1975
1975
1980
1980
1985
1990
1993
1995
1997
1999
2000
2004
2005
2006
Date Monitored


City of Norphlet
16S15W20DAA1
Union County
Sparta Aquifer
Water Level Altitude
-65
-70
-75
-80
-85
-90
-95
-100
-105
1970
1975
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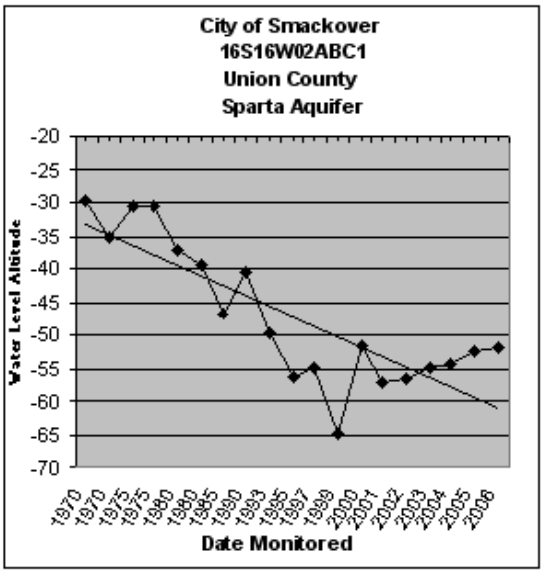
1980
1980
1985
1990
1993
1995
1997
1999
2000
2001
2002
2003
2004
2005
2006
Date Monitored


City of Smackover
16S16W02ABC1
Union County
Sparta Aquifer
Water Level Altitude
-20
-25
-30
-35
-40
-45
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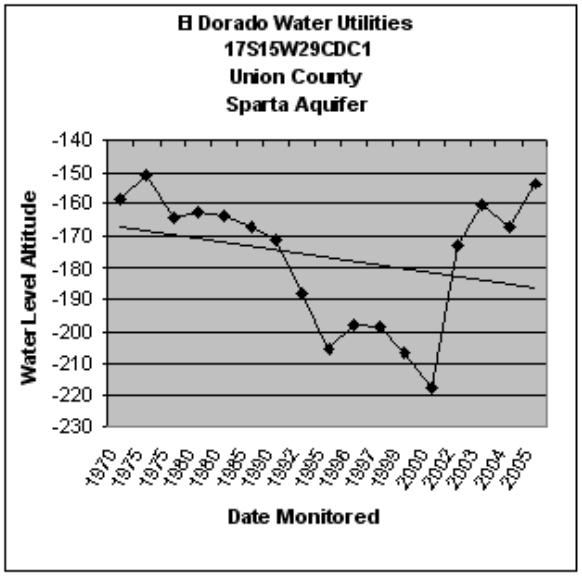
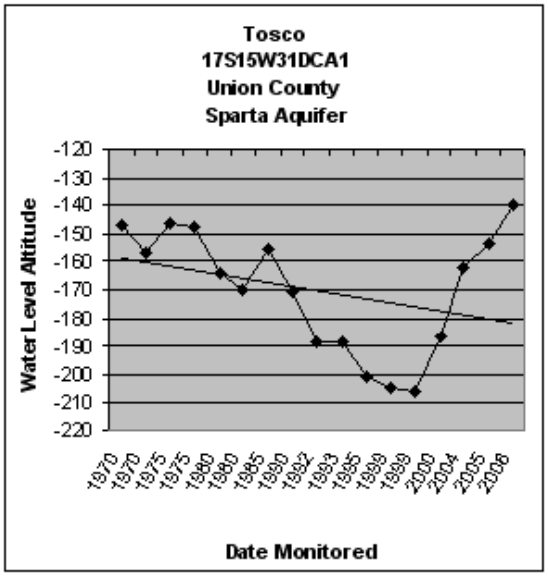
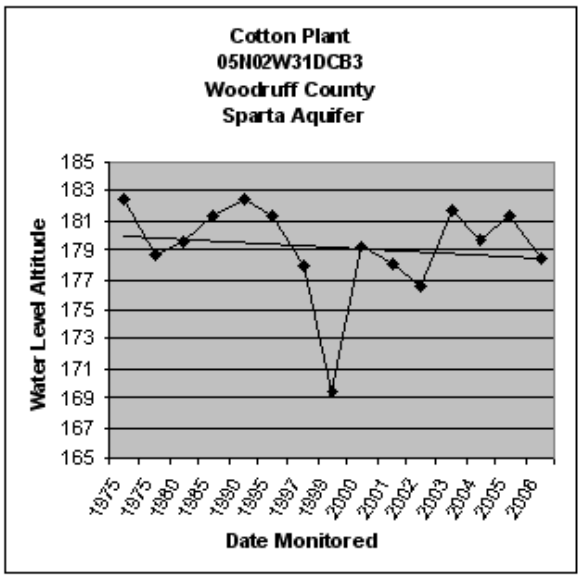
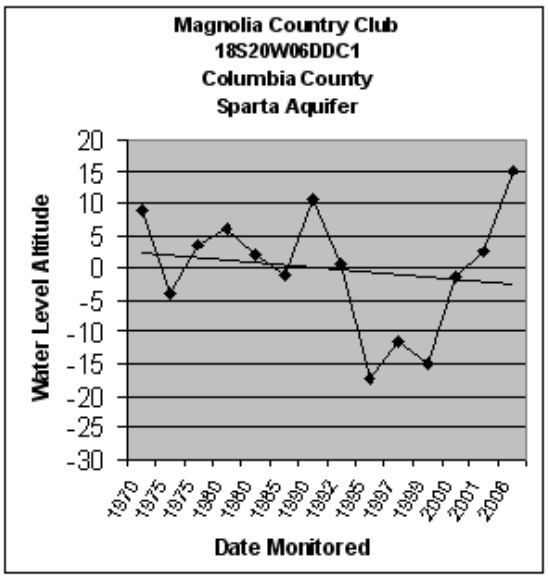
-55
-60
-65
-70
1970
1970
1975
1975
1980
1980
1985
1990
1993
1995
1997
1999
2000
2001
2002
2003
2004
2005
2006
Date Monitored


El Dorado Water Utilities
17S15W29CDC1
Union County
Sparta Aquifer
Water Level Altitude
-140
-150
-160
-170
-180
-190
-200
-210
-220
-230
1970
1975
1975
1980
1980
1985
1990
1992
1995
1996
1997
1999
2000
2002
2003
2004
2005
Date Monitored


Tosco
17S15W31DCA1
Union County
Sparta Aquifer
Water Level Altitude
-120
-130
-140
-150
-160
-170
-180
-190
-200
-210
-220
1970
1970
1975
1975
1980
1980
1985
1990
1992
1993
1995
1999
1999
2000
2004
2005
2006
Date Monitored


Cotton Plant
05N02W31DCB3
Woodruff County
Sparta Aquifer
Water Level Altitude
185
183
181
179
177
175
173
171
169
167
165
1975
1975
1980
1985
1990
1995
1997
1999
2000
2001
2002
2003
2004
2005
2006
Date Monitored


Magnolia Country Club
18S20W06DDC1
Columbia County
Sparta Aquifer
Water Level Altitude
20
15
10
5
0
-5
-10
-15
-20
-25
-30
1970
1975
1975
1980
1980
1985
1990
1992
1995
1997
1999
2000
2001
2006
Date Monitored

Appendix E

Comparative Table of Selected Spring/Fall Water Level Changes

Spring/Fall WL Changes on Selected Alluvial Wells 2006

County	Station ID	Latitude	Longitude	LSA	Date Measured	Depth To Water	WL Alt. Spring '06	Date Measured	Depth to Water	WL Alt. Fall '06	Spring/Fall 06 Change
Arkansas	03S03W18CCC1	342553	912251	196.00	3/28/2006	98.71	97.29	10/18/2006	100.01	95.99	-1.30
Arkansas	03S05W13AC1	342630	913007	211.00	3/28/2006	105.75	105.25	10/18/2006	107.03	103.97	-1.28
Arkansas	04S04W02ABB1	342313.2	912423.69	200.00	4/10/2006	108.63	91.37	10/18/2006	110.50	89.50	-1.87
Arkansas	04S04W35ABC1	341835	912437	197.00	4/12/2006	106.00	91.00	9/28/2006	106.00	91.00	0.00
Arkansas	02S04W11DBB1	343232	912417	213.04	4/10/2006	100.70	112.34	10/18/2006	102.30	110.74	-1.60
Arkansas	06S03W10BBA1	341136	911953.82	184.00	4/6/2006	81.98	102.02	10/18/2006	84.10	99.90	-2.12
Arkansas	06S03W32DDA	340740	912115	180.00	3/28/2006	56.23	123.77	10/18/2006	60.37	119.63	-4.14
Arkansas	06S03W03ABA1	341228	911302	187.00	4/4/2006	71.90	115.10	10/18/2006	74.00	113.00	-2.10
								Avg. Change:			**-1.80**
Ashley	19S04W09CBB1	330346	913146	105.00	3/21/2006	22.20	82.80	10/17/2006	28.40	76.60	-6.20
Ashley	16S04W10ABB	331902	913002	130.00	3/21/2006	35.20	94.80	10/17/2006	43.10	86.90	-7.90
Ashley	18S05W11CCD1	330816	915337	118.00	3/25/2006	22.80	95.20	9/15/2006	31.70	86.30	-8.90
Ashley	18S05W22DDA1	330712	913555	125.00	3/25/2006	21.00	104.00	9/15/2006	26.40	98.60	-5.40
Ashley	19S05W22DCD1	330139	913615	107.00	3/25/2006	23.20	83.80	9/7/2006	28.00	79.00	-4.80
Ashley	19S05W08ACA1	330405	913815	111.00	3/25/2006	17.30	93.70	9/7/2006	25.00	86.00	-7.70
Ashley	19S05W16ABB1	330323	913718	116.00	3/25/2006	24.00	92.00	9/7/2006	22.00	94.00	2.00
								Avg. Change:			**-5.56**
Chicot	19S01W17BBB1	330309	911415	105.00	3/21/2006	13.70	91.30	10/17/2006	18.40	86.60	-4.70
Chicot	13S03W27AAA1	333253	912310	138.00	3/27/2006	46.00	92.00	9/12/2006	47.00	91.00	-1.00
Chicot	14S02W18BBA1	332859	912038	130.00	4/5/2006	32.00	98.00	9/11/2006	40.00	90.00	-8.00
Chicot	14S02W09BDD1	332859	911729	133.00	3/27/2006	29.00	104.00	9/11/2006	31.00	102.00	-2.00
Chicot	15S03W18BBB1	332226	911919.83	125.00	4/6/2006	38.00	87.00	9/12/2006	45.00	80.00	-7.00
Chicot	15S02W20DDC1	332226.6	911919.83	110.00	3/22/2006	29.00	81.00	9/11/2006	37.00	73.00	-8.00
Chicot	17S03W18CBC1	331257	912736	117.00	3/22/2006	33.00	84.00	9/7/2006	37.00	80.00	-4.00
Chicot	18S01W33BDA1	330543	911245	115.00	3/22/2006	18.00	97.00	9/7/2006	21.00	94.00	-3.00
								Avg. Change:			**-4.71**
Clay	18N08E03DAB1	361323.2	901153.03	257.00	4/18/2006	7.89	249.11	10/17/2006	7.30	249.70	0.59
Clay	19N08E27DAA1	361459	901140	261.00	4/21/2006	5.20	255.80	10/17/2006	5.40	255.60	-0.20
Clay	21N03E15CBC1	362738	904453	292.00	4/13/2006	11.00	281.00	10/12/2006	13.00	279.00	-2.00
Clay	21N04E09DBC1	362828	903853	291.00	4/13/2006	13.00	278.00	10/12/2006	11.00	280.00	2.00
Clay	20N04E03AA1	362425	903725	290.00	4/13/2006	16.00	274.00	10/12/2006	16.00	274.00	0.00
Clay	20N06E28CCD1	362005	902630	290.00	4/12/2006	29.00	261.00	10/12/2006	18.00	272.00	11.00

Spring/Fall WL Changes on Selected Alluvial Wells 2006

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	Depth	WL	Spring/Fall
					Measured	Water	Alt. Spring '06	Measured	to Water	Alt. Fall '06	06 Change
Clay	20N06E09BB1	362327	902620	290.00	4/12/2006	22.00	268.00	10/17/2006	10.00	280.00	12.00
Clay	21N07E01DDC1	362835	901607	303.00	4/13/2006	26.00	277.00	10/17/2006	19.00	284.00	7.00
Clay	19N08E08DCA1	361729	901402	270.00	4/12/2006	7.00	263.00	10/17/2006	7.00	263.00	0.00
Clay	19N07E25BCB1	361519	901700	268.00	4/12/2006	18.00	250.00	10/17/2006	19.00	249.00	-1.00
Clay	19N09E30BB1	361531	900921	265.00	4/12/2006	8.00	257.00	10/17/2006	10.00	255.00	-2.00
Clay	20N09E09ABC1	362306	900642	279.00	4/12/2006	8.00	271.00	10/17/2006	13.00	266.00	-5.00
Clay	20N05E22CAD1	362118	903132	290.00	4/12/2006	31.00	259.00	10/12/2006	29.00	261.00	2.00
Clay	21N08E03CD1	362842	901211	308.00	4/13/2006	19.00	289.00	10/17/2006	26.00	282.00	-7.00
Clay	19N06E18DBC1	361642	902815	297.00	4/13/2006	37.00	260.00	10/12/2006	38.00	259.00	-1.00
Clay	20N08E22BDC1	362111	901220	275.00	4/12/2006	9.00	266.00	10/17/2006	12.00	263.00	-3.00
Clay	18N08E11BAA1	361253	901117	259.00	4/12/2006	7.00	252.00	10/17/2006	9.00	250.00	-2.00
Clay	19N05E15BBD1	361716	903152	289.00	4/12/2006	34.00	255.00	10/12/2006	24.00	265.00	10.00
Clay	21N06E11BBB1	362839	902421	296.00	4/13/2006	15.00	281.00	10/17/2006	17.00	279.00	-2.00
Clay	21N09E31BDA1	362447	900851	284.00	4/12/2006	7.00	277.00	10/17/2006	10.00	274.00	-3.00
Clay	20N05E30CAC1	362003	903454	283.00	4/12/2006	18.00	265.00	10/12/2006	20.00	263.00	-2.00
Clay	19N04E19BAA1	361649	904125	279.00	4/12/2006	22.00	257.00	10/12/2006	25.00	254.00	-3.00
Clay	19N04E11DAA1	361805	903621	280.00	4/12/2006	23.00	257.00	10/12/2006	13.00	267.00	10.00
Clay	21N05E22BAB1	362704	903132	288.00	4/13/2006	7.00	281.00	10/12/2006	12.00	276.00	-5.00
Clay	20N09E33DDC1	361904	900628	270.00	4/12/2006	7.00	263.00	10/17/2006	11.00	259.00	-4.00
								Avg. Change:			**0.50**
Craighead	13N03E29AAA1	354403.3	904712.98	251.00	4/19/2006	103.79	147.21	10/17/2006	106.60	144.40	-2.81
Craighead	14N02E27AA	354918	905125	255.00	3/27/2006	78.21	176.79	10/17/2006	80.65	174.35	-2.44
Craighead	15N03E19ADA1	355502.2	904802.05	262.00	4/19/2006	49.16	212.84	10/17/2006	51.20	210.80	-2.04
Craighead	15N07E10DAB1	355622	901934	235.00	3/2/2006	9.80	225.20	10/10/2006	11.80	223.20	-2.00
Craighead	13N05E06DCC1	354637	903547	229.00	3/2/2006	20.00	209.00	10/10/2006	22.20	206.80	-2.20
Craighead	15N06E04BAD1	355744	902706	239.00	3/2/2006	15.50	223.50	10/10/2006	17.00	222.00	-1.50
Craighead	13N04E15DBA1	354521	903857	230.00	3/2/2006	26.60	203.40	10/10/2006	26.70	203.30	-0.10
Craighead	14N02E15DD1	354852	905044	255.00	3/1/2006	74.80	180.20	10/4/2006	81.00	174.00	-6.20
Craighead	15N02E12DCB1	355626	904930	250.00	3/1/2006	34.50	215.50	10/4/2006	35.00	215.00	-0.50
Craighead	14N01E10BAB1	355204	905828	246.00	3/1/2006	51.10	194.90	10/4/2006	53.30	192.70	-2.20
Craighead	13N02E02AAB1	354731	905032	251.00	3/1/2006	92.20	158.80	10/4/2006	89.50	161.50	2.70
Craighead	13N01E03AAA1	354739	905753	240.00	3/1/2006	54.70	185.30	10/4/2006	57.70	182.30	-3.00
Craighead	14N01E31DCA1	354817	910121	251.00	3/1/2006	59.10	191.90	10/4/2006	62.50	188.50	-3.40
Craighead	13N03E23CDA1	354419	904434	249.00	3/2/2006	79.60	169.40	10/12/2006	81.30	167.70	-1.70
Craighead	13N07E35BCD1	354233	901837	221.00	3/2/2006	12.30	208.70	10/10/2006	14.00	207.00	-1.70
Craighead	13N04E26BCC1	354340	903829	225.00	3/2/2006	26.50	198.50	10/10/2006	27.80	197.20	-1.30

Spring/Fall WL Changes on Selected Alluvial Wells 2006

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	Depth	WL	Spring/Fall
					Measured	Water	Alt. Spring '06	Measured	to Water	Alt. Fall '06	06 Change
Craighead	14N01E03ACB1	355246	905816	249.00	3/1/2006	50.90	198.10	10/4/2006	51.80	197.20	-0.90
Craighead	13N02E03AAA1	354733	905129	250.00	3/1/2006	86.90	163.10	10/4/2006	88.30	161.70	-1.40
Craighead	13N01E21CAB1	354434	905945	240.00	3/1/2006	62.00	178.00	10/6/2006	65.00	175.00	-3.00
Craighead	13N03E28CDB1	354322	904652	250.00	3/2/2006	109.00	141.00	10/12/2006	109.00	141.00	0.00
Craighead	13N01E26BC1	353832	905800	245.00	3/1/2006	68.50	176.50	10/4/2006	71.00	174.00	-2.50
Craighead	15N07E35DCB1	355241	901831	231.00	3/2/2006	14.60	216.40	10/10/2006	13.80	217.20	0.80
Craighead	14N06E06BAA1	355234	902934	240.00	3/2/2006	22.40	217.60	10/10/2006	25.50	214.50	-3.10
Craighead	15N05E22BAB1	355513	903241	260.00	3/2/2006	34.80	225.20	10/10/2006	35.70	224.30	-0.90
Craighead	13N05E02CCC1	354648	903202	230.00	3/2/2006	12.90	217.10	10/10/2006	12.70	217.30	0.20
Craighead	14N07E14DDC1	354956	901831	230.00	3/2/2006	13.50	216.50	10/6/2006	13.50	216.50	0.00
Craighead	13N07E05ABB1	354716	902158	225.00	3/2/2006	5.50	219.50	10/10/2006	12.20	212.80	-6.70
Craighead	13N05E24BAC1	354451	903045	225.00	3/2/2006	12.20	212.80	10/6/2006	14.30	210.70	-2.10
Craighead	15N03E31ADA1	355313	904805	270.00	3/1/2006	63.90	206.10	10/3/2006	63.80	206.20	0.10
Craighead	13N07E02CAB1	354642	901901	226.00	3/2/2006	5.00	221.00	10/10/2006	10.30	215.70	-5.30
Craighead	13N03E35AAA1	354308	904401	249.00	3/2/2006	94.00	155.00	10/12/2006	93.50	155.50	0.50
Craighead	13N06E21AD1	354421	902743	220.00	3/2/2006	10.00	210.00	10/6/2006	11.00	209.00	-1.00
								Avg. Change:			**-1.74**
Crittenden	08N07E13CCC2	351828.3	901811.95	221.00	3/30/2006	29.20	191.80	10/18/2006	31.90	189.10	-2.70
Crittenden	09N07E20DDC1	352256	902158	215.00	3/24/2006	28.20	186.80	10/18/2006	30.30	184.70	-2.10
Crittenden	08N07E32DAA1	351618	902146	215.00	4/25/2006	29.00	186.00	10/6/2006	32.60	182.40	-3.60
Crittenden	09N08E08CCB1	352501	901608	214.00	4/25/2006	24.10	189.90	10/6/2006	28.10	185.90	-4.00
Crittenden	06N07E13BAA1	350849.6	901807.57	205.00	4/26/2006	20.40	184.60	10/10/2006	25.30	179.70	-4.90
Crittenden	08N06E01DCC1	352021	902408	215.00	4/25/2006	32.00	183.00	10/6/2006	34.90	180.10	-2.90
Crittenden	05N07E34CDD1	350010	902028	205.00	4/26/2006	19.00	186.00	10/10/2006	23.30	181.70	-4.30
Crittenden	05N07E09BCA1	350410	902138	206.00	4/27/2006	22.80	183.20	10/10/2006	24.50	181.50	-1.70
Crittenden	09N07E02CDB1	352537	901905	225.00	4/25/2006	31.70	193.30	10/6/2006	35.80	189.20	-4.10
Crittenden	07N06E24CCC1	351227	902445	213.00	4/26/2006	34.90	178.10	10/10/2006	39.40	173.60	-4.50
Crittenden	07N06E30AAA1	351227	902923	210.00	4/26/2006	39.10	170.90	10/10/2006	24.30	185.70	14.80
Crittenden	07N08E04BDC1	351525	902138	211.00	4/25/2006	19.10	191.90	10/6/2006	19.50	191.50	-0.40
Crittenden	09N07E31BAB1	352159.9	902326.57	221.00	4/25/2006	31.80	189.20	10/6/2006	37.90	183.10	-6.10
Crittenden	08N06E06BBB1	352114	902912	214.00	4/25/2006	30.20	183.80	10/6/2006	33.20	180.80	-3.00
Crittenden	08N08E06ABB1	352103	901644	223.00	4/25/2006	29.00	194.00	10/6/2006	27.11	195.89	1.89
								Avg. Change:			**-1.84**
Cross	06N02E11DDB1	350923	905132	200.00	4/26/2006	62.00	138.00	10/4/2006	65.00	135.00	-3.00

Spring/Fall WL Changes on Selected Alluvial Wells 2006

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	Depth	WL	Spring/Fall
					Measured	Water	Alt. Spring '06	Measured	to Water	Alt. Fall '06	06 Change
Cross	06N02E12AAA1	350934	904952	235.00	4/26/2006	78.00	157.00	10/5/2006	82.00	153.00	-4.00
Cross	06N04E01DDB1	351028	903656	205.00	5/4/2006	37.00	168.00	10/4/2006	38.00	167.00	-1.00
Cross	06N05E02BAB1	351039	903202	205.00	5/4/2006	30.00	175.00	10/4/2006	42.00	163.00	-12.00
Cross	07N01E05CDA1	351517.5	910049.05	217.00	3/24/2006	73.64	143.36	10/18/2006	75.90	141.10	-2.26
Cross	07N01E05BCD1	351550	910726	215.00	4/26/2006	73.00	142.00	10/6/2006	76.00	139.00	-3.00
Cross	07N01E06DCD1	351532	910152	220.00	4/24/2006	73.00	147.00	10/6/2006	75.00	145.00	-2.00
Cross	07N02E02BBB1			220.00	4/26/2006	75.00	145.00	10/6/2006	76.00	144.00	-1.00
Cross	07N02E10BBB1	351455	905205	225.00	4/27/2006	84.00	141.00	10/6/2006	88.00	137.00	-4.00
Cross	07N02E15ACA1	351959	904623	218.00	4/27/2006	79.00	139.00	10/6/2006	84.00	134.00	-5.00
Cross	07N02E28CCC1	351709	903947	210.00	4/26/2006	70.00	140.00	10/6/2006	72.00	138.00	-2.00
Cross	07N02E29DDC1	351138.1	905409.17	220.00	4/24/2006	70.00	150.00	10/18/2006	82.20	137.80	-12.20
Cross	08N04E27ABB1	351745	903916	205.00	5/1/2006	28.00	177.00	10/4/2006	27.00	178.00	1.00
Cross	07N02E02CD	351510	905113	225.00	3/27/2006	81.37	143.63	10/18/2006	83.57	141.43	-2.20
Cross	07N03E05DDA1			255.00	4/27/2006	102.00	153.00	10/6/2006	105.00	150.00	-3.00
Cross	07N04E04DBB1	351534	904021	205.00	5/1/2006	30.00	175.00	10/10/2006	32.00	173.00	-2.00
Cross	07N04E07AAA1	351457	904234	215.00	5/1/2006	45.00	170.00	10/4/2006	49.00	166.00	-4.00
Cross	07N04E27ADB1	351221	903908	200.00	5/3/2006	27.00	173.00	10/4/2006	28.00	172.00	-1.00
Cross	07N05E02BAA1	351600	903103	210.00	5/4/2006	41.00	169.00	10/4/2006	42.00	168.00	-1.00
Cross	07N05E09BAA1	351506	903347	210.00	5/4/2006	33.00	177.00	10/4/2006	34.00	176.00	-1.00
Cross	08N01E02DDC1	352045	905801	220.00	4/27/2006	84.00	136.00	10/10/2006	86.00	134.00	-2.00
Cross	08N01E17CAD1	351926	910056	220.00	4/24/2006	74.00	146.00	10/10/2006	78.00	142.00	-4.00
Cross	08N02E29ABD1	351704	905421	225.00	4/27/2006	80.00	145.00	10/6/2006	83.00	142.00	-3.00
Cross	08N05E17AAC1	351922	903448	210.00	5/4/2006	30.00	180.00	10/4/2006	32.00	178.00	-2.00
Cross	09N01E04CDB1	352617	905913	225.00	4/24/2006	88.00	137.00	10/10/2006	90.00	135.00	-2.00
Cross	09N02E32BBB1	352148	905431	225.00	4/28/2006	94.00	131.00	10/10/2006	97.00	128.00	-3.00
Cross	09N03E03DCC1	352619	904529	250.00	4/27/2006	106.00	144.00	10/10/2006	108.00	142.00	-2.00
Cross	09N03E17DCD1	352422	904753	245.00	4/27/2006	99.00	146.00	10/10/2006	103.00	142.00	-4.00
Cross	09N04E01AAC1	352552	903742	205.00	5/4/2006	15.00	190.00	10/4/2006	17.00	188.00	-2.00
Cross	09N04E03DBB1	352614	903918	215.00	5/4/2006	25.00	190.00	10/4/2006	27.00	188.00	-2.00
Cross	09N04E33DBB1	352205	904041	205.00	5/4/2006	37.00	168.00	10/4/2006	38.00	167.00	-1.00
Cross	09N05E10DBC1	352451	903312	210.00	5/4/2006	23.00	187.00	10/4/2006	24.00	186.00	-1.00
Cross	9N01E36AAB1	352155	905605	225.00	4/27/2006	85.00	140.00	10/10/2006	88.00	137.00	-3.00
Cross	09N05E32BDB1	352150.5	903512.11	210.00	5/4/2006	30.00	180.00	10/4/2006	33.00	177.00	-3.00
Cross	09N09E20AAA1	352333	905414	230.00	4/27/2006	94.00	136.00	10/10/2006	94.00	136.00	0.00
Cross	08N01E16DBB1	351855	905933	225.00	4/27/2006	84.00	141.00	10/10/2006	87.00	138.00	-3.00
Cross	08N02E17AAA1	351923	905354	225.00	4/27/2006	85.00	140.00	10/6/2006	88.00	137.00	-3.00
Cross	08N02E12DCC1	351938	905002	230.00	4/27/2006	88.00	142.00	10/6/2006	92.00	138.00	-4.00
Cross	08N03E09CAC1	351959	904623	265.00	4/27/2006	112.00	153.00	10/6/2006	115.00	150.00	-3.00

Spring/Fall WL Changes on Selected Alluvial Wells 2006

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	Depth	WL	Spring/Fall
					Measured	Water	Alt. Spring '06	Measured	to Water	Alt. Fall '06	06 Change
Cross	9N02E30CBB1	352243	905551	225.00	4/27/2006	87.00	138.00	10/10/2006	90.00	135.00	-3.00
								Avg. Change:			**-2.87**
Desha	09S02W26DDC1	335258	911523	149.27	5/9/2006	29.33	119.94	10/18/2006	32.49	116.78	-3.16
Desha	10S04W19DAC1	334901	913233	160.00	3/28/2006	25.80	134.20	10/17/2006	28.90	131.10	-3.10
Desha	11S02W15BAD1	334446	911635	148.00	4/7/2006	34.00	114.00	9/21/2006	37.00	111.00	-3.00
Desha	09S01W15CBB1	335501	911055	152.00	4/7/2006	36.00	116.00	9/21/2006	39.00	113.00	-3.00
Desha	10S02W11ADD1	335045	911517	146.00	4/7/2006	28.00	118.00	9/21/2006	31.00	115.00	-3.00
Desha	09S02W17CBC1	355502	911920	153.00	4/7/2006	32.00	121.00	9/21/2006	40.00	113.00	-8.00
Desha	09S04W02CDA1	335823	912821	163.00	4/7/2006	42.00	121.00	9/21/2006	44.00	119.00	-2.00
Desha	09S01W08BDA1	335608	911234	156.00	4/7/2006	28.00	128.00	9/21/2006	32.00	124.00	-4.00
Desha	12S01W23DBC1	333803	911019	146.00	4/7/2006	26.00	120.00	9/21/2006	35.00	111.00	-9.00
Desha	13S02W05CDD1	333535	911938	146.00	4/7/2006	45.00	101.00	9/21/2006	48.00	98.00	-3.00
Desha	13S02W32DBD1	333126	911917	135.00	4/7/2006	43.00	92.00	9/21/2006	30.00	105.00	13.00
Desha	13S03W11CAB1	333503	912241	142.00	4/7/2006	51.00	91.00	9/21/2006	54.00	88.00	-3.00
Desha	11S03W21ABB1	334416	912412	139.00	4/7/2006	31.00	108.00	9/21/2006	40.00	99.00	-9.00
Desha	07S01E19ABA1	340428	910303	154.00	4/12/2006	21.00	133.00	10/2/2006	25.00	129.00	-4.00
								Avg. Change:			**-3.16**
Drew	11S04W35DC1	334144	912842	154.00	3/28/2006	26.46	127.54	10/17/2006	29.46	124.54	-3.00
Drew	13S04W36DCC	333110	912757	140.00	3/23/2006	25.60	114.40	10/17/2006	28.30	111.70	-2.70
Drew	13S06W21DAA1	333324	914258	207.00	4/13/2006	74.00	133.00	9/26/2006	85.00	122.00	-11.00
Drew	12S04W25DBB1	333739	912738	149.00	4/13/2006	34.00	115.00	9/26/2006	26.00	123.00	8.00
Drew	13S04W09ACD1	333512	913034	145.00	4/13/2006	19.00	126.00	9/26/2006	22.00	123.00	-3.00
Drew	14S04W05CBA1	333047	913218	131.00	4/13/2006	14.00	117.00	9/26/2006	34.00	97.00	-20.00
Drew	14S04W03CBA1	333039	912944	140.00	4/13/2006	27.00	113.00	9/26/2006	36.00	104.00	-9.00
Drew	14S04W05CBC1	333042	913226	131.00	4/13/2006	15.00	116.00	9/26/2006	31.00	100.00	-16.00
Drew	14S04W22CAA1	332805	912957	135.00	4/13/2006	13.00	122.00	9/26/2006	16.00	119.00	-3.00
								Avg. Change:			**-6.63**
Greene	16N06E28ABB1	355938.3	902657.01	251.00	4/18/2006	25.76	225.24	10/17/2006	29.10	221.90	-3.34
Greene	18N07E20BBA1	361110.4	902113.23	257.00	4/18/2006	10.92	246.08	10/17/2006	14.30	242.70	-3.38
Greene	17N07E03CCC1	360744	901951	246.00	4/11/2006	5.80	240.20	10/10/2006	7.20	238.80	-1.40
Greene	16N03E29ACC1	355926	904722	257.00	4/11/2006	31.50	225.50	10/4/2006	33.40	223.60	-1.90
Greene	18N07E17BAB1	361203	902105	262.00	4/11/2006	11.30	250.70	10/10/2006	14.90	247.10	-3.60

Spring/Fall WL Changes on Selected Alluvial Wells 2006

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	Depth	WL	Spring/Fall
					Measured	Water	Alt. Spring '06	Measured	to Water	Alt. Fall '06	06 Change
Greene	16N06E21BAA1	360031	902705	249.00	4/11/2006	27.10	221.90	10/10/2006	33.00	216.00	-5.90
Greene	19N05E34AAD1	361437	903102	282.00	4/11/2006	34.20	247.80	10/10/2006	35.30	246.70	-1.10
Greene	16N06E09ABB1	360215	902651	261.00	4/11/2006	49.90	211.10	10/10/2006	47.00	214.00	2.90
Greene	17N03E02DCC1	360806	904352	267.00	4/11/2006	20.20	246.80	10/4/2006	36.50	230.50	-16.30
Greene	17N06E15ABC1	360631	902546	268.00	4/11/2006	31.10	236.90	10/10/2006	35.20	232.80	-4.10
Greene	16N03E05BBB1	360316	904750	257.00	4/11/2006	30.50	226.50	10/4/2006	37.20	219.80	-6.70
Greene	16N03E16DDD1	360049	904547	258.00	4/11/2006	26.80	231.20	10/4/2006	31.40	226.60	-4.60
Greene	17N04E07DDA1	360712	904129	271.00	4/11/2006	42.60	228.40	10/4/2006	42.20	228.80	0.40
Greene	18N04E04AAC1	361356	903854	273.00	4/11/2006	32.60	240.40	10/10/2006	37.50	235.50	-4.90
Greene	19N03E33DDD1	361418	904516	276.00	4/11/2006	36.00	240.00	10/4/2006	38.40	237.60	-2.40
Greene	18N06E23ACB1	361056	902357	277.00	4/11/2006	14.90	262.10	10/10/2006	22.90	254.10	-8.00
								Avg. Change:			**-4.02**
Jackson	09N02W32CBB1	352151.8	911347.79	220.00	3/27/2006	30.29	189.71	10/18/2006	33.00	187.00	-2.71
Jackson	10N01W04DCB1	353114	910602	225.00	4/18/2006	54.40	170.60	10/18/2006	59.50	165.50	-5.10
Jackson	11N01W10DA	353358	910428	231.00	3/23/2006	53.68	177.32	10/18/2006	56.23	174.77	-2.55
Jackson	13N03W15DCB1	354540	911718	238.00	4/12/2006	17.90	220.10	9/29/2006	21.10	216.90	-3.20
Jackson	14N01W33CCD1	354759	910610	245.00	4/12/2006	39.30	205.70	9/27/2006	41.80	203.20	-2.50
Jackson	14N01W26BCB1	354922	910407	245.00	4/12/2006	43.30	201.70	9/27/2006	46.40	198.60	-3.10
Jackson	14N01W08AAA1	355216	910623	252.00	4/12/2006	36.00	216.00	9/27/2006	36.80	215.20	-0.80
Jackson	14N01W19BBB1	355032	910823	246.00	4/12/2006	32.00	214.00	9/29/2006	34.40	211.60	-2.40
Jackson	14N02W22BBC1	355026	911145	250.00	4/12/2006	28.00	222.00	9/29/2006	31.40	218.60	-3.40
Jackson	11N02W23ADC1	353357	911002	221.00	4/20/2006	26.00	195.00	9/27/2006	30.10	190.90	-4.10
Jackson	10N01W05ADD1	353132	910702	227.00	4/20/2006	47.30	179.70	9/27/2006	49.90	177.10	-2.60
Jackson	09N02W32BBB1	352215	911344	220.00	4/20/2006	34.00	186.00	9/27/2006	34.70	185.30	-0.70
Jackson	10N01W10ABA1	353055	910445	223.00	4/20/2006	59.20	163.80	9/27/2006	61.90	161.10	-2.70
Jackson	11N01W25BDA1	353322	910228	227.00	4/20/2006	66.20	160.80	9/27/2006	70.90	156.10	-4.70
Jackson	12N01W30CCC2	353812	910821	227.00	4/12/2006	33.00	194.00	9/27/2006	34.20	192.80	-1.20
Jackson	13N03W36ABB1	354337	911532	241.00	4/12/2006	16.60	224.40	9/29/2006	19.10	221.90	-2.50
Jackson	09N01W30BAC1	352258	910813	218.00	4/20/2006	44.50	173.50	9/27/2006	47.80	170.20	-3.30
Jackson	12N01W11BCB1	354127	910416	233.00	4/12/2006	38.20	194.80	9/27/2006	42.20	190.80	-4.00
Jackson	11N03W05ABA1	353722	912012	224.00	4/12/2006	21.10	202.90	9/27/2006	25.40	198.60	-4.30
								Avg. Change:			**-2.94**
Jefferson	03S08W24BBC1	342620.4	914953.19	202.00	4/3/2006	51.03	150.97	10/19/2006	51.20	150.80	-0.17
Jefferson	04S07W08CBB1	342226	914745	195.00	4/11/2006	47.75	147.25	10/19/2006	49.60	145.40	-1.85

Spring/Fall WL Changes on Selected Alluvial Wells 2006

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	Depth	WL	Spring/Fall
					Measured	Water	Alt. Spring '06	Measured	to Water	Alt. Fall '06	06 Change
Jefferson	06S05W15BCA1	341024	913240	177.14	4/4/2006	18.58	158.56	10/19/2006	21.25	155.89	-2.67
Jefferson	03S10W35BCA2	342537	900241	215.00	4/6/2006	15.70	199.30	9/19/2006	20.00	195.00	-4.30
Jefferson	03S10W26BBB2	342427	920249	215.00	4/6/2006	18.80	196.20	9/19/2006	26.00	189.00	-7.20
Jefferson	04S09W32DDA1	341859	920008	212.00	4/6/2006	23.00	189.00	9/19/2006	23.60	188.40	-0.60
Jefferson	03S09W14BCD1	342712	915712	224.00	4/6/2006	56.00	168.00	9/19/2006	53.50	170.50	2.50
Jefferson	03S09W36ACC1	342428	915555	214.00	4/7/2006	27.90	186.10	9/19/2006	28.00	186.00	-0.10
Jefferson	04S07W35DDB1	341836	914347	185.00	4/6/2006	27.30	157.70	9/19/2006	30.00	155.00	-2.70
Jefferson	07S07W16BAA1	340722	914828	188.00	4/6/2006	28.00	160.00	9/19/2006	34.00	154.00	-6.00
Jefferson	05S07W28CCC1	341412	914651	195.00	4/6/2006	14.20	180.80	9/19/2006	20.00	175.00	-5.80
								Avg. Change:			**-2.63**
Lawrence	16N02E35AAA1	360409	905004	256.00	4/18/2006	49.20	206.80	9/18/2006	52.70	203.30	-3.50
Lawrence	16N02E34CBB1	355831	905208	255.00	4/18/2006	48.10	206.90	9/18/2006	50.60	204.40	-2.50
Lawrence	17N02E25CBD1	360423	904948	265.00	4/18/2006	38.10	226.90	9/18/2006	41.30	223.70	-3.20
Lawrence	17N02E19CDC1	360515.9	905449.43	265.00	4/18/2006	40.90	224.10	9/18/2006	39.70	225.30	1.20
Lawrence	17N01E02BBA1	360901	905707	260.00	4/18/2006	15.00	245.00	9/18/2006	17.90	242.10	-2.90
Lawrence	17N01W36AAB1	360435	910158	257.00	4/18/2006	13.10	243.90	9/18/2006	17.10	239.90	-4.00
Lawrence	16N01W30DDC1	355936.9	910723.26	255.00	4/18/2006	21.60	233.40	9/18/2006	19.70	235.30	1.90
								Avg. Change:			**-1.86**
Lee	01N02E33CBB1	343858	905434	186.00	5/2/2006	16.00	170.00	10/10/2006	27.00	159.00	-11.00
Lee	01N02E33CCB1	343851	905433	185.00	5/2/2006	14.00	171.00	10/10/2006	26.00	159.00	-12.00
Lee	01N01E09CCC1	344215	910054	182.00	5/2/2006	32.50	149.50	10/10/2006	46.50	135.50	-14.00
Lee	03N01E32BCC1	344951	910150	200.00	5/2/2006	62.00	138.00	10/10/2006	59.00	141.00	3.00
Lee	03N02E12CDC1	345239	905053	210.00	5/2/2006	41.00	169.00	10/10/2006	54.00	156.00	-13.00
Lee	01N02E22CBA1	344056	905318	200.00	5/2/2006	28.50	171.50	10/10/2006	38.50	161.50	-10.00
Lee	02N04E03ABD1	344855	903954	192.00	5/3/2006	24.50	167.50	10/10/2006	26.00	166.00	-1.50
Lee	03N05E26ADC1	345020	903215	185.00	5/3/2006	7.00	178.00	10/10/2006	9.00	176.00	-2.00
Lee	01N01E24CBD1	344033	905729	185.00	5/3/2006	16.30	168.70	10/10/2006	34.30	150.70	-18.00
Lee	01N02E11BAB1	344255	905208	202.00	4/22/2006	32.00	170.00	10/10/2006	36.00	166.00	-4.00
Lee	01N02E12ABB1	344254	905040	206.00	5/2/2006	27.00	179.00	10/10/2006	33.00	173.00	-6.00
Lee	03N03E05CDD1	345327	904837	204.00	5/1/2006	49.50	154.50	10/10/2006	55.00	149.00	-5.50
Lee	03N04E07CBB1	345245	904312	200.00	5/1/2006	30.00	170.00	10/10/2006	32.00	168.00	-2.00
Lee	02N03E29CAD1	344500	904846	215.00	5/2/2006	50.00	165.00	10/10/2006	48.00	167.00	2.00
Lee	03N03E18DAB1	345206	904919	196.00	5/2/2006	29.00	167.00	10/10/2006	32.00	164.00	-3.00
Lee	01N02E01ADD1	344330	905016	207.00	5/2/2006	28.00	179.00	10/10/2006	39.00	168.00	-11.00

Spring/Fall WL Changes on Selected Alluvial Wells 2006

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	Depth	WL	Spring/Fall
					Measured	Water	Alt. Spring '06	Measured	to Water	Alt. Fall '06	06 Change
Lee	02N01W34DDC1	344410	910520	180.00	5/2/2006	52.00	128.00	10/10/2006	54.00	126.00	-2.00
Lee	02N01E21BAA1	344633	910005	185.00	5/2/2006	35.30	149.70	10/10/2006	38.30	146.70	-3.00
Lee	02N02E22BBB1	344628	905327	200.00	5/2/2006	28.00	172.00	10/10/2006	32.00	168.00	-4.00
Lee	01N01E21CCC1	344030	910055	209.00	5/2/2006	54.00	155.00	10/10/2006	56.00	153.00	-2.00
Lee	01N03E27ADD1	343952	904605	204.00	5/2/2006	16.00	188.00	10/10/2006	20.00	184.00	-4.00
Lee	02N03E09DDD1	344723	904707	220.00	5/2/2006	51.00	169.00	10/10/2006	54.00	166.00	-3.00
								Avg. Change:			**-5.73**
Lincoln	08S06W02ACB1	340338.8	913957.73	181.03	3/20/2006	42.25	138.78	10/17/2006	44.60	136.43	-2.35
Lincoln	10S05W05CB	335529	913832	170.00	4/4/2006	25.70	144.30	10/17/2006	28.33	141.67	-2.63
Lincoln	07S06W03CCA2	340828	914114	190.00	4/12/2006	19.00	171.00	9/14/2006	26.00	164.00	-7.00
Lincoln	08S04W06ABD1	340341	913116	171.00	4/12/2006	20.00	151.00	9/14/2006	19.00	152.00	1.00
Lincoln	08S05W12DBA1	340229	913222	171.00	4/12/2006	22.00	149.00	9/14/2006	27.00	144.00	-5.00
Lincoln	08S05W21DCD1	340027	913533	169.00	4/12/2006	35.00	134.00	9/14/2006	41.00	128.00	-6.00
Lincoln	08S05W29ABC1	340021	913044	176.00	4/12/2006	41.00	135.00	9/14/2006	43.00	133.00	-2.00
Lincoln	08S05W32DCC1	335840	913644	172.00	4/12/2006	43.00	129.00	9/14/2006	48.00	124.00	-5.00
Lincoln	09S04W06CBB1	335721	913252	163.00	4/12/2006	40.00	123.00	9/14/2006	45.00	118.00	-5.00
Lincoln	09S06W24DAA1	335452	913954	177.00	4/12/2006	31.00	146.00	9/14/2006	36.00	141.00	-5.00
Lincoln	09S06W04BDD1	335759	914335	178.00	4/12/2006	36.00	142.00	9/14/2006	36.00	142.00	0.00
Lincoln	07S07W36CBD1	340411	914529	183.00	4/12/2006	38.00	145.00	9/14/2006	40.00	143.00	-2.00
								Avg. Change:			**-3.42**
Lonoke	01S10W11CCB1	343839	920337	235.00	3/15/2006	31.87	203.13	10/19/2006	34.97	200.03	-3.10
Lonoke	02N07W16BAB1	344815.2	914539.5	240.00	4/13/2006	137.64	102.36	10/20/2006	141.90	98.10	-4.26
Lonoke	02N08W34BA1	344543	915106	230.00	3/16/2006	128.79	101.21	10/20/2006	132.41	97.59	-3.62
Lonoke	02S08W06AAB1	343430	915447	221.00	3/15/2006	67.34	153.66	10/19/2006	69.80	151.20	-2.46
Lonoke	02S08W28CDC	343008	915237	211.00	3/15/2006	60.50	150.50	10/19/2006	62.77	148.23	-2.27
Lonoke	01N08W03DDA1	344411	915050	229.00	4/17/2006	139.20	89.80	10/10/2006	147.00	82.00	-7.80
Lonoke	02N08W23CAB1	344659	915118	229.00	4/17/2006	129.70	99.30	10/10/2006	146.00	83.00	-16.30
Lonoke	02N07W07DAA1	344845	914707	232.00	4/17/2006	140.20	91.80	10/10/2006	148.00	84.00	-7.80
Lonoke	01N09W07DAA1	344330	900028	240.00	4/17/2006	47.00	193.00	10/10/2006	50.00	190.00	-3.00
Lonoke	01N10W15CDA1	344236	920414	240.00	4/17/2006	24.70	215.30	10/10/2006	33.00	207.00	-8.30
Lonoke	01S09W36CCC1	343435.3	915618.98	220.00	4/17/2006	62.50	157.50	10/10/2006	65.00	155.00	-2.50
Lonoke	01S06W32BBB1	343501	914056	201.00	4/17/2006	77.00	124.00	10/10/2006	79.00	122.00	-2.00
Lonoke	01S09W02DDD1	343857	915623	230.00	4/17/2006	83.00	147.00	10/10/2006	89.00	141.00	-6.00
Lonoke	02N10W15ACC1	344807	920352	242.00	4/17/2006	31.50	210.50	10/10/2006	35.50	206.50	-4.00

Spring/Fall WL Changes on Selected Alluvial Wells 2006

County	Station ID	Latitude	Longitude	LSA	Date Measured	Depth To Water	WL Alt. Spring '06	Date Measured	Depth to Water	WL Alt. Fall '06	Spring/Fall 06 Change
Lonoke	02S09W35ABB1	343008	915652	216.00	4/17/2006	50.00	166.00	10/10/2006	58.00	158.00	-8.00
Lonoke	02S07W05CDC1	343326	914715	205.00	4/17/2006	70.40	134.60	10/10/2006	66.00	139.00	4.40
Lonoke	02S07W20ACD1	343112	914655	201.00	4/17/2006	60.60	140.40	10/10/2006	64.00	137.00	-3.40
Lonoke	03N07W29CCD1			232.00	4/17/2006	95.00	137.00	10/10/2006	95.50	136.50	-0.50
								Avg. Change:			**-4.50**
Mississippi	10N09E08ACC1	352949.1	900925.66	230.00	4/20/2006	15.84	214.16	10/17/2006	16.90	213.10	-1.06
Mississippi	11N09E34BBB1	353217.7	900715.17	235.00	4/20/2006	16.70	218.30	10/17/2006	20.20	214.80	-3.50
Mississippi	14N11E33CAA1	354727	895508	240.00	4/10/2006	15.00	225.00	9/8/2006	16.00	224.00	-1.00
Mississippi	15N12E01BCD1	355704	894601	258.00	4/13/2006	11.00	247.00	9/8/2006	13.00	245.00	-2.00
Mississippi	16N10E28BBD1	355906.1	900156.03	238.00	4/13/2006	14.50	223.50	9/8/2006	12.00	226.00	2.50
Mississippi	15N10E21ABC1	355447	900135	240.00	4/13/2006	13.00	227.00	9/8/2006	16.00	224.00	-3.00
Mississippi	13N08E24ABB1	354428	901112	230.00	4/18/2006	9.00	221.00	9/8/2006	11.00	219.00	-2.00
Mississippi	12N10E04CAA1	354124	900136	235.00	4/14/2006	20.00	215.00	9/8/2006	22.00	213.00	-2.00
Mississippi	12N10E21DBA1	353842	900122	236.00	4/14/2006	17.00	219.00	9/7/2006	20.00	216.00	-3.00
Mississippi	11N10E09BCB1	353530	900202	236.00	4/14/2006	20.00	216.00	9/7/2006	22.00	214.00	-2.00
Mississippi	10N08E21ABA1	352852	901415	224.00	4/18/2006	25.00	199.00	9/7/2006	26.00	198.00	-1.00
Mississippi	10N08E21BDC1	352830	901407	224.00	4/18/2006	25.00	199.00	9/7/2006	26.00	198.00	-1.00
Mississippi	12N08E28DDB1	353707	901406	225.00	4/18/2006	20.00	205.00	9/7/2006	23.00	202.00	-3.00
Mississippi	12N09E12ABC1	354054	900449	232.00	4/14/2006	17.00	215.00	9/7/2006	29.00	203.00	-12.00
Mississippi	12N10E07BCD1	354036	900404	234.00	4/14/2006	22.00	212.00	9/7/2006	24.00	210.00	-2.00
Mississippi	14N08E20DAA1	354921	901458	225.00	4/18/2006	5.00	220.00	9/8/2006	7.00	218.00	-2.00
Mississippi	14N08E26DCC1	354803	901235	230.00	4/18/2006	5.00	225.00	9/8/2006	7.00	223.00	-2.00
Mississippi	14N11E17CCB1	354955	895639	240.00	4/10/2006	8.00	232.00	9/8/2006	13.00	227.00	-5.00
								Avg. Change:			**-2.50**
Monroe	01N01W15CBD1	344139	910542	185.00	4/4/2006	49.19	135.81	10/19/2006	50.34	134.66	-1.15
Monroe	01N02W12CBC1	344242.3	911031.9	182.00	4/4/2006	39.21	142.79	10/17/2006	41.53	140.47	-2.32
Monroe	04N02W05BBB1	345957	911311	188.00	4/13/2006	15.00	173.00	9/28/2006	16.00	172.00	-1.00
Monroe	04N02W01BCC1	345929	911004	175.00	4/13/2006	39.50	135.50	9/28/2006	41.00	134.00	-1.50
Monroe	02N01W19ADD1	344624	910814	188.00	4/14/2006	53.00	135.00	9/28/2006	54.00	134.00	-1.00
Monroe	01S01W16DB	343615	910632	175.00	4/14/2006	22.00	153.00	9/28/2006	18.00	157.00	4.00
Monroe	02S01W01BCD1	343305	910408	176.00	4/14/2006	19.00	157.00	9/28/2006	23.00	153.00	-4.00
Monroe	01S02W20BBB1	343612.7	911456.1	170.00	4/14/2006	12.00	158.00	9/28/2006	14.50	155.50	-2.50
Monroe	1N03W23BAC1	344124	911743	170.00	4/14/2006	16.00	154.00	9/28/2006	16.50	153.50	-0.50
Monroe	02N03W35BCA1	344455	911745	188.00	4/14/2006	34.00	154.00	9/28/2006	36.00	152.00	-2.00

Spring/Fall WL Changes on Selected Alluvial Wells 2006

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	Depth	WL	Spring/Fall
					Measured	Water	Alt. Spring '06	Measured	to Water	Alt. Fall '06	06 Change
Monroe	1S03W20CCD1	343626	912121	210.00	4/14/2006	79.00	131.00	9/28/2006	80.00	130.00	-1.00
								Avg. Change:			**-1.18**
Phillips	01S01E09CBB1	343718.7	905434.06	185.00	3/21/2006	14.29	170.71	10/19/2006	27.40	157.60	-13.11
Phillips	01S03E10ABB1	343741	904634	205.00	4/10/2006	18.00	187.00	10/2/2006	34.00	171.00	-16.00
Phillips	01S03E02ADD1	343814	904511	200.00	4/10/2006	16.60	183.40	10/2/2006	30.00	170.00	-13.40
Phillips	01S04E05DCD1	343802	904151	230.00	4/10/2006	49.00	181.00	10/2/2006	58.00	172.00	-9.00
Phillips	01S01E20DDB1	343529	910058	185.00	4/10/2006	26.00	159.00	10/2/2006	35.00	150.00	-9.00
Phillips	01S03E20BDD1	343533	904846	210.00	4/10/2006	33.00	177.00	10/2/2006	48.00	162.00	-15.00
Phillips	01S02E09BDC1	343725	910047	185.00	4/10/2006	14.80	170.20	10/20/2006	30.00	155.00	-15.20
Phillips	01S02E32BCC1	343350	905526	200.00	4/10/2006	37.00	163.00	10/2/2006	46.00	154.00	-9.00
Phillips	02S02E33ACC1	342824	905412	177.00	4/10/2006	26.00	151.00	10/2/2006	36.00	141.00	-10.00
Phillips	02S02E29DDD1	342901	905444	180.00	4/10/2006	27.60	152.40	10/2/2006	37.00	143.00	-9.40
Phillips	02S03E34BCD1	342828	904653	165.00	4/12/2006	18.00	147.00	10/3/2006	23.00	142.00	-5.00
Phillips	02S04E27AAC1	342931.6	904001.09	179.00	4/12/2006	4.90	174.10	10/18/2006	14.70	164.30	-9.80
Phillips	03S04E02CAA1	342732	903918	176.00	4/10/2006	17.00	159.00	10/3/2006	25.00	151.00	-8.00
Phillips	04S01E14CDD1	342014	905837	155.00	4/12/2006	15.00	140.00	10/2/2006	20.00	135.00	-5.00
Phillips	04S02E01DBB1	342220	905053	163.00	4/12/2006	15.60	147.40	10/2/2006	22.60	140.40	-7.00
Phillips	04S01E01AAD1	342238	905700	156.00	4/12/2006	22.00	134.00	10/2/2006	25.00	131.00	-3.00
								Avg. Change:			**-9.81**
Poinsett	11N01E17DDD1	353436.8	910013.21	230.00	4/13/2006	78.00	152.00	10/17/2006	94.80	135.20	-16.80
Poinsett	11N02E26AAB1	353350.3	905034.19	241.00	3/28/2006	107.55	133.45	10/17/2006	135.40	105.60	-27.85
Poinsett	12N07E25DC1	353740	901802	226.00	3/23/2006	17.42	208.58	10/17/2006	19.72	206.28	-2.30
Poinsett	11N06E34AB1	353224	902646	211.00	3/23/2006	13.22	197.78	10/17/2006	14.77	196.23	-1.55
Poinsett	12N01E22DAB1	353922	905809	235.00	4/13/2006	74.00	161.00	10/4/2006	76.00	159.00	-2.00
Poinsett	10N01E33ACB1	352746	905931	220.00	4/13/2006	77.00	143.00	10/4/2006	81.00	139.00	-4.00
Poinsett	12N03E04DAD1	354158	904600.16	247.00	4/17/2006	104.00	143.00	10/4/2006	107.00	140.00	-3.00
Poinsett	12N03E01CBD1	354154	904329	250.00	4/17/2006	93.00	157.00	10/4/2006	96.00	154.00	-3.00
Poinsett	12N02E25DCC1	353820	904944	245.00	4/13/2006	112.00	133.00	10/4/2006	114.00	131.00	-2.00
Poinsett	11N02E30BBB1	353352	905540	239.00	4/17/2006	102.50	136.50	10/4/2006	104.50	134.50	-2.00
Poinsett	12N05E16ABA1	354039	903333	221.00	4/17/2006	12.00	209.00	9/28/2006	13.50	207.50	-1.50
Poinsett	11N04E36ABA1	353251	903654	211.00	4/17/2006	18.00	193.00	9/28/2006	19.00	192.00	-1.00
Poinsett	10N04E35BBA1	352745	903831	215.00	4/17/2006	21.00	194.00	9/28/2006	21.00	194.00	0.00
Poinsett	12N07E10BCC1	354042	902022	228.00	4/17/2006	10.00	218.00	9/28/2006	10.00	218.00	0.00
Poinsett	11N01E34AAA1	353256	905759	229.00	4/13/2006	88.50	140.50	10/4/2006	90.00	139.00	-1.50

Spring/Fall WL Changes on Selected Alluvial Wells 2006

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	Depth	WL	Spring/Fall
					Measured	Water	Alt. Spring '06	Measured	to Water	Alt. Fall '06	06 Change
Poinsett	10N01E02AAA1	353205	905654	235.00	4/13/2006	98.00	137.00	10/4/2006	100.00	135.00	-2.00
Poinsett	12N04E08CDA1	354053	904112	250.00	4/17/2006	88.00	162.00	10/4/2006	90.00	160.00	-2.00
Poinsett	12N03E35DDA1	353735	904355	245.00	4/17/2006	103.00	142.00	9/28/2006	111.00	134.00	-8.00
Poinsett	11N03E17AAA1	353534	904713	243.00	4/17/2006	105.00	138.00	9/28/2006	106.50	136.50	-1.50
Poinsett	10N02E15CAA1	352939	905026	237.00	4/12/2006	104.50	132.50	10/6/2006	104.00	133.00	0.50
Poinsett	10N03E19BCB1	352906	904021	239.00	4/12/2006	99.50	139.50	10/16/2006	100.00	139.00	-0.50
Poinsett	10N03E20BBA1	352405	904810	235.00	4/13/2006	112.50	122.50	10/6/2006	108.00	127.00	4.50
Poinsett	10N03E26BBD1	352817	904449	257.00	4/13/2006	113.50	143.50	10/6/2006	116.00	141.00	-2.50
Poinsett	10N03E13BCB1	353001	904352	270.00	4/13/2006	142.00	128.00	10/6/2006	132.00	138.00	10.00
Poinsett	11N04E13DDA1	353447	903631	210.00	4/17/2006	15.00	195.00	9/28/2006	18.50	191.50	-3.50
Poinsett	11N05E26BDB1	353318	903155	213.00	4/17/2006	12.00	201.00	9/28/2006	14.00	199.00	-2.00
Poinsett	11N07E28CBB1	353250	902125	218.00	4/17/2006	20.00	198.00	9/28/2006	26.00	192.00	-6.00
Poinsett	10N07E28CBB1	352743	902128	215.00	4/17/2006	28.50	186.50	9/28/2006	33.00	182.00	-4.50
Poinsett	10N01E32CBB1	352657	910053	222.00	4/13/2006	74.00	148.00	10/4/2006	76.00	146.00	-2.00
Poinsett	11N02E34CBA1	353238	905222	240.00	4/13/2006	109.00	131.00	10/4/2006	111.00	129.00	-2.00
Poinsett	12N02E34CCC1	353724	905230	245.00	4/13/2006	112.50	132.50	10/4/2006	115.00	130.00	-2.50
								Avg. Change:			**-2.98**
Prairie	01S06W12BAB1	343826	913613	228.00	3/17/2006	119.36	108.64	10/18/2006	119.81	108.19	-0.45
Prairie	02N05W21CB1	344649	913300	225.00	3/17/2006	108.15	116.85	10/18/2006	109.66	115.34	-1.51
Prairie	02N05W24ACB	344659	912937	225.00	3/17/2006	90.70	134.30	10/18/2006	93.70	131.30	-3.00
Prairie	02S06W14BBB1	343213.4	913728.62	201.00	4/11/2006	74.29	126.71	10/20/2006	80.40	120.60	-6.11
Prairie	02N06W21DAA1	344653	913827	225.00	3/25/2006	116.20	108.80	10/20/2006	116.02	108.98	0.18
Prairie	02N06W24CAA1	344651	913551	223.00	3/25/2006	118.90	104.10	10/20/2006	118.62	104.38	0.28
Prairie	03N05W03BDD2	345444	913115	207.00	4/11/2006	67.70	139.30	10/20/2006	66.60	140.40	1.10
Prairie	05N05W28DDA1	350119	913228	191.00	4/23/2006	63.00	128.00	10/6/2006	39.70	151.30	23.30
Prairie	01S04W28BBC1	343529	912650	206.00	4/17/2006	82.00	124.00	10/6/2006	97.50	108.50	-15.50
								Avg. Change:			**-0.19**
Pulaski	01S10W29CC1	343537.8	920707.66	239.00	4/3/2006	18.02	220.98	10/20/2006	20.30	218.70	-2.28
Pulaski	02S10W14DC1	343204.7	920333.75	225.00	4/3/2006	24.90	200.10	10/20/2006	22.70	202.30	2.20
Randolph	18N02E17CBB1	361204	905356	265.00	4/24/2006	23.00	242.00	10/4/2006	24.50	240.50	-1.50
Randolph	18N01E28AAD1	361040	905820	265.00	4/24/2006	22.00	243.00	10/4/2006	23.00	242.00	-1.00
Randolph	19N02E09DCA1	361759	905158	267.00	4/25/2006	18.00	249.00	10/4/2006	20.00	247.00	-2.00
Randolph	19N03E33CCB1			285.00	4/24/2006	26.00	259.00	10/4/2006	28.50	256.50	-2.50

Spring/Fall WL Changes on Selected Alluvial Wells 2006

County	Station ID	Latitude	Longitude	LSA	Date	Depth To	WL	Date	Depth	WL	Spring/Fall
					Measured	Water	Alt. Spring '06	Measured	to Water	Alt. Fall '06	06 Change
Randolph	19N02E22DAB1	361622	905049	266.00	4/24/2006	15.50	250.50	10/4/2006	18.50	247.50	-3.00
Randolph	20N02E21CDD1	362117	905107	270.00	4/25/2006	12.00	258.00	10/4/2006	13.50	256.50	-1.50
Randolph	18N02E03DAD1	361336	905043	280.00	4/24/2006	56.00	224.00	10/4/2006	56.00	224.00	0.00
Randolph	20N02E14DAB1	362232	904930	274.00	4/25/2006	14.00	260.00	10/4/2006	14.00	260.00	0.00
Randolph	20N02E06DAD1	362410	905339	281.00	4/25/2006	22.00	259.00	10/4/2006	21.50	259.50	0.50
Randolph	18N02E34BAB1	360933	905150	270.00	4/24/2006	31.00	239.00	10/4/2006	32.00	238.00	-1.00
Randolph	18N02E20BDA1	361125	905332	274.00	4/24/2006	42.50	231.50	10/4/2006	43.50	230.50	-1.00
Randolph	20N02E12BAA1	362352	904848	281.00	4/25/2006	12.00	269.00	10/4/2006	13.00	268.00	-1.00
								Avg. Change:			**-1.17**
St. Francis	04N01W17CBC1	345735	910801	208.00	3/27/2006	59.08	148.92	10/18/2006	60.10	147.90	-1.02
St. Francis	04N02E19BBB1	345701	905633	209.00	3/22/2006	60.16	148.84	10/18/2006	62.20	146.80	-2.04
St. Francis	05N01E15BCB1	350302.6	905942.41	209.00	3/22/2006	67.19	141.81	10/18/2006	65.10	143.90	2.09
St. Francis	04N01W20BBB1	345716	910759	200.00	5/15/2006	59.00	141.00	11/9/2006	61.50	138.50	-2.50
St. Francis	06N06E17DD1	350812	902853	200.00	5/15/2006	34.00	166.00	11/9/2006	38.00	162.00	-4.00
St. Francis	05N05E33BCC1	350004	903506	196.00	5/15/2006	29.00	167.00	11/9/2006	30.00	166.00	-1.00
St. Francis	04N02E27AAA1	345604	905220	211.00	5/15/2006	48.00	163.00	11/9/2006	49.50	161.50	-1.50
St. Francis	04N02E16ACD1	345733	905341	209.00	5/15/2006	41.00	168.00	11/9/2006	52.00	157.00	-11.00
								Avg. Change:			**-2.62**
White	06N06W13DBB1	350918	913552	213.00	4/25/2006	47.30	165.70	10/2/2006	86.00	127.00	-38.70
White	06N06W18BCA1	350835	914150	210.00	4/25/2006	20.30	189.70	10/2/2006	27.00	183.00	-6.70
White	06N06W04BAD1	351037	913903	221.00	4/25/2006	40.80	180.20	10/2/2006	39.00	182.00	1.80
White	07N05W26AAA1	351224	913003	200.00	4/6/2006	22.40	177.60	10/17/2006	25.70	174.30	-3.30
White	07N05W01AAA1	351553	912558	205.00	3/23/2006	17.52	187.48	10/17/2006	19.40	185.60	-1.88
								Avg. Change:			**-9.76**
Woodruff	04N03W03AB1	345951	911900	185.00	3/28/2006	14.61	170.39	10/17/2006	12.60	172.40	2.01
Woodruff	06N02W19AAA1	350802	911419	225.00	4/5/2006	45.50	179.50	10/11/2006	50.00	175.00	-4.50
Woodruff	08N03W04BBB1	352128	911919	221.00	3/24/2006	14.08	206.92	10/14/2006	22.28	198.72	-8.20
Woodruff	09N03W32ACA1	352205	911936	217.00	4/5/2006	21.60	195.40	10/11/2006	23.80	193.20	-2.20
Woodruff	07N03W31BBA1	351152	912103	190.00	4/5/2006	11.90	178.10	10/11/2006	15.70	174.30	-3.80
Woodruff	07N01W04ABC1	351541	910626	225.00	4/5/2006	60.90	164.10	10/11/2006	64.10	160.90	-3.20
Woodruff	07N03W06BAC1	351607	912109	211.00	4/5/2006	24.40	186.60	10/11/2006	25.63	185.37	-1.23
Woodruff	05N01W31CCC1	350106	910900	210.00	4/5/2006	59.10	150.90	10/11/2006	61.20	148.80	-2.10

Spring/Fall WL Changes on Selected Alluvial Wells 2006

County	Station ID	Latitude	Longitude	LSA	Date Measured	Depth To Water	WL Alt. Spring '06	Date Measured	Depth to Water	WL Alt. Fall '06	Spring/Fall 06 Change
Woodruff	06N04W22BDA1	350807	912428	186.00	4/5/2006	5.90	180.10	10/11/2006	11.00	175.00	-5.10
Woodruff	05N01W13CDC1	350244	910331	210.00	4/5/2006	74.60	135.40	10/11/2006	80.30	129.70	-5.70
Woodruff	08N02W27DDB1	351711	911107	213.00	4/5/2006	27.00	186.00	10/11/2006	29.30	183.70	-2.30
Woodruff	06N01W11AAB1	350944	910354	215.00	3/26/2006	61.30	153.70	10/14/2006	64.20	150.80	-2.90
								Avg. Change:			**-3.27**
							Total Average Change:				**-3.16**

Appendix F

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	PR1-01	PR2-02	PR3-03	LO1-01
Location	Latitude	342036	341343	342552	342736	345718	344254	345844	345059
	Longitude	910743	911102	912252	912251	914728	912850	914629	915309
Sampling date	mm/dd/yyyy	06/05/02	06/05/02	06/11/02	06/11/02	06/04/02	06/04/02	06/06/02	06/06/02
Sample	Characteristics	UnFiltered	UnFiltered	UnFiltered	UnFiltered	UnFiltered	UnFiltered	UnFiltered	UnFiltered
Parameter	Aquifer	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
Calcium	mg/L	82.19	73.46	93.36	86.63	61.10	129.53	54.94	17.56
Magnesium	mg/L	20.45	22.15	25.51	32.08	15.04	40.79	12.90	6.56
Sodium	mg/L	11.26	14.84	52.79	53.57	13.14	45.44	18.68	13.34
Potassium	mg/L	1.1	1.8	2.7	4.6	1.0	2.6	1.2	0.9
Iron	mg/L	0.045	1.753	1.663	1.507	0.026	4.384	0.027	3.373
Lead	mg/L	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Manganese	mg/L	0.018	0.193	0.236	0.172	0.005	0.190	0.001	2.054
Copper	mg/L	-	-	-	-	-	-	-	
Zinc	mg/L	0.014	0.021	0.036	0.020	0.019	0.041	0.019	0.022
Alkalinity	mg/L as $CaCO_3$	281	264	407	385	197	364	206	62
Bicarbonate#	mg/L	340	320	491	466	240	441	250	76
Carbonate#	mg/L	0.94	1.12	2.72	2.14	0.42	1.28	0.79	0.01
Chloride	mg/L	13.66	12.79	45.42	35.62	11.37	66.30	14.86	11.57
Sulfate	mg/L	17.08	9.50	13.46	27.09	2.46	117.92	1.83	25.01
Bromide	mg/L	0.156	0.040	0.112	0.110	0.105	0.401	0.146	0.108
Fluoride	mg/L	0.050	0.220	0.190	0.210	0.05	0.18	0.19	0.28
Nitrate***	mg/L as N	0.083	0.037	0.016	0.017	0.076	0.000	0.231	0.019
Ammonia	mg/L	-	-	-	-	-	-	-	-
Orthophosphate **	mg/L	0.0719	0	0	0	0.1399	0	0.636	0
pH	standard units	7.78	7.88	8.08	8.00	7.58	7.80	7.84	6.36
Conductivity	uS/cm	573	541	880	844	405	1044	439	212
Turbidity	NTU	-	-	-	-	-	-	-	-
TSS	mg/L	0.40	0.30	1.12	0.56	0.65	8.00	0.18	0.60
TDS	mg/L	361	335	561	491	263	729	279	173
Total Coliform	MPN/100 ml	3	>200.5	3	15	<1	<1	70	<1
E. coli	MPN/100 ml	<1	>200.5	<1	<1	<1	<1	<1	<1

* Exceeded holding time

SW wells are ANRC 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	LO2-SW1	LO3-SW2	PR4-SW3	PR5-SW4	PR6-SW5	PR7-SW6	PR8-SW7	AR7-SW8	MN1-SW10
Location	343007	343430	344653	344651	344649	344659	343826	340740	344139
	915237	915447	913827	913551	913300	912937	913613	912115	910542
Sampling date	06/19/02	06/18/02	03/04/03	02/16/03	03/05/03	02/19/03	05/28/03	06/11/03	06/18/03
Sample	UnFiltered	UnFiltered	UnFiltered	UnFiltered	UnFiltered	UnFiltered	UnFiltered	UnFiltered	UnFiltered
Parameter	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
Calcium	112.51	107.62	127.273	103.829	99.998	86.387	89.612	162.130	142.411
Magnesium	29.50	24.83	25.569	22.113	22.403	22.950	26.064	39.511	53.309
Sodium	47.12	33.09	29.09	26.57	37.99	21.34	51.330	79.52	43.89
Potassium	1.8	1.6	1.43	1.37	2.12	1.77	1.390	2.702	1.978
Iron	10.918	9.775	2.198	2.020	2.162	0.965	1.463	3.352	4.917
Lead	0.01	0.01	0.013	0.004	0.004	0.965	0.001	0	0
Manganese	0.297	0.215	0.308	0.193	0.191	0.166	0.185	0.324	0.317
Copper	-	-	-	-	-	-	-	-	-
Zinc	0.022	0.027	0.013	0.017	0.011	0.014	0.000	0.000	0.000
Alkalinity	338	282	368	124?	270	124?	274	432	432
Bicarbonate#	411	340	447	149?	329	149?	334	526	526
Carbonate#	0.56	1.80	1.03	1.062?	0.42	0.948?	0.11	0.44	0.57
Chloride	48.94	32.73	21.99	28.13	57.34	4.71	28.125	156.971	71.918
Sulfate	92.64	105.01	88.20	32.93	78.52	32.58	85.398	38.482	92.961
Bromide	0.216	0.162	0.17	0.076	0.45	0.00	0.213	0.285	0.410
Fluoride	0.12	0.11	0.13	0.09	0.14	0.14	0.149	0.000	0.047
Nitrate***	0.026	0.037	0.03	0.02	0.08	0.14	1.894*	0.008*	0.058*
Ammonia	-	-	-	-	-	-	-	-	-
Orthophosphate **	-	-	0.0332	0	0	0.013	0.0509	0	0
pH	7.47	8.06	7.70	8.19	7.44	8.14	6.85##	7.26	7.370
Conductivity	929	818	880	288	820	279	770	1296	1133
Turbidity	-	-	-	-	-	-	-	-	-
TSS	17.20	42.24	15.0	7.8	30.1	13.8	-	-	-
TDS	539	765	569	463	514	401	511*	824*	773*
Total Coliform	12	>200.5	59.000	>200.5	165	95	-	-	-
E. coli	<1	2	<1	<1	<1	<1	-	-	-
	* Exceeded holding time		SW wells are ANRC 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	LO4-SW9	AR1-01	AR2-02	AR3-03	AR4-04	AR5-05	AR6-06	PR2-02	PR3-03
Location	343841	342036	341343	342552	342736	341245	341318	344254	345844
	920337	910743	911102	912255	912251	912947	912909	912850	914629
Sampling date	06/25/03	10/15/03	10/15/03	10/16/03	0/16/2003	10/15/03	10/15/03	10/16/03	10/16/03
Sample	UnFiltered	UnFiltered	UnFiltered	UnFiltered	UnFiltered	UnFiltered	UnFiltered	UnFiltered	UnFiltered
Parameter	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
Calcium	52.696	82.420	88.772	103.951	88.957	9.510	3.660	137.119	54.770
Magnesium	14.520	19.636	24.898	28.119	32.907	2.649	0.975	44.008	12.030
Sodium	69.30	11.250	27.750	58.650	53.460	180.320	37.770	47.120	20.870
Potassium	2.244	1.220	2.390	2.890	4.530	4.680	3.730	2.900	1.410
Iron	10.605	0.017	2.012	2.674	2.545	0.116	0.130	9.284	0.100
Lead	0	0.001	0.015	0.000	0.004	0.003	0.004	0.006	0.003
Manganese	0.296	0.021	0.232	0.263	0.194	0.033	0.125	0.221	0.000
Copper	-	0.003	0.253	0.001	0.000	0.060	0.001	0.007	0.001
Zinc	0.000	0.000	0.117	0.000	0.000	0.184	0.151	0.028	0.000
Alkalinity	242	250	302	404	390	394	98	376	204
Bicarbonate#	295	304	368	492	475	476	119	458	248
Carbonate#	0.09	0.30	0.45	0.47	0.60	2.33	0.34	0.30	0.42
Chloride	19.874	12.053	30.795	43.985	34.880	13.350	3.971	94.911	13.336
Sulfate	0.000	21.532	16.916	13.801	20.000	0.034	0.083	115.448	1.826
Bromide	0.000	0.154	0.147	0.138	0.132	0.068	0.038	0.672	0.132
Fluoride	0.069	0.078	0.082	0.082	0.130	0.753	0.137	0.042	0.115
Nitrate***	0.140*	0.000	0.000	0.000	0.000	0.051	0.000	0.000	0.008
Ammonia	-	0.010	0.374	0.672	0.859	1.083	0.383	0.910	0.012
Orthophosphate **	0	0.094	0.021	0.000	0.000	0.115	0.130	0.000	0.084
pH	6.830	7.320	7.420	7.310	7.430	8.020	7.790	7.150	7.560
Conductivity	606	547.000	686.000	900.000	860.000	766.000	202.000	1152.000	446.000
Turbidity	-	1.000	8.000	16.000	20.000	0.000	0.000	48.000	0.000
TSS	-	-	-	-	-	-	-	-	-
TDS	390*	-	-	-	-	-	-	-	-
Total Coliform	-	-	-	-	-	-	-	-	-
E. coli	-	-	-	-	-	-	-	-	-
	* Exceeded holding time		SW wells are ANRC 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	LO2-SW1	LO3-SW2	AR1-01	AR2-02	AR3-03	AR4-04	AR5-05	AR6-06	PR2-02
Location	343007	343430	342036	341343	342552	342736	341245	341318	344254
	915237	915447	910743	911102	912252	912251	912947	912909	912850
Sampling date	10/14/03	10/13/03	10/15/03	10/15/03	10/16/03	10/16/03	10/15/03	10/15/03	10/16/03
Sample	UnFiltered	UnFiltered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered
Parameter	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
Calcium	118.360	121.914	78.789	84.787	99.957	86.265	9.496	3.579	133.538
Magnesium	27.336	32.048	19.125	24.214	27.272	32.102	2.688	0.958	43.302
Sodium	28.380	36.480	11.210	27.230	56.810	52.620	176.550	37.440	46.720
Potassium	1.890	2.140	1.230	2.340	2.950	4.430	4.610	3.700	2.900
Iron	12.166	11.308	0.028	0.800	2.407	2.252	0.122	0.028	3.373
Lead	0.010	0.005	0.002	0.009	0.003	0.007	0.002	0.003	0.005
Manganese	0.207	0.442	0.021	0.224	0.266	0.197	0.034	0.013	0.213
Copper	0.000	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000
Zinc	0.000	0.000	0.003	0.000	0.000	0.000	0.191	0.140	0.002
Alkalinity	288	320	-	-	-	-	-	-	-
Bicarbonate#	351	390	-	-	-	-	-	-	-
Carbonate#	0.16	0.17	-	-	-	-	-	-	-
Chloride	32.795	125.213	-	-	-	-	-	-	-
Sulfate	104.071	139.343	-	-	-	-	-	-	-
Bromide	0.175	0.303	-	-	-	-	-	-	-
Fluoride	0.108	0.113	-	-	-	-	-	-	-
Nitrate***	0.000	0.000	-	-	-	-	-	-	-
Ammonia	0.435	0.340	-	-	-	-	-	-	-
Orthophosphate **	0.000	0.000	-	-	-	-	-	-	-
pH	6.990	6.960	-	-	-	-	-	-	-
Conductivity	846.000	961.000	-	-	-	-	-	-	-
Turbidity	93.000	84.000	-	-	-	-	-	-	-
TSS	-	-	-	-	-	-	-	-	-
TDS	-	-		-	-	-	-	-	-
Total Coliform	-	-	-	-	-	-	-	-	-
E. coli	-	-	-	-	-	-	-	-	-
	* Exceeded holding time		SW wells are ANRC 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	L02-SW1	AR8 SW11	AR3 SW12	AR3 03	L05 SW13	PN1 SW14	PN2 SW15	CH1-SW16	JK1-SW17
Location	345844	343007	342630	342553	342552	344543	353740	353224	354916	353550
	914629	915237	913007	912251	912252	915106	901802	902646	905125	910428
Sampling date	10/16/03	10/14/03	04/20/04	04/21/04	04/21/04	04/23/04	04/27/04	04/28/04	05/04/04	05/06/04
Sample	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered
Parameter	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
Calcium	54.972	116.256	74.207	95.838	99.280	46.182	74.608	89.638	59.962	81.302
Magnesium	12.209	26.999	20.171	29.312	28.924	13.117	12.612	22.795	17.115	23.199
Sodium	20.870	28.390	33.30	63.33	56.87	63.85	7.30	10.35	28.85	24.10
Potassium	1.420	2.050	1.89	3.04	2.92	1.01	2.08	1.19	2.00	2.35
Iron	0.000	11.961	1.908	0.384	1.190	1.954	14.620	9.903	0.878	2.575
Lead	0.000	0.006	0.008	0.006	0.013	0.001	0.008	0	0.004	0.001
Manganese	0.001	0.204	0.140	0.224	0.223	0.100	0.532	0.744	0.245	0.634
Copper	0.001	0.010	0.006	0.005	0.009	0.002	0.001	0.003	0.005	0.002
Zinc	0.000	0.020	0.123	0.046	0.105	0.017	0.015	0.021	0.010	0.015
Alkalinity	-	-	280	398	414	246	240	256	268	256
Bicarbonate#	-	-	341	484	503	294	292	312	326	310
Carbonate#	-	-	0.47	0.81	1.01	2.96	0.29	0.31	0.70	1.08
Chloride	-	-	17.598	44.796	45.785	16.365	2.412	8.511	26.649	15.171
Sulfate	-	-	10.593	15.224	13.936	30.995	16.651	51.682	49.327	61.752
Bromide	-	-	0.000	0.112	0.116	0.083	0.008	0.000	0.231	0.113
Fluoride	-	-	0.069	0.070	0.066	0.143	0.099	0.093	0.0637	0.0554
Nitrate***	-	-	0.089	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ammonia	-	-	0.383	0.622	0.635	0.103	0.616	0.092	0.278	0.402
Orthophosphate **	-	-	0.0398	0.046	0	0.025	0.0265	0	0.0261	0
pH	-	-	7.45	7.53	7.61	8.31	7.30	7.30	7.64	7.85
Conductivity	-	-	611	885	924	563	480	578	713	653
Turbidity	-	-	36	15	14	24	42	48	3	11
TSS	-	-	-	-	-	-	-	-	-	-
TDS	-	-	-	-	-	-	-	-	-	-
Total Coliform	-	-	-	-	-	-	-	-	-	-
E. coli	-	-	-	-	-	-	-	-	-	-
	* Exceeded holding time		SW wells are ANRC 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	WI01-SW18	CS1-SW19	SF1-SW20	LN1-SW21	DR1-SW22	WO2-SW24	CS2-SW25	PN3-SW26	PN4-SW27	CD1-SW23
Location	352128	351508	345735	335228	334144	350944	352505	353831	352726	351630
	911919	905113	910801	913833	912842	910354	905653	905024	905231	901933
Sampling date	05/07/04	05/11/04	05/12/04	05/18/04	05/19/04	6/8/2005	6/9/2005	6/14/2005	6/15/2005	6/16/2005
Sample	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered	Filtered
Parameter	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial	Alluvial
Calcium	60.176	126.640	64.047	22.647	30.074	60	110	152	105	64
Magnesium	13.885	56.522	19.662	6.884	10.267	16	32	35	30	19
Sodium	19.40	30.98	15.04	14.87	12.08	12	37	38	36	14
Potassium	2.22	1.77	1.53	1.95	1.62	1	2	2	2	4
Iron	3.427	0.427	0.626	16.362	23.765	0.52	2.2	4.3	2	6.7
Lead	0.005	0.003	0.003	0.007	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese	1.530	0.239	0.904	0.617	0.414	0.38	0.37	0.64	0.42	0.320
Copper	0.001	0.006	0.001	0.003	0.000	0.004	0.002	0.002	<0.001	0.001
Zinc	0.012	0.029	0.017	0.038	0.008	0.058	0.021	0.029	0.025	0.010
Alkalinity	192	472	316	100	116	204	410	490	388	260
Bicarbonate#	233	571	382	122	141	249	499	597	473	317
Carbonate#	0.71	2.19	1.64	0.03	0.06	0.2	0.3	0.2	0.3	0.2
Chloride	6.061	15.948	17.538	1.986	7.148	9.18	15.55	17.53	30.63	3.47
Sulfate	54.832	54.722	23.360	1.129	7.894	1.56	35.28	66.74	19.25	2.61
Bromide	0.000	0.169	0.115	0.006	0.000	0.450	0.116	0.136	0.205	0.034
Fluoride	0.0700	0.0525	0.0776	0.062	0.092	0.16	0.17	0.08	0.14	0.24
Nitrate***	0.000	0.000	0.000	0.000	0.000	0.014	0.016	0.031	0.031	0.036
Ammonia	0.196	0.152	0.164	0.287	0.222	0.302	0.284	0.484	0.219	0.726
Orthophosphate **	0	0	0.1059	0.0282	0	<0.13	<0.13	<0.13	<0.13	<0.13
pH	7.79	7.89	7.94	6.62	6.94	7.14	7.18	6.87	7.12	7.10
Conductivity	480	1007	688	214	277	457	860	1049	835	506
Turbidity	16	12	20	91	37	36	16	13	13	36
TSS	-	-	-	-	-	-	-	-	-	-
TDS	-	-	-	-	-	-	-	-	-	-
Total Coliform	-	-	-	-	-	-	-	-	-	-
E. coli	-	-	-	-	-	-	-	-	-	-

* Exceeded holding time

SW wells are ANRC 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	AR5-05	PR5-SW4D	PR7-SW6D	AR6-06	CD1-SW23D	MN1-SW10D	PR8-SW7D	AR30SW12D
Location	341245	344651	344659	341318	351630	344139	343826	342553
	912947	913551	912937	912909	901933	910542	913613	912251
Sampling date	06/12/02	03/12/03	03/27/03	06/12/02	09-28-2004	09-28-2004	09-28-2004	11/11/2005
Sample	UnFiltered	UnFiltered	UnFiltered	UnFiltered	Filtered	Filtered	Filtered	Filtered
Parameter	Sparta	Sparta	Sparta	Sparta	Sparta	Sparta	Sparta	Sparta
Calcium	3.57	64.419	48.524	3.38	19	52	87	33
Magnesium	0.97	16.300	10.774	0.93	9.4	14	20	7
Sodium	60.74	44.95	52.85	37.23	7.6	100	36	61
Potassium	2.9	3.86	3.68	3.4	7.6	6.6	4.3	7
Iron	0.042	2.310	1.226	0.057	16*	1*	2	0.16
Lead	0.00	0	0.005	0.00	0.001*	<0.001*	<0.001*	<0.001
Manganese	0.023	0.050	0.063	0.011	0.24*	0.074*	0.094*	0.052
Copper	-	-	-	-	0.004*	0.006*	0.002*	0.003
Zinc	0.158	0.037	0.012	0.155	0.028*	0.011*	0.015*	0.061
Alkalinity	140	280	240	96	102	372	294	222[a]
Bicarbonate#	170	334	289	117	-	-	-	267
Carbonate#	0.47	3.44	1.96	0.19	-	-	-	2.0
Chloride	3.89	21.99	24.01	4.23	1.27	28.21	23.73	6.09
Sulfate	1.39	7.64	1.01	0.11	6.90	0.77	11.76	0.28
Bromide	0.000	0.093	0.225	0.000	-			NA
Fluoride	0.400	0.14	0.20	0.310	0.06	0.16	0.14	0.07
Nitrate***	0.000	0.01	0.77	0.000	0	0	0	<0.013
Ammonia	-	-	-	-	0.513	1.466	0.361	1.300
Orthophosphate **	0.1357	0	0.047	0.1054	0	0.0216	0	0.07
pH	7.78	8.35	8.17	7.56	-	-	-	8.2[a]
Conductivity	280	616	536	195	-	-	-	428
Turbidity	-	-	-	-	-	-	-	-
TSS	0.00	11.44	21.68	0.08	-	-	-	-
TDS	159	346	291	113	-	-	-	-
Total Coliform	59	-	-	1	-	-	-	-
E. coli	<1	-	-	<1	-	-	-	-

* Exceeded holding time. The metal analyses were conducted within 180 days and the holding time is 6 months, thus these analyses may be 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