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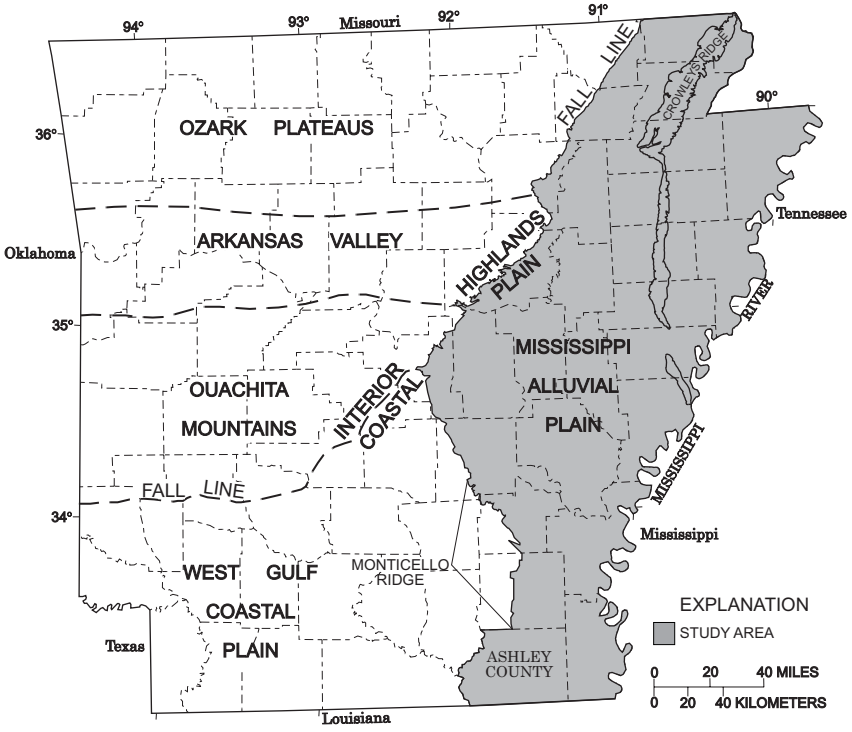
Status of Water Levels and Selected Water-Quality Conditions in the Mississippi River Valley Alluvial Aquifer in Eastern Arkansas, 2002



Prepared in cooperation with the
ARKANSAS SOIL AND WATER CONSERVATION COMMISSION and the
ARKANSAS GEOLOGICAL COMMISSION

Scientific InvestigationsReport 2004-5129

U.S. Department of the Interior
U.S. Geological Survey

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By T.B. Reed

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U.S. Department of the Interior
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U.S. Geological Survey, Reston, Virginia: 2004
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Status of Water Levels and Selected Water-Quality Conditions in the Mississippi River Valley Alluvial Aquifer in Eastern Arkansas, 2002

By T.B. Reed

Abstract

During the spring of 2002, water levels were measured in 737 wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas. The regional direction of ground-water flow is generally to the south and east except where affected by intense ground-water withdrawals. In 2002, the highest water-level altitude measured was 287 feet above National Geodetic Vertical Datum of 1929 in northeastern Clay County. The lowest water-level altitude measured was 78 feet above National Geodetic Vertical Datum of 1929 in southwestern Ashley County. Comparisons of water-level changes in cones of depression from 1998 to 2002 show increases and decreases in depth or areal extent. A large depression in the potentiometric surface was located in Arkansas, Lonoke, and Prairie Counties during 1998 and persisted in 2002. Water levels generally declined in this depression in Lonoke County but rose in Arkansas County. Two shallower cones of depressions were located in Craighead, Cross, and Poinsett Counties and St. Francis, Woodruff, Lee, and Monroe Counties west of Crowleys Ridge during 1998. These coalesced into a single depression by 2002. Water-level data from 143 wells with 26 or more years of record indicate long-term water levels in the alluvial aquifer declined an average of about 0.3 foot per year from 1977 to 2002. Water levels generally declined throughout most of the aquifer from 1998 to 2002.

Specific conductance measurements made on water samples collected from 64 wells ranged from 262 microsiemens per centimeter in a well in Randolph County to 2,730 microsiemens per centimeter in a well in Chicot County.

Introduction

The Mississippi Alluvial Plain (fig. 1) encompasses an area of approximately 32,000 square miles and includes parts of Arkansas and nearby states. Approximately 54 percent of the Mississippi Alluvial Plain covers the eastern one-third of Arkansas. The Mississippi River Valley alluvial aquifer (herein referred to as the alluvial aquifer) underlies the Mississippi Alluvial Plain in eastern Arkansas. Within Arkansas, the alluvial aquifer extends from the Missouri State line south to the Louisiana State line, and from the Mississippi River west to the Fall Line (the physiographic boundary between the West Gulf Coastal Plain and the Interior Highlands) and the Monticello Ridge (a topographic feature in southeastern Arkansas), and near the western Ashley County line (fig. 1).

The land use in eastern Arkansas has become more agricultural since 1900 with production consisting predominately of rice, soybeans, cotton, and in recent years aquaculture, all of which are highly dependent on the availability of water. Eastern Arkansas receives sufficient precipitation to support these crops, receiving an average 46 to 54 inches of precipitation annually (Freiwald, 1984). However, during a critical portion of the growing season from late spring through early summer, most precipitation in eastern Arkansas falls as rain from widely scattered thunderstorms. Increasingly farmers are relying on water from the alluvial aquifer for agriculture and aquaculture irrigation.

In 1985, estimated water withdrawals from the alluvial aquifer in Arkansas totaled about 3,500 million gallons per day (Mgal/d) (Holland, 1987); estimated withdrawals increased to 4,300 Mgal/d in 1990 (Holland, 1993). In 1995, estimated water withdrawals totaled about 5,062 Mgal/d (Holland, 1999); and in 2000, estimated water withdrawals totaled about 7,050 Mgal/d (T.W. Holland, U.S. Geological Survey, written commun., 2004). The increase in estimated water withdrawals from 1995 to 2000 in the alluvial aquifer in Arkansas is about 39 percent.

The U.S. Geological Survey (USGS), in cooperation with the Arkansas Soil and Water Conservation Commission (ASWCC) and the Arkansas Geological Commission, conducted a study of water levels and selected water-quality conditions in the alluvial aquifer in eastern Arkansas. The U.S. Department of Agriculture-Natural Resources Conservation Service (NRCS) also measured water levels in wells completed in the alluvial aquifer and provided these data to the ASWCC. These data were made available to the USGS and were incorporated into the database used to develop a potentiometric-surface map of the alluvial aquifer for the spring of 2002. In the spring of 2002, a total of 737 water-level measurements (380 by the USGS and 357 by the NRCS) were collected.

During the summer of 2002, water samples from 64 wells completed in the alluvial aquifer were analyzed for specific conductance. These measurements provided information for a database of selected water-quality data for the alluvial aquifer.

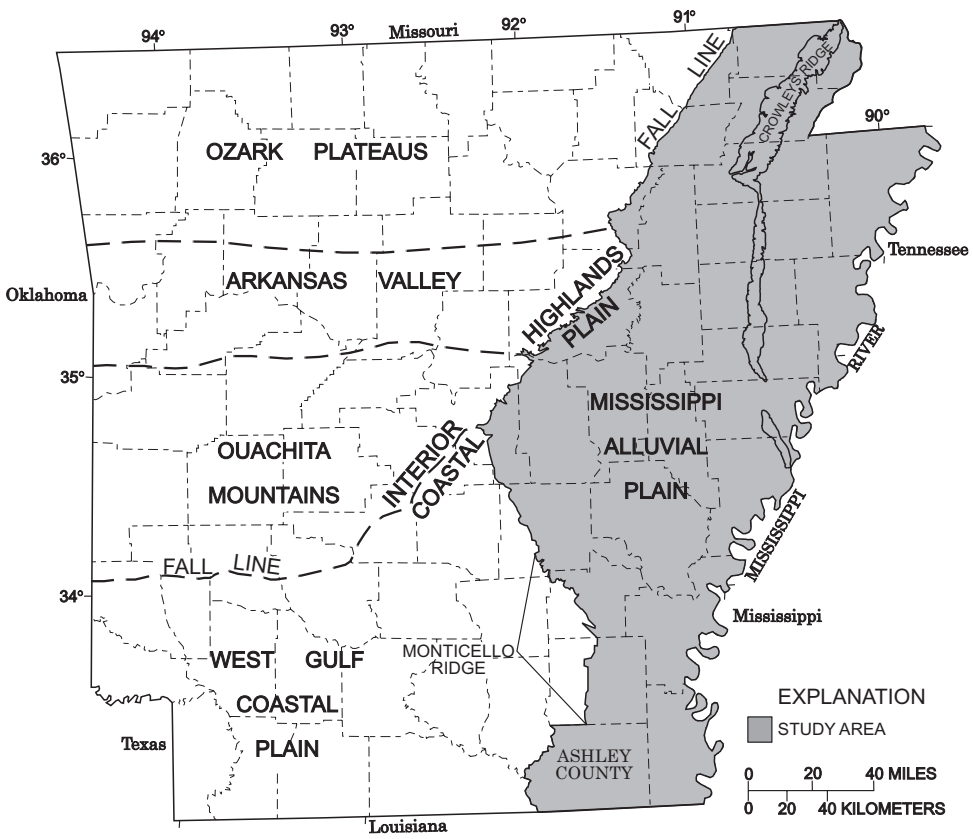


Figure 1. Location of study area.

The purpose of this report is to describe the status and trends of water levels and selected water-quality constituents in the alluvial aquifer. The report includes maps, long-term hydrographs, and data tables. Scheduled monitoring and evaluation of conditions in the alluvial aquifer provide information necessary for resource management.

The well-numbering system used in this report is based upon the locations of the wells according to the Federal land survey used in Arkansas. The component parts of a well number are the township number; the range number; the section number; three letters which indicate respectively, the quarter section, the quarter-quarter section, and the quarter-quarter-quarter section in which the well is located; and a sequence number of the well in the quarter-quarter-quarter section. The letters are assigned counterclockwise, beginning with "A" in the northeast quarter or quarter-quarter or quarter-quarter-quarter section in which the well is located. For example, well 01S03W04BBD16 (fig. 2) is located in Township 1 South, Range 3 West, and in the southeast quarter of the northwest quarter of the northwest quarter of section 4. This well is the 16th well in this quarter-quarter-quarter section of section 4 from which data were collected.

Aquifer Description

The alluvial aquifer comprises alluvial and terrace deposits of Quaternary age (Ackerman, 1996). Lithologically, the Quaternary alluvial and terrace deposits are similar, consisting of unconsolidated sediments that grade from gravel and coarse sand in the lower sections to silt and clay in the upper sections (Boswell and others, 1968). Because coarse sediments are contained in the lower sections of the alluvial and terrace deposits, the aquifer is capable of sustaining high yielding wells (Ackerman, 1996). Finer sediments in the upper sections of the alluvial and terrace deposits form a confining unit above much of the aquifer. This confining unit is thin or has been completely removed by erosion in some areas, especially near large rivers within the study area (Gonthier and Mahon, 1993). Channel fill, point bar, and backswamp deposits associated with present or former channels of large rivers have produced abrupt changes in lithology and result in large spatial variations in the hydraulic properties of the aquifer (Joseph, 1999).

Sedimentary rocks and unconsolidated sediments of Tertiary age or older underlie the alluvial aquifer and have been modified by geologic processes into an undulating surface (Mahon and Poynter, 1993). In most areas, these rocks and sediments are less permeable than the overlying alluvial and terrace deposits of Quaternary age and form the confining unit below the alluvial aquifer (Boswell and others, 1968).

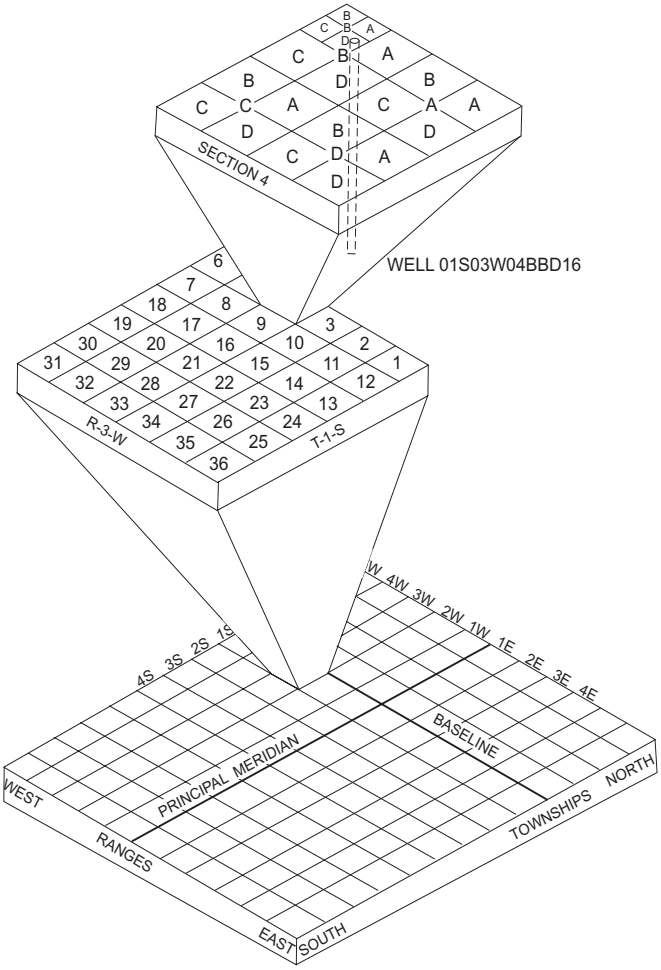


Figure 2. Well-numbering system.

In the northern half of the study area, the alluvial and terrace deposits of Quaternary age are separated by Crowleys Ridge (fig. 1), an erosional remnant of Tertiary-age deposits trending north-south from the Missouri-Arkansas border to northeastern Phillips County. Crowleys Ridge is a prominent topographic feature on the otherwise low-relief surface of the Mississippi Alluvial Plain and forms a physical barrier to ground-water flow in the alluvial aquifer.

Methods

Personnel from the USGS and the Natural Resources Conservation Service (NRCS) measured water levels from February 2002 to May 2002 from wells screened in the alluvial aquifer. Measurements were made using steel or electric tapes graduated in hundredths of a foot (USGS personnel) or in tenths of a foot (NRCS personnel). The steel and electric tapes used by USGS personnel were calibrated during January 2002 prior to collecting measurement from wells.

Well locations were measured using Global Positioning System receivers to acquire the horizontal coordinate information, latitude and longitude, based on the North American Datum of 1983. The latitude and longitude of the well location were transferred to the topographic map and altitude of the well (National Geodetic Vertical Datum of 1929) was determined from the contours at the location on the map.

Specific conductance data were measured from selected wells using specific conductivity meters with temperature compensation. Specific conductance is a measure of the electrical conductance of a substance. As the dissolved solid concentration in ground water increases, specific conductance increases.

Water Levels

Water-level measurements collected in wells screened in the alluvial aquifer (Appendix 1) were used to produce a regional potentiometric-surface map (plate 1). Short-term water-level changes in cones of depression in the potentiometric surface are shown by comparing contour lines for 1998, 2000, and 2002 from previous reports (Stanton and others, 1998; Joseph, 1999; Schrader, 2001). Data from wells that have water-level measurements with 26 or more years of record were used to produce hydrographs shown on figure 3. The water-level changes shown in the hydrographs indicate long-term changes in hydrologic conditions. Long-term water-level changes shown by the hydrographs reflect the development of the cones of depression in the potentiometric surface.

Potentiometric Surface

The potentiometric-surface map (plate 1) shows the altitude at which water would have risen in tightly cased wells screened in the alluvial aquifer. The map on plate 1 is based on 737 water-level measurements (by USGS and NRCS) made in wells during the spring of 2002 (appendix 1). The surface was mapped using the altitude of the water levels measured in the wells and is represented on the map by contours that connect points of equal value. The general direction of ground-water flow is perpendicular to the contours in the direction of decreasing potentiometric altitude.

The regional direction of ground-water flow is generally to the south and east except where flow is affected by “intense” ground-water withdrawals; however, the flow direction is affected over substantial areas by cones of depression. In 2002, the highest measured water-level altitude of 287 feet above National Geodetic Vertical Datum of 1929 (NGVD of 1929) was in northeastern Clay County. The lowest measured water-level altitude of 78 feet above NGVD of 1929 was in southwestern Ashley County.

Previous reports described three large cones of depression in the alluvial aquifer potentiometric surface (Stanton and others, 1998; Joseph, 1999; Schrader, 2001). The depressions or other areas of reduced water level are shaded on plate 1. A large, elongated area of depression extended across Arkansas, Lonoke, and Prairie Counties. Two shallower potentiometric

depressions were documented in Lee, Monroe, St. Francis, and Woodruff Counties, and also in Craighead, Cross, and Poinsett Counties.

A comparison of water-level altitudes from 1998 to 2002 at the lowest point in the cone of depression in central Arkansas County indicates that water levels generally have recovered. The lowest measured water-level altitudes in the alluvial aquifer in Arkansas County in 1998, 2000, and 2002 were 78, 80, and 86 ft above NGVD of 1929, respectively (Joseph, 1999, p. 22; Schrader, 2001, p. 28). The area enclosed by the 100-foot contour in Arkansas County in 1998 was reduced in 2000 and further reduced in 2002. The area enclosed by the 100-foot contour in 1998 in neighboring Prairie and Lonoke Counties expanded further into Lonoke County in 2000 and 2002 but contracted in Prairie County by 2002.

Along the west side of Crowleys Ridge the two previously documented areas of depression expanded and coalesced to a single depression by 2002 (plate 1). In St. Francis and Lee Counties, a smaller cone of depression enclosed by the 130-foot contour, present in 1998, is not evident in 2000 or 2002. Areas enclosed by 140-foot contours in different areas in northern and east-central Monroe, northwestern Lee and western St. Francis Counties contracted and later expanded from 1998 to 2002. East of Crowleys Ridge, a cone of depression in St. Francis, Crittenden, and Cross Counties present in 1998 and 2000 continues to expand and deepen.

Five potentiometric depressions or troughs have been present since 1994 and are shaded on plate 1. Continued monitoring of the potentiometric surface will determine if these depressions are the result of short-term variations or long-term changes in the hydrologic conditions in the alluvial aquifer. Three potentiometric depressions were noted by Schrader (2001) in southeastern Arkansas—one in eastern Lincoln County, a second that extends from southern Desha County into northern Chicot County, and a third that extends from western Chicot County into eastern Ashley County. The trough in southern Desha and northern Chicot Counties was first evident in the 1998 potentiometric surface (Joseph, 1999) and had expanded radially and vertically by 2000 (Schrader, 2001). This trough expanded southward by 2002 but has not appreciably deepened. The troughs in eastern Lincoln County and in western Chicot and eastern Ashley Counties were not evident in 1994 and 1998. The trough in eastern Lincoln County "persists" in 2002 while that in western Chicot and eastern Ashley Counties has become appreciably less deep. A potentiometric depression noted first in 1998 by Joseph (1999) and in 2000 by Schrader (2001) is still evident in Greene County and deepened by 2002. In 2002, a potentiometric depression present in 1994 in St. Francis County east of Crowleys Ridge (Stanton and others, 1998, plate 1) had deepened.

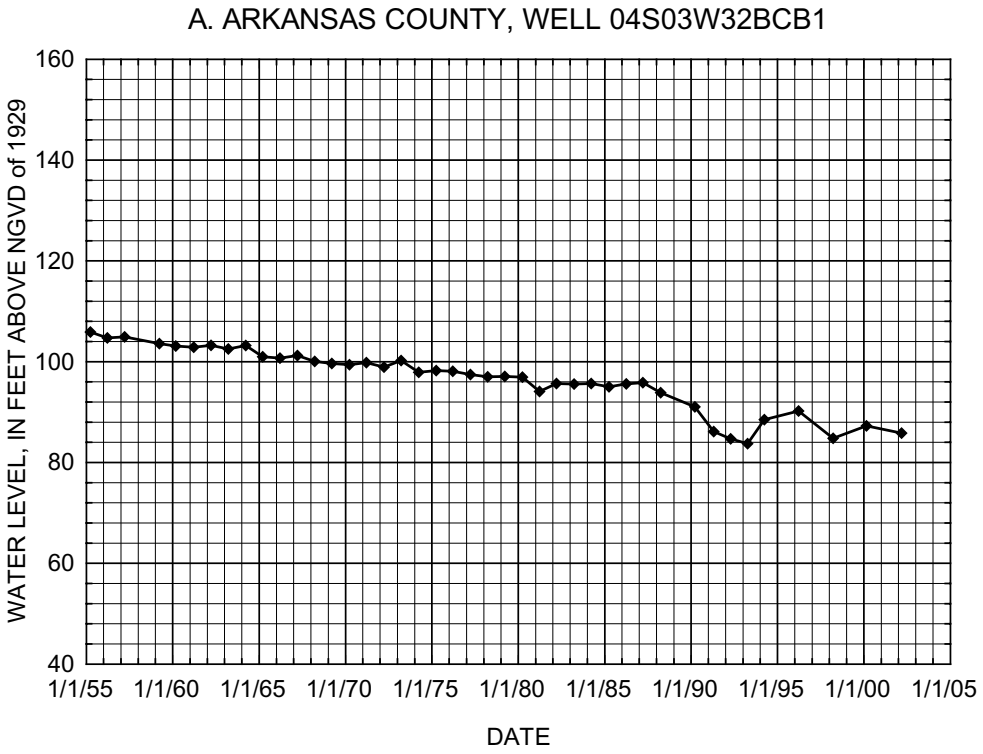
Long-Term Water-Level Changes

Long-term water-level changes vary substantially across the study area and as shown in table 1 generally are less than 0.30 ft/yr. Long-term water-level changes were calculated for 143 wells in the alluvial aquifer for the period from 1977 to 2002. Linear regression was used to calculate the trend in water-level change for each well for this period. The median annual decline in water level for all wells was 0.29 ft/yr and the median annual decline for each county is shown in table 1.

Table 1. Median decline in water levels in the Mississippi River Valley alluvial aquifer by county for the period 1977 to 2002.

County	Number of wells	Range of annual rise/decline in water level (feet/year)	Median annual rise/decline in water
Arkansas	27	-0.66 to 0.84	-0.11
Ashley	6	-0.33 to 0.02	-0.18
Chicot	2	-0.47 to -0.07	-0.27
Clay	6	-0.51 to 0.18	-0.16
Craighead	5	-1.10 to -0.01	-0.11
Crittenden	4	-0.51 to -0.04	-0.37
Cross	5	-1.13 to -0.29	-0.99
Desha	5	-0.80 to -0.04	-0.26
Drew	2	-0.11 to -0.02	-0.06
Greene	4	-0.80 to -0.01	-0.60
Independence	1	<0.00	<0.00
Jackson	4	-0.88 to -0.25	-0.66
Jefferson	6	-0.69 to -0.07	-0.22
Lee	4	-0.62 to -0.29	-0.55
Lincoln	3	-0.37 to 0.69	-0.15
Lonoke	6	-1.35 to 0.44	-0.60
Mississippi	9	-0.11 to 0.02	-0.07
Monroe	8	-0.51 to -0.03	-0.26
Phillips	3	-0.26 to -0.07	-0.11
Poinsett	5	-1.42 to -0.03	-0.33
Prairie	10	-0.84 to 0.48	-0.18
Pulaski	1	-0.26	-0.26
Randolph	1	-0.18	-0.18
St. Francis	8	-0.91 to -0.07	-0.54
White	3	-0.33 to 0.22	-0.22
Woodruff	5	-0.51 to >0.00	-0.07

The largest median declines in water level are in Cross, Jackson, Greene, and Lonoke Counties. The maximum annual decline in Cross County was about 1 ft. The smallest median declines are in Mississippi, Woodruff, Drew, and Independence Counties. Arkansas County, where a large cone of depression is present, has a median annual decline of about 0.1 foot as do Craighead and Phillips Counties. Additionally, hydrographs for period of record for wells in Arkansas, Ashley, Chicot, Clay, Craighead, Crittenden, Cross, Desha, Drew, Greene, Independence, Jackson, Jefferson, Lee, Lincoln, Lonoke, Mississippi, Monroe, Phillips, Poinsett, Prairie, Pulaski, Randolph, St. Francis, White, and Woodruff Counties are presented in figure 3 (wells A-BB, plate 1).



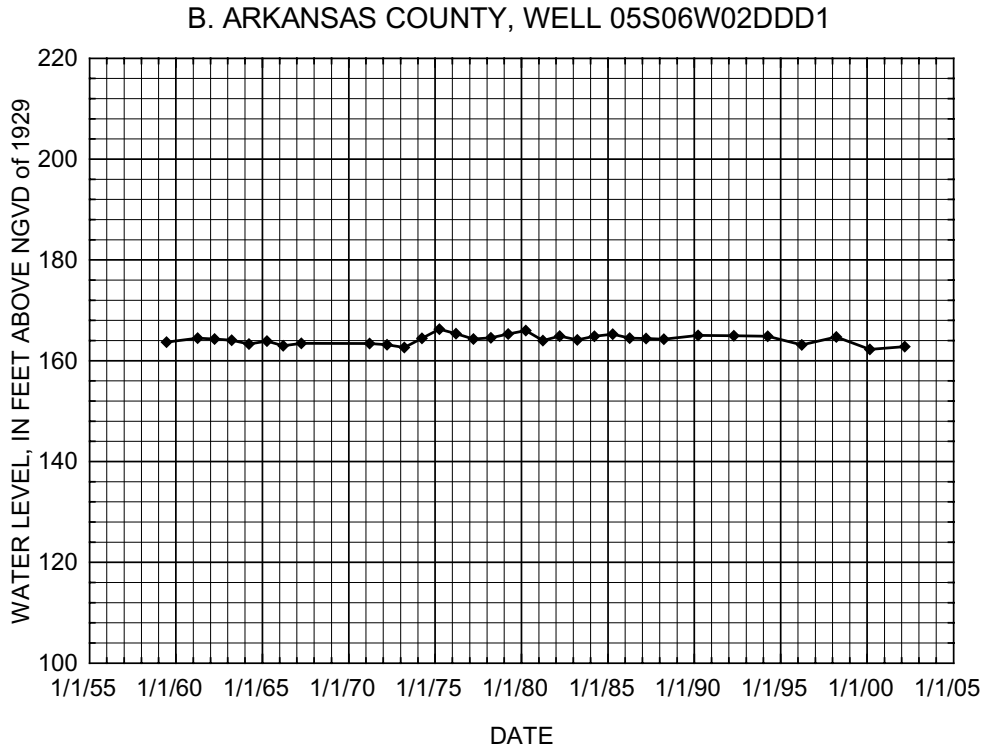
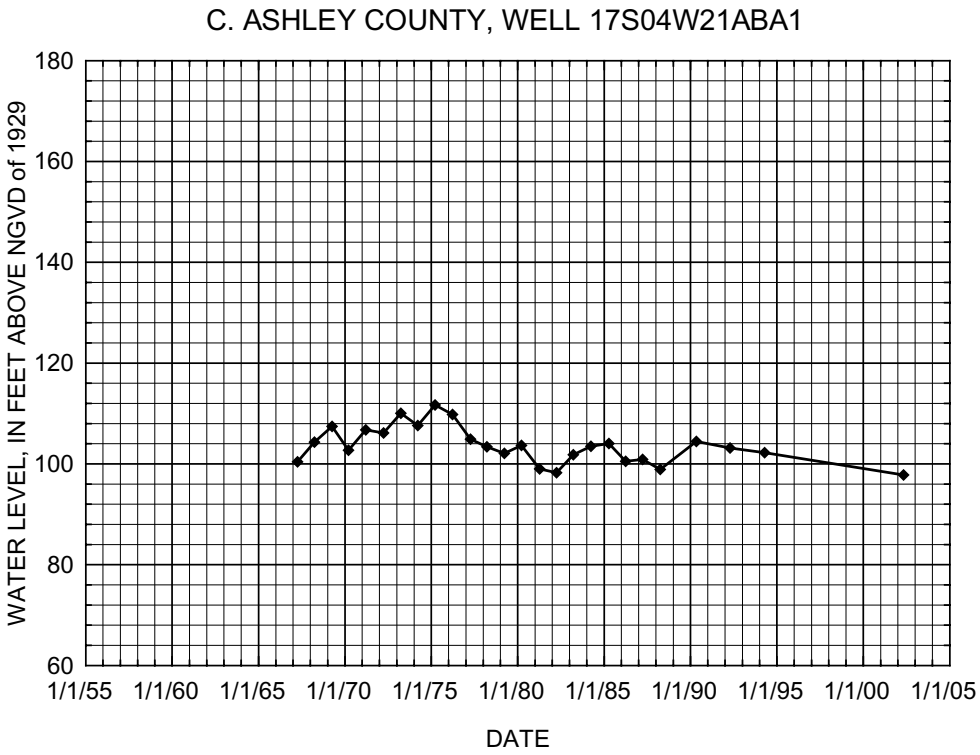
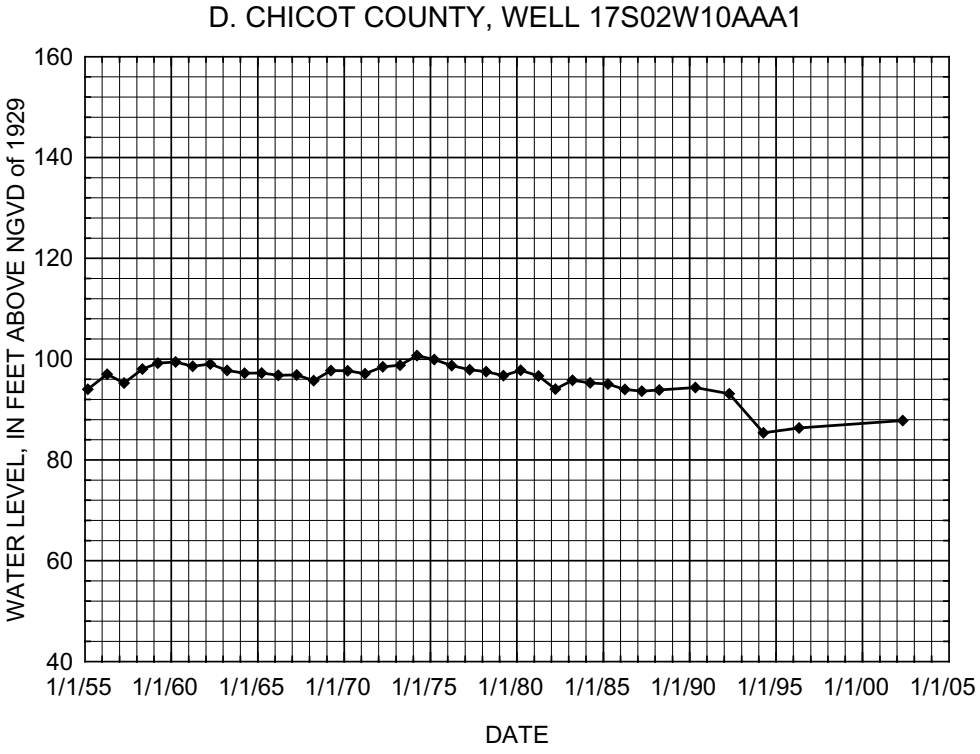


Figure 3. Water-level hydrographs for selected wells in the Mississippi River Valley alluvial aquifer in eastern Arkansas.





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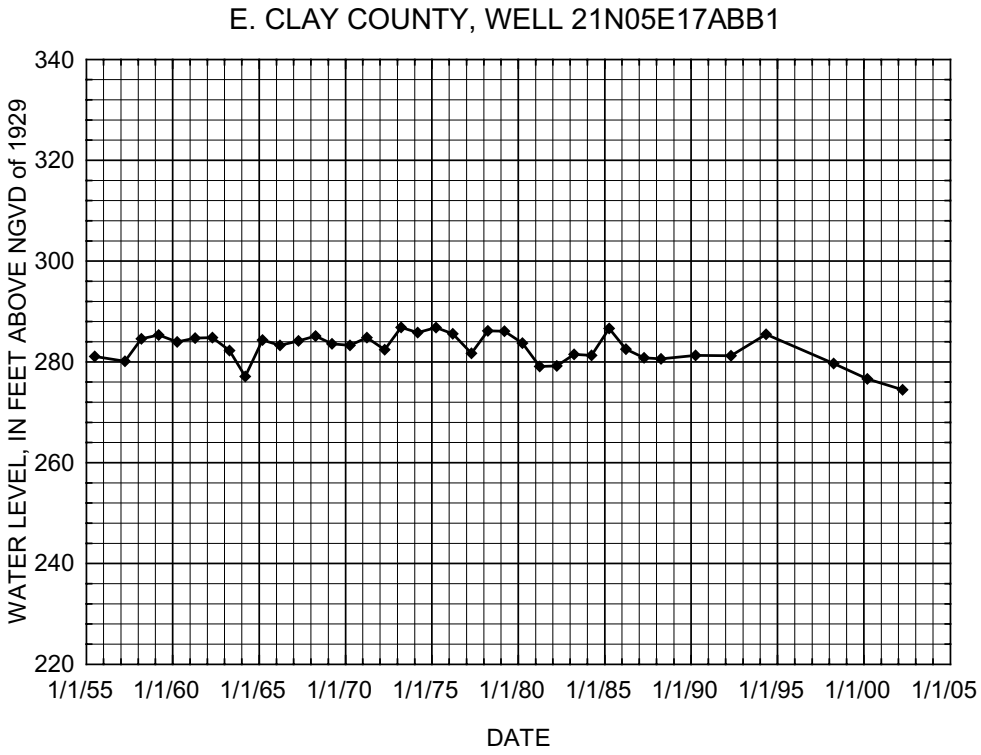

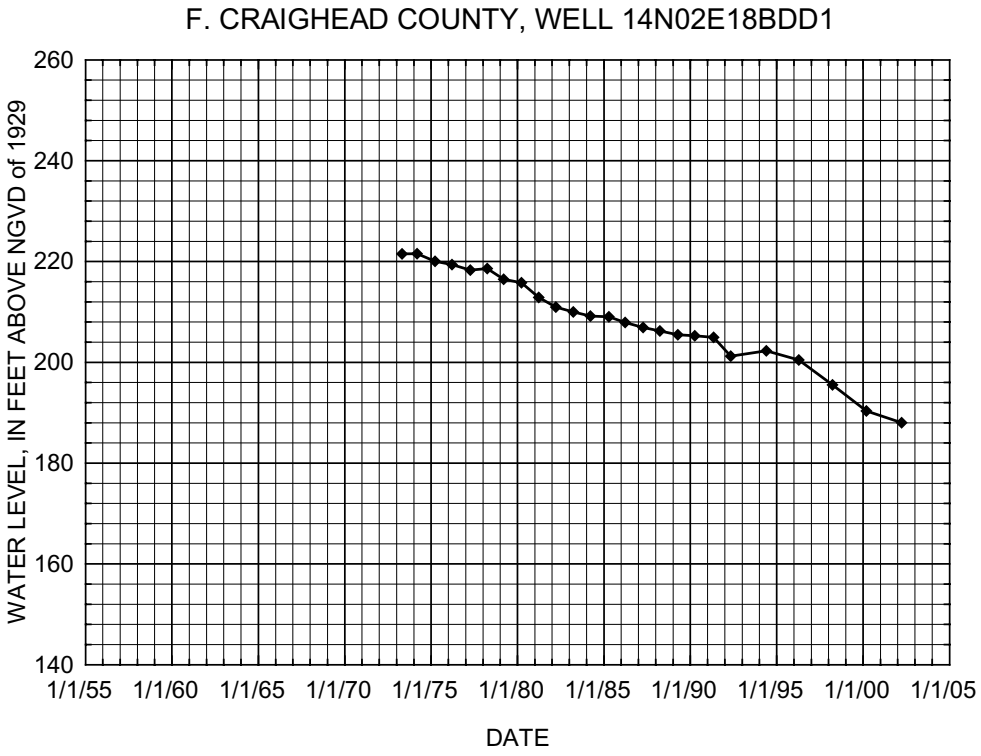

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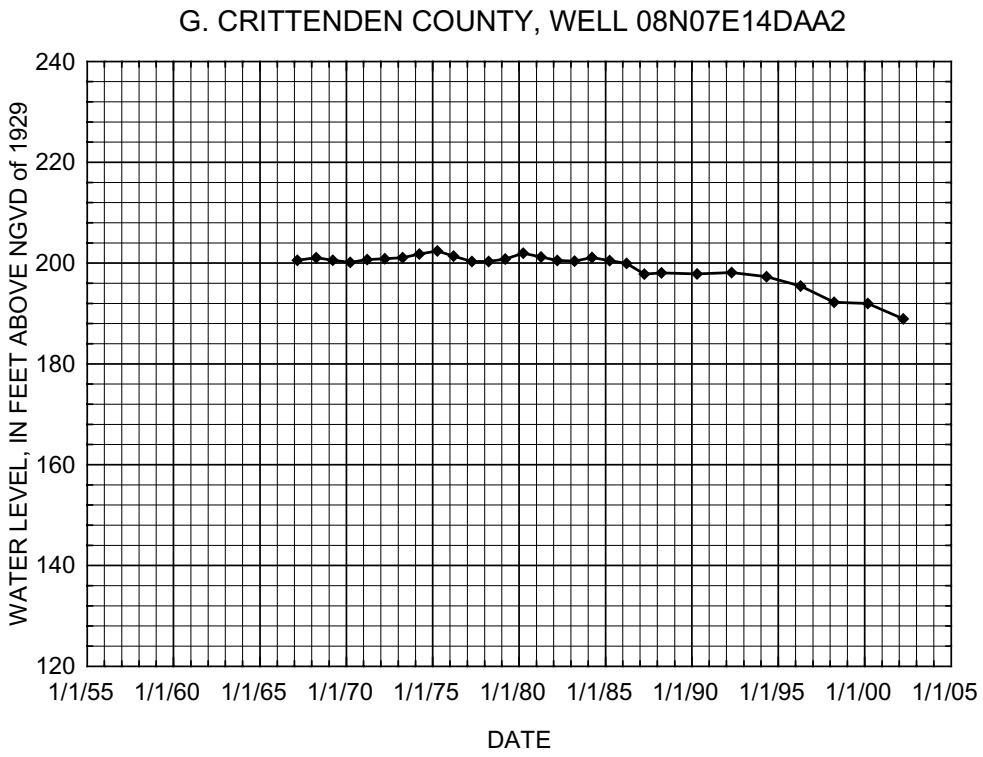

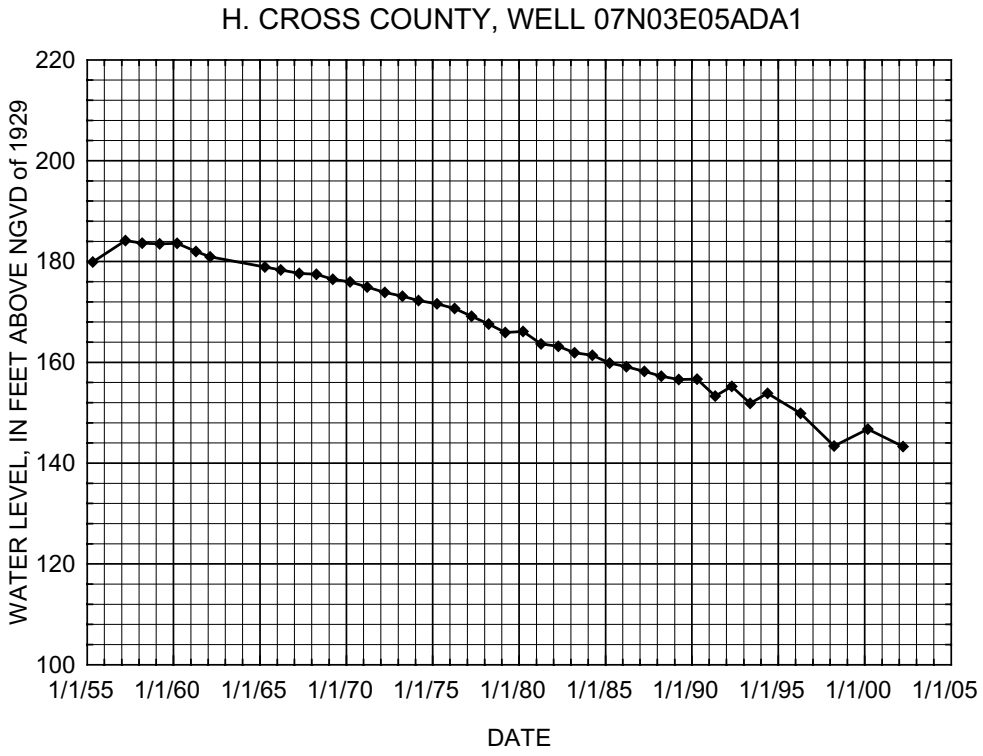

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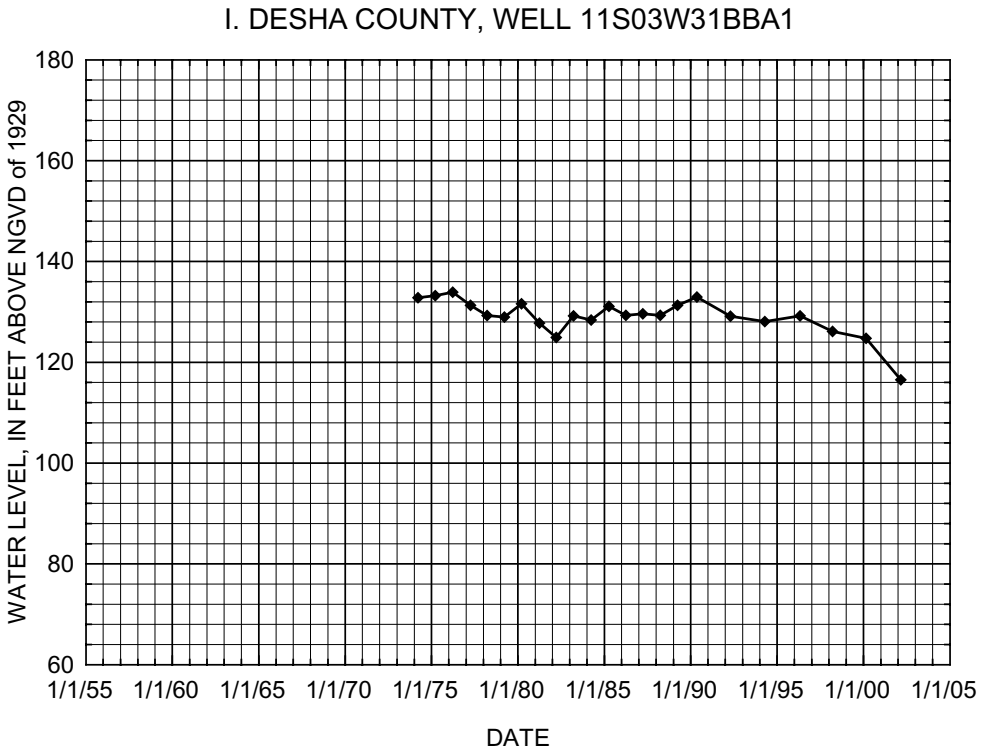

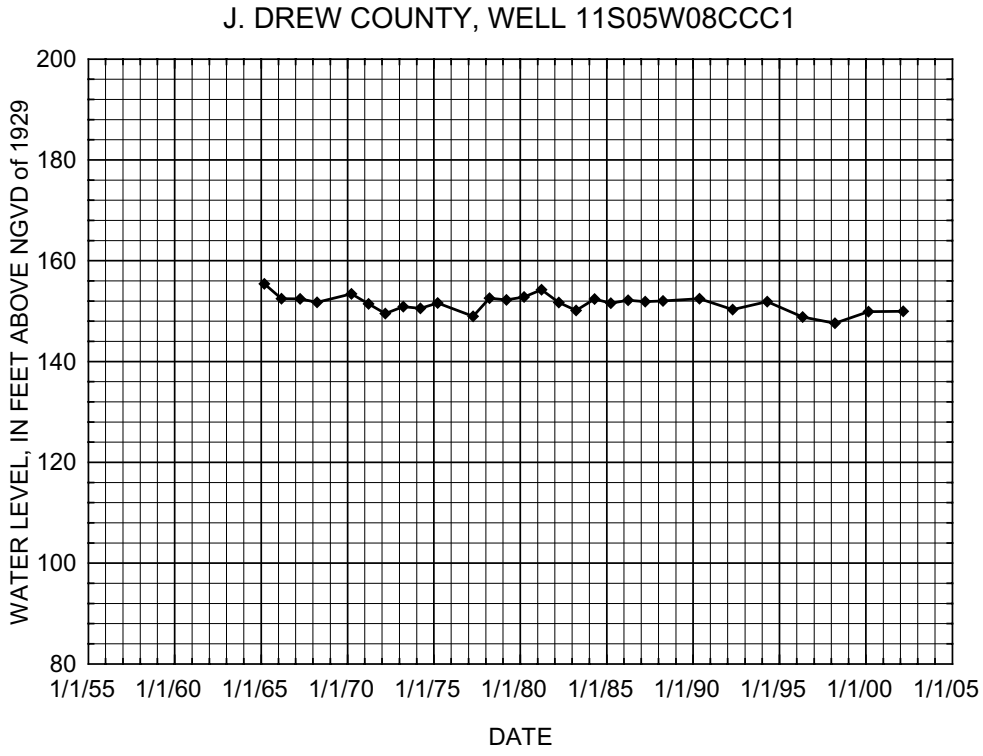

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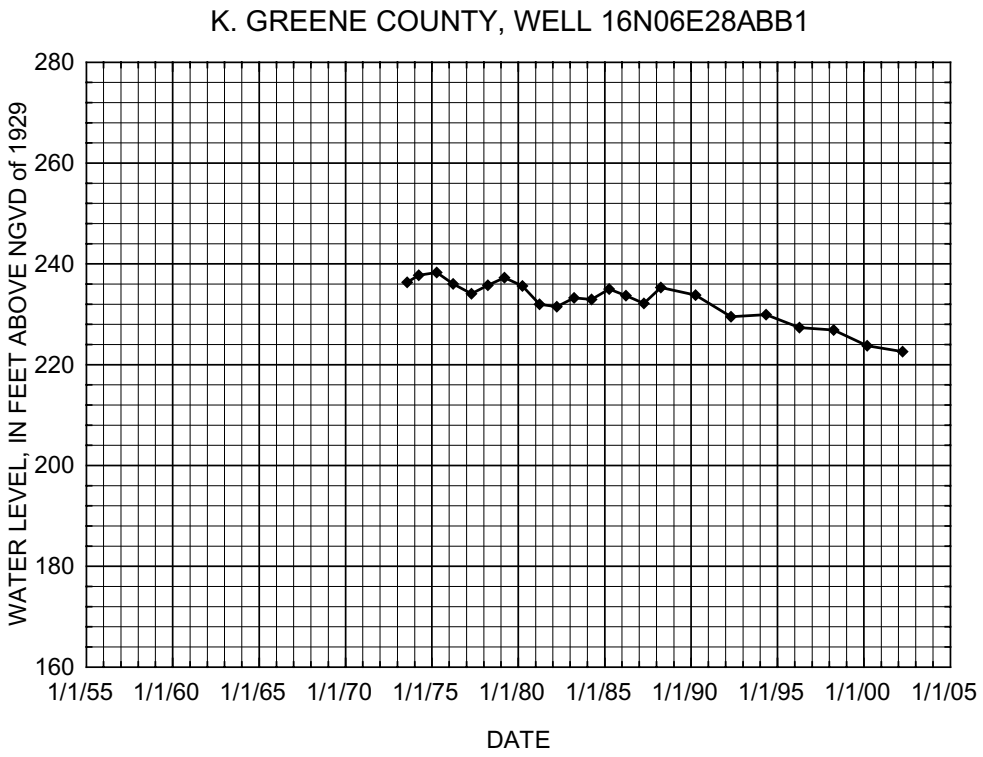

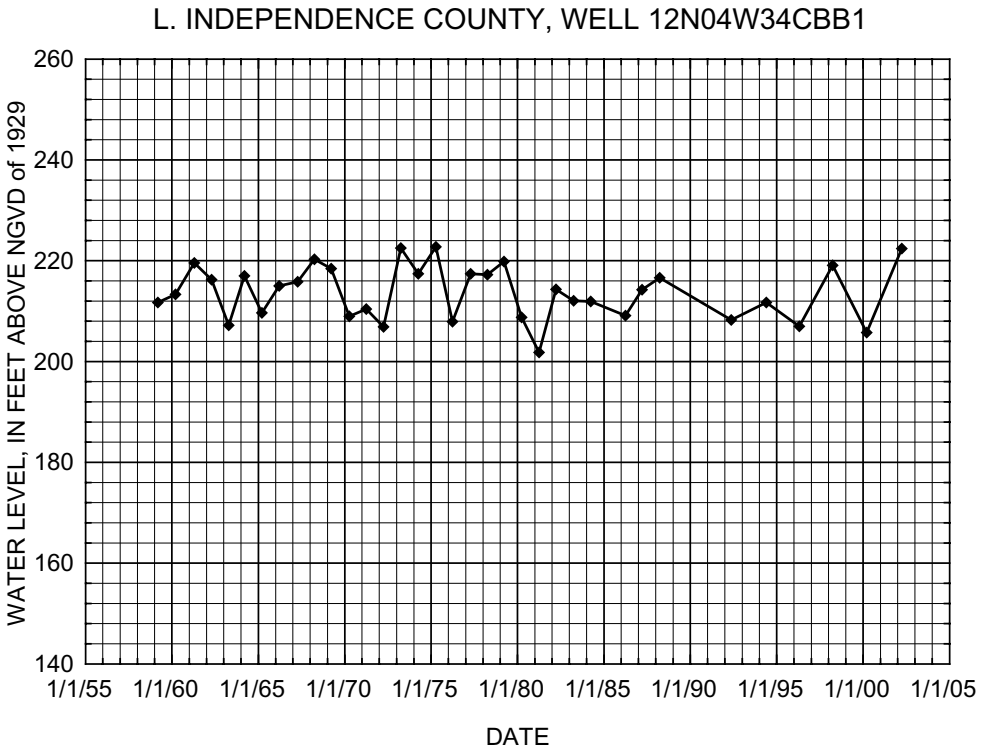

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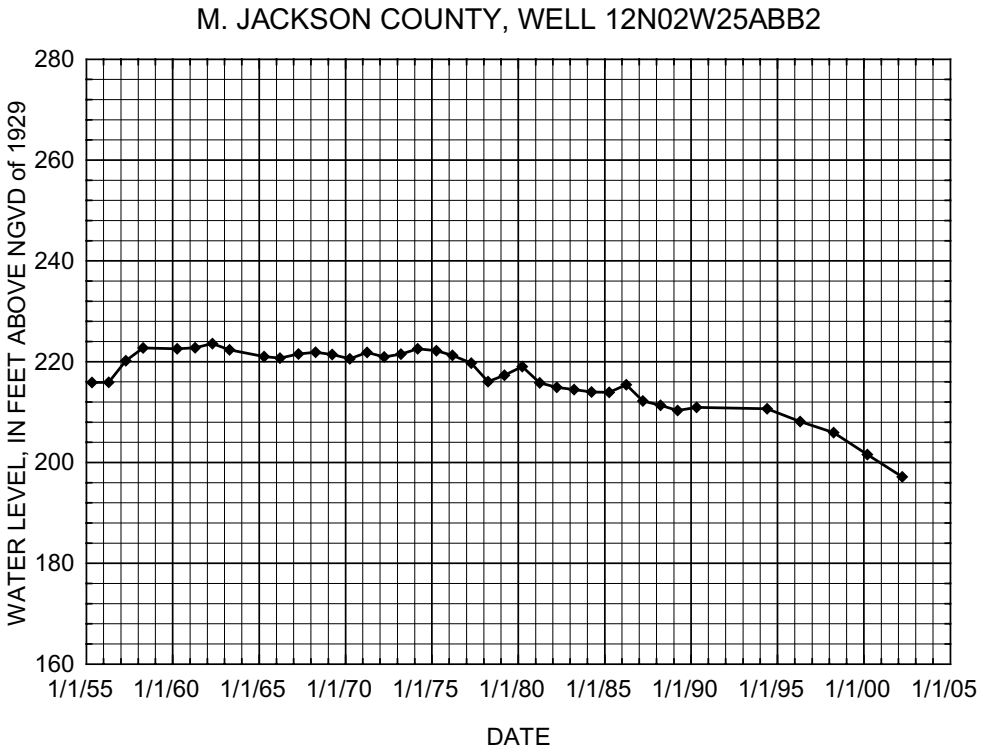

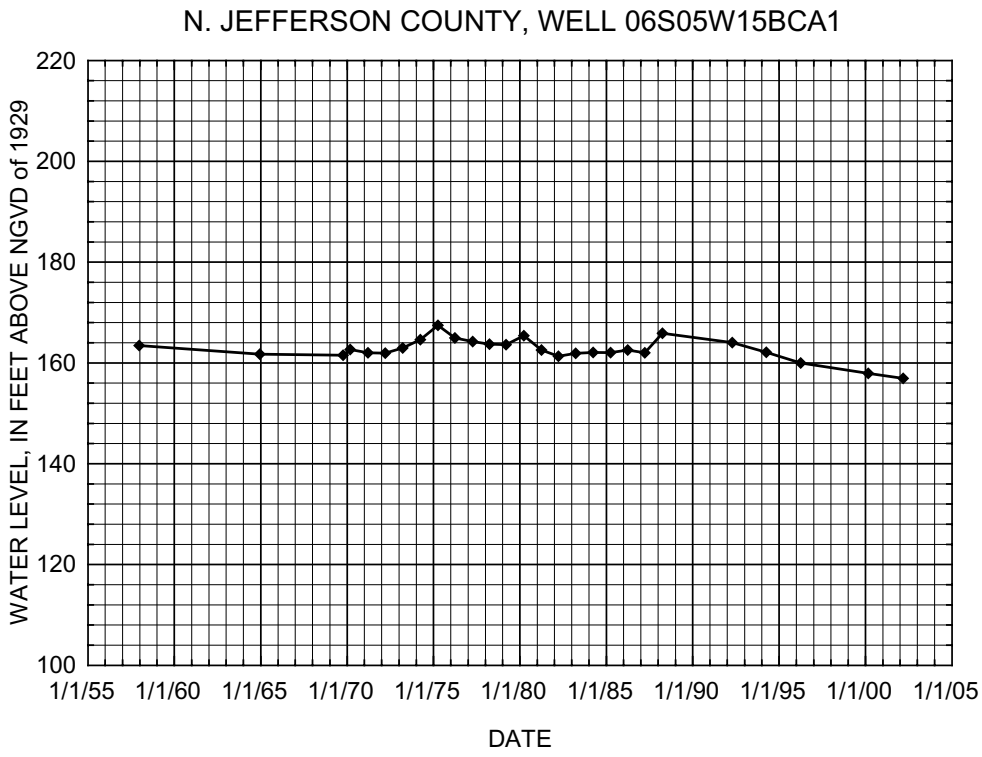

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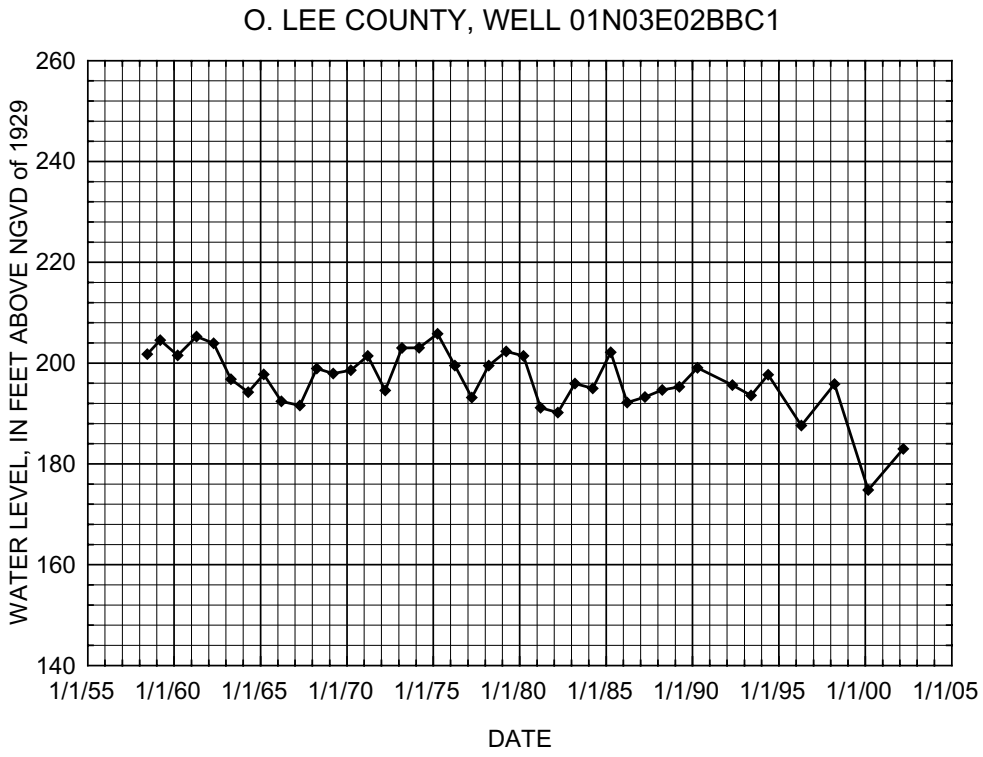

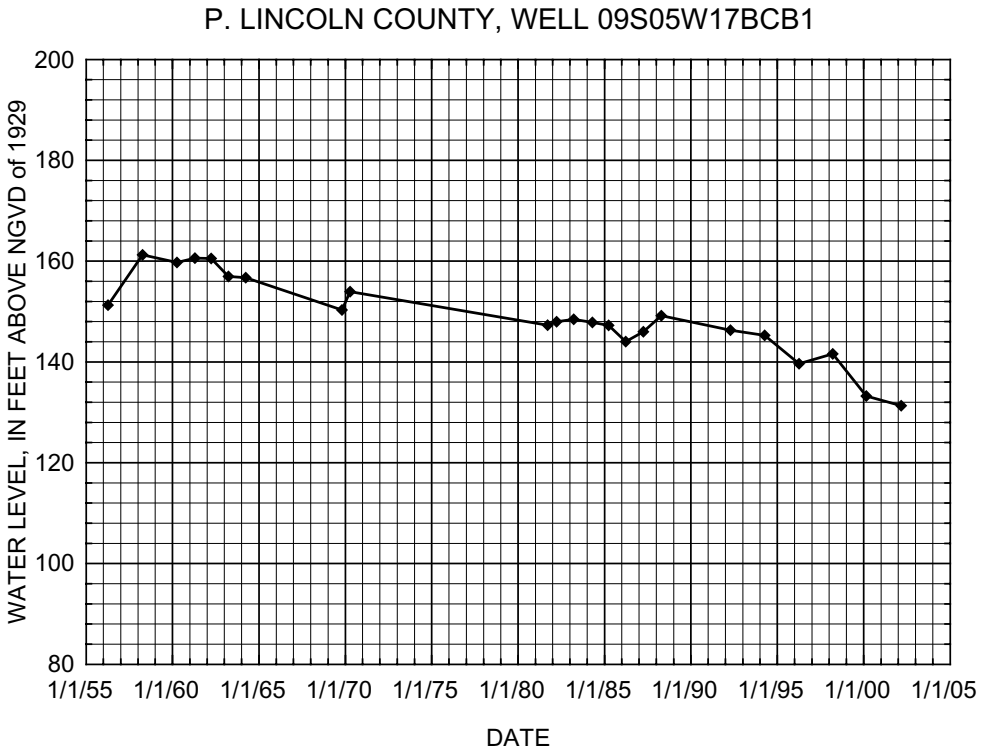

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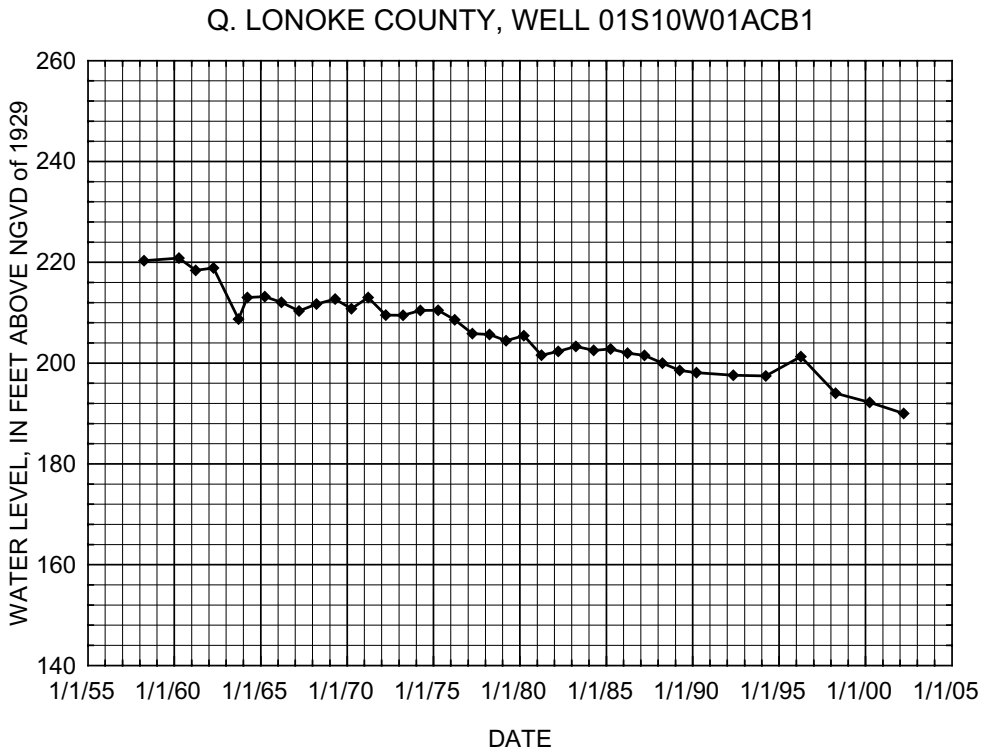

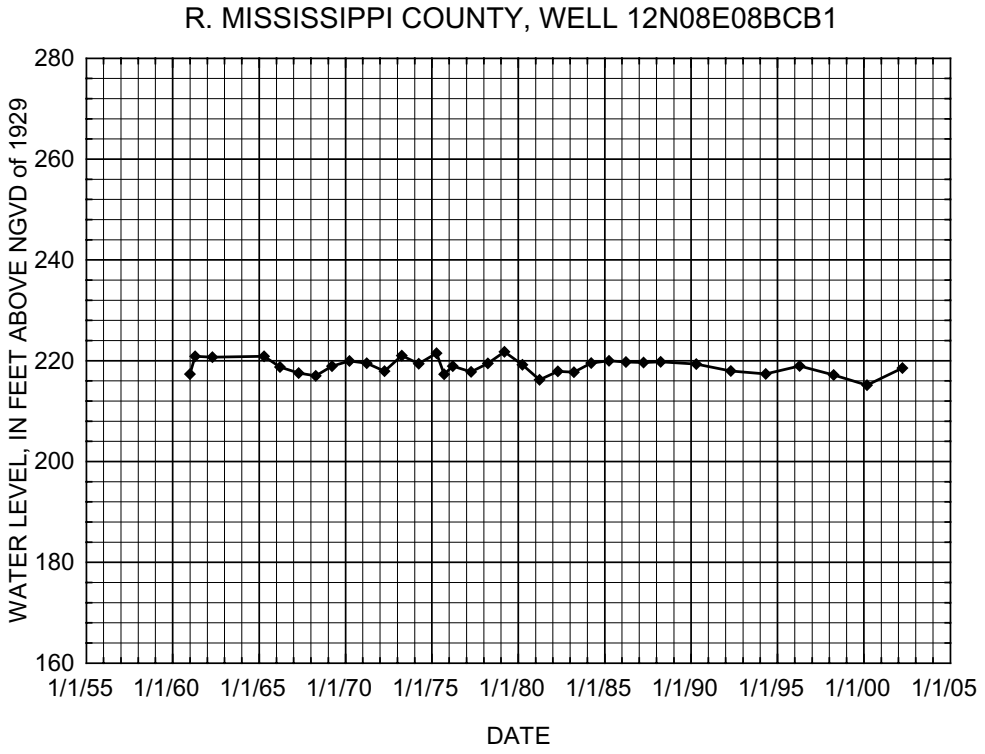

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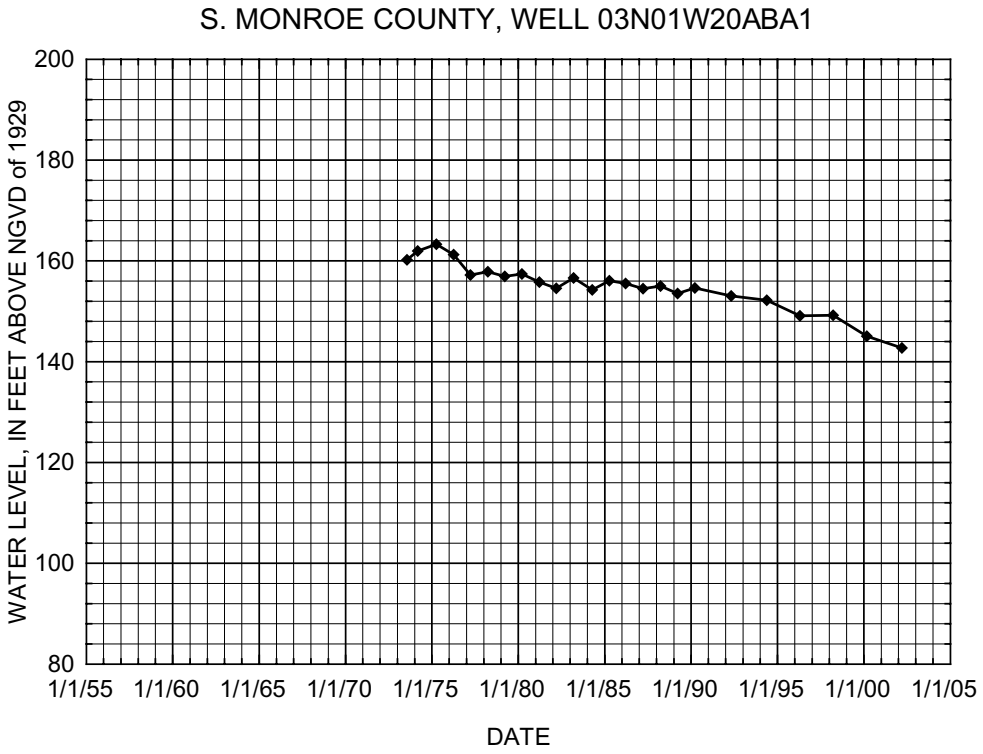

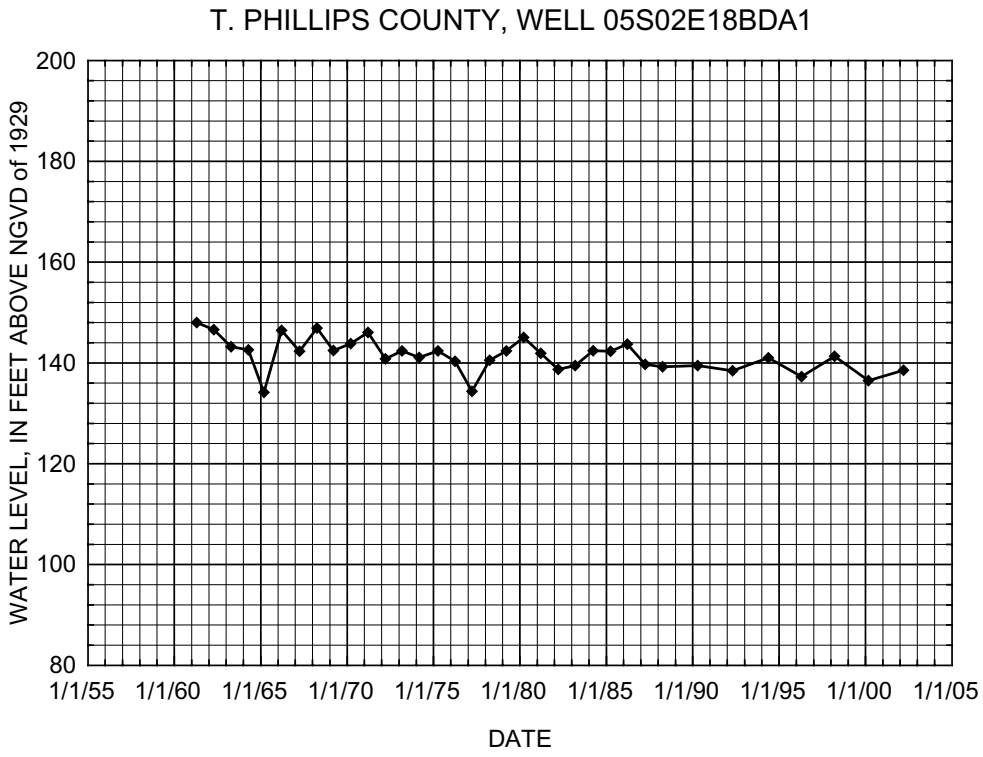

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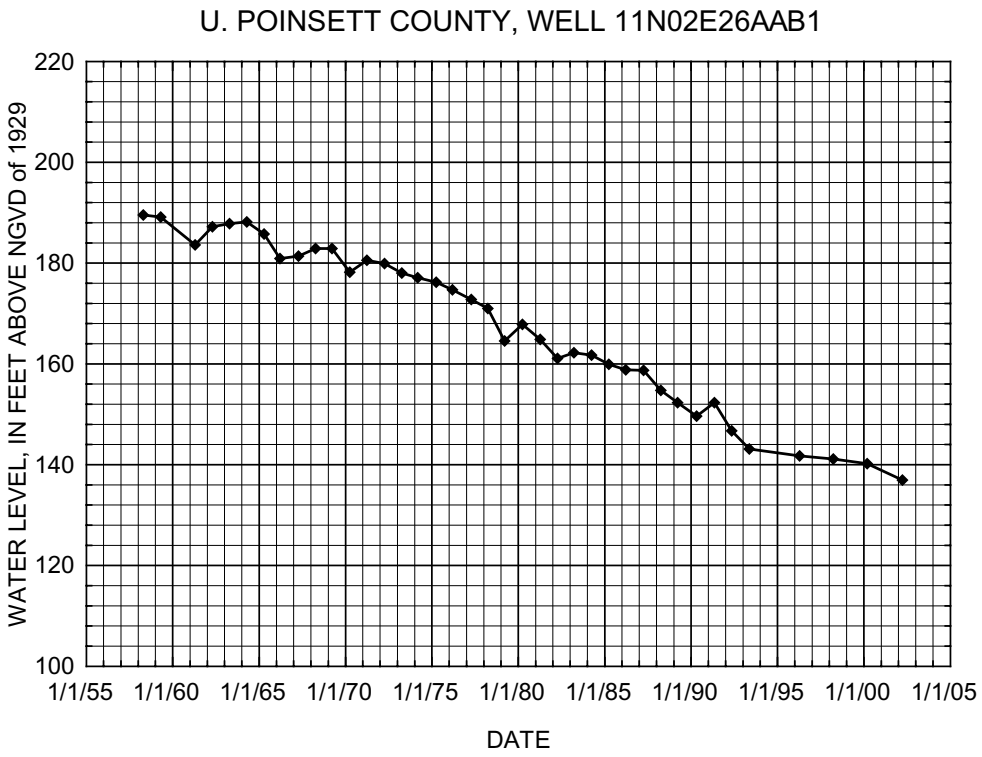

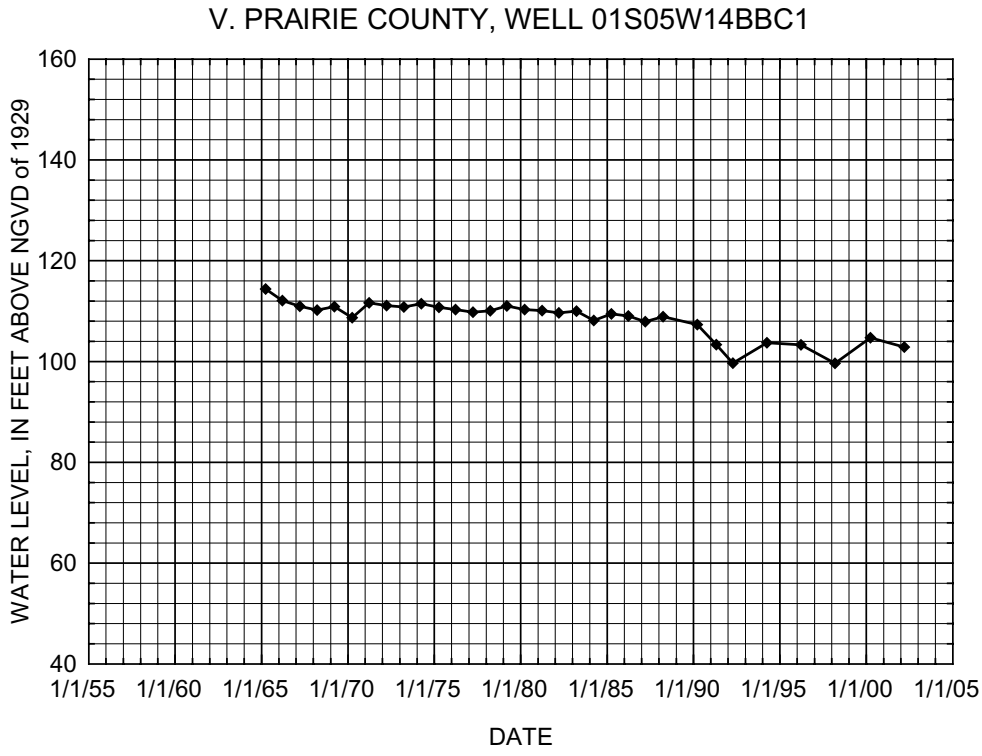

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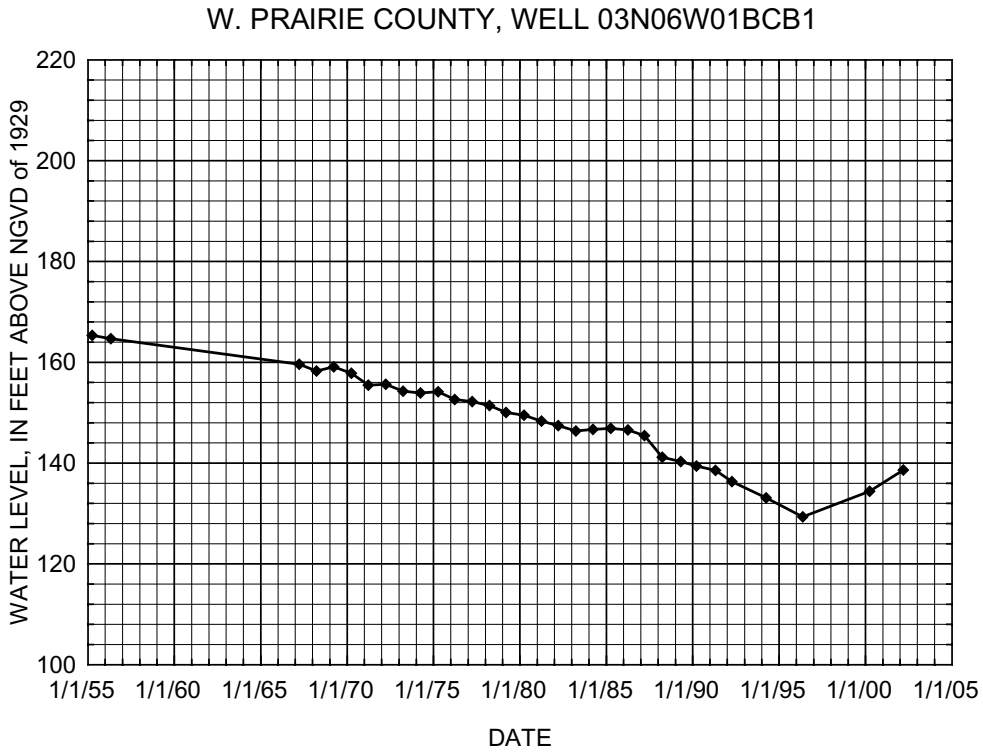


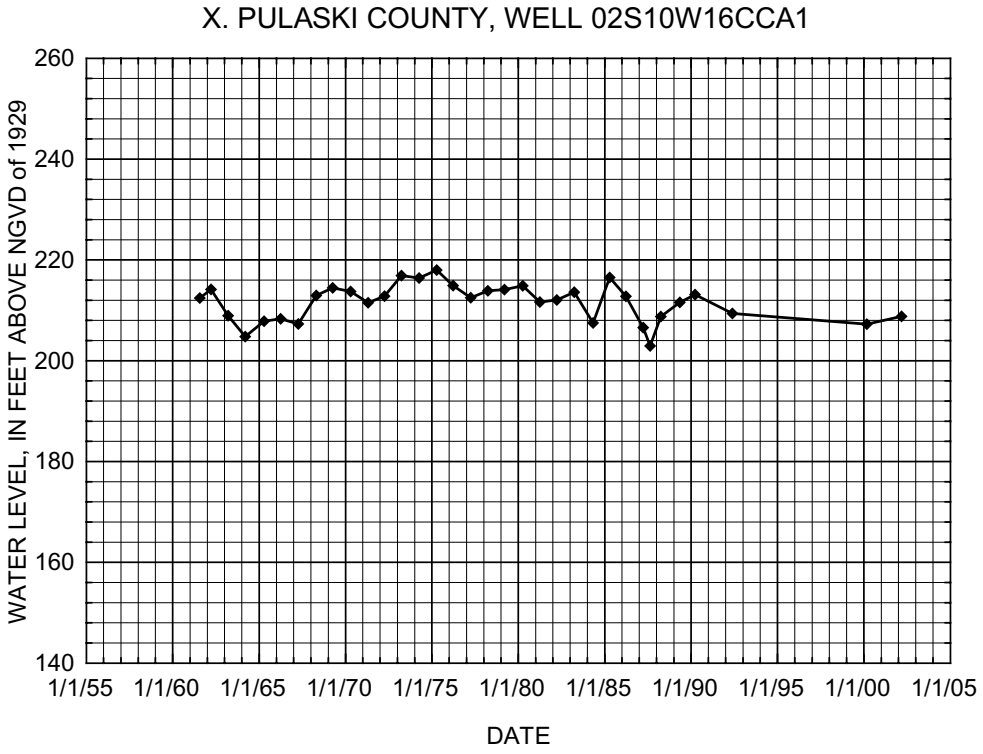
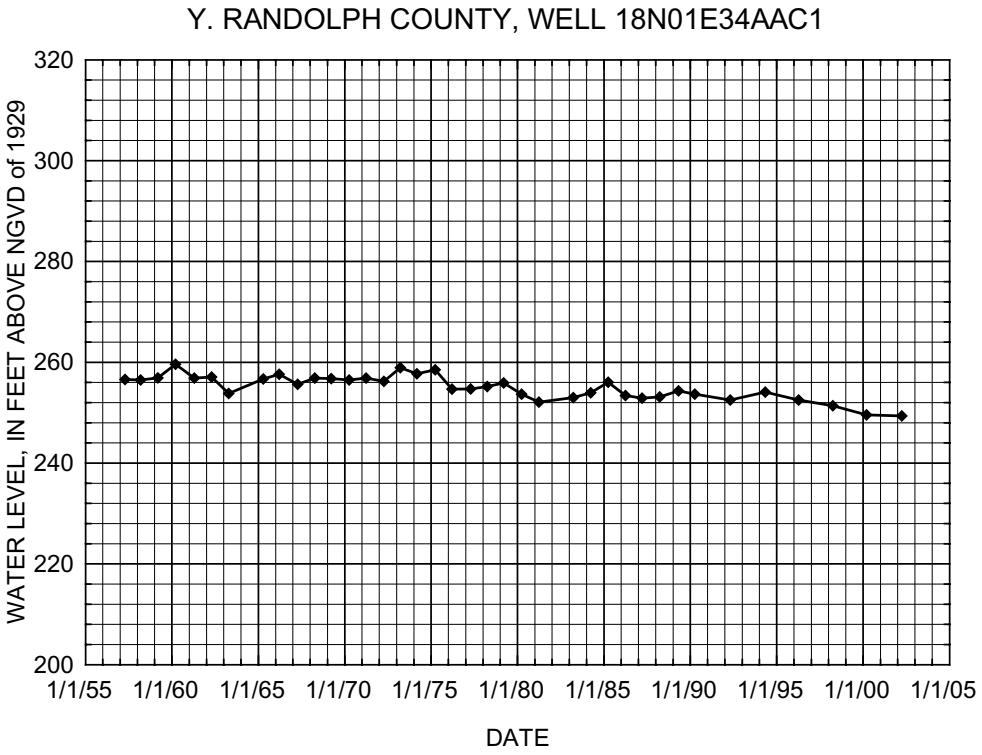


Figure 3. Water-level hydrographs for selected wells in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued



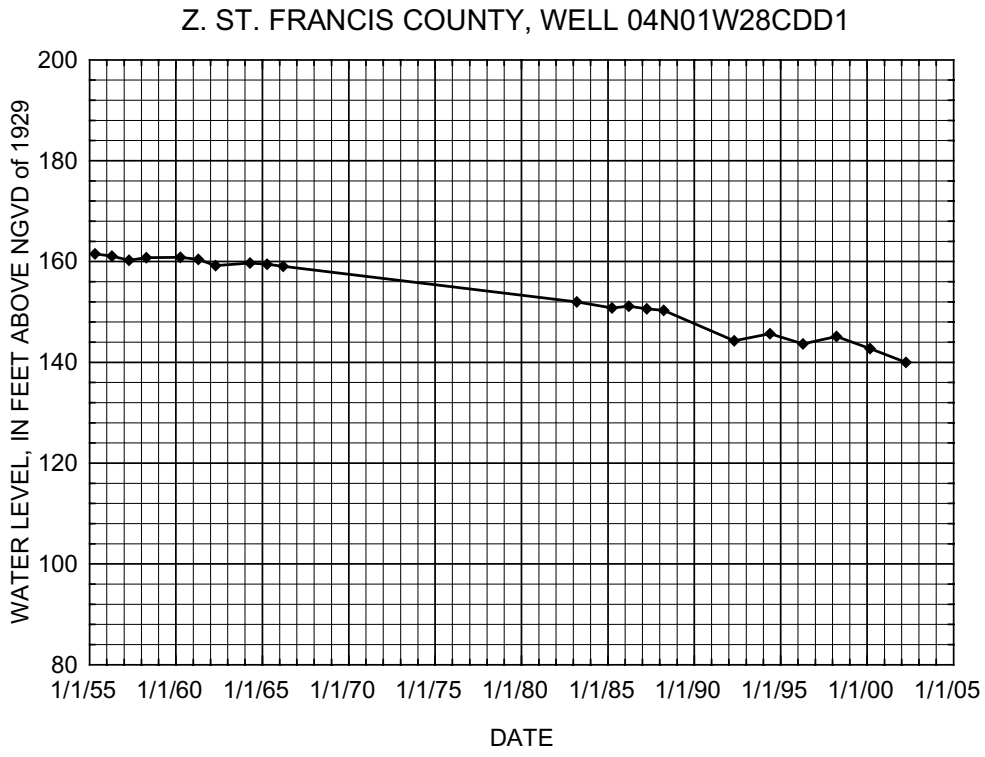
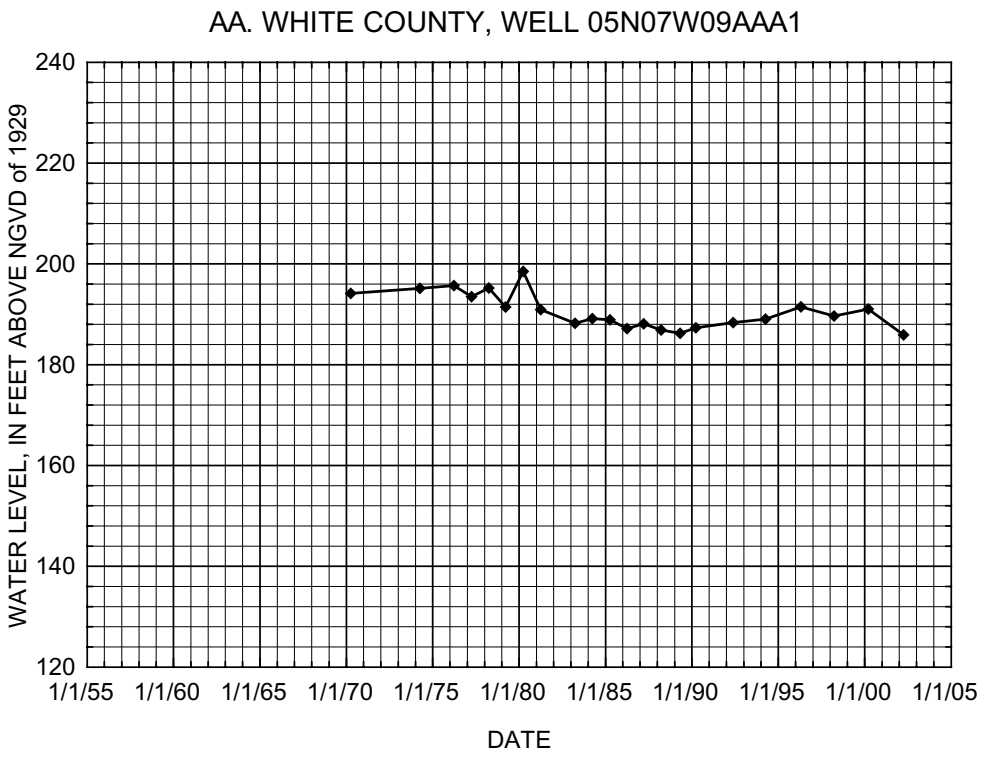


Figure 3. Water-level hydrographs for selected wells in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued



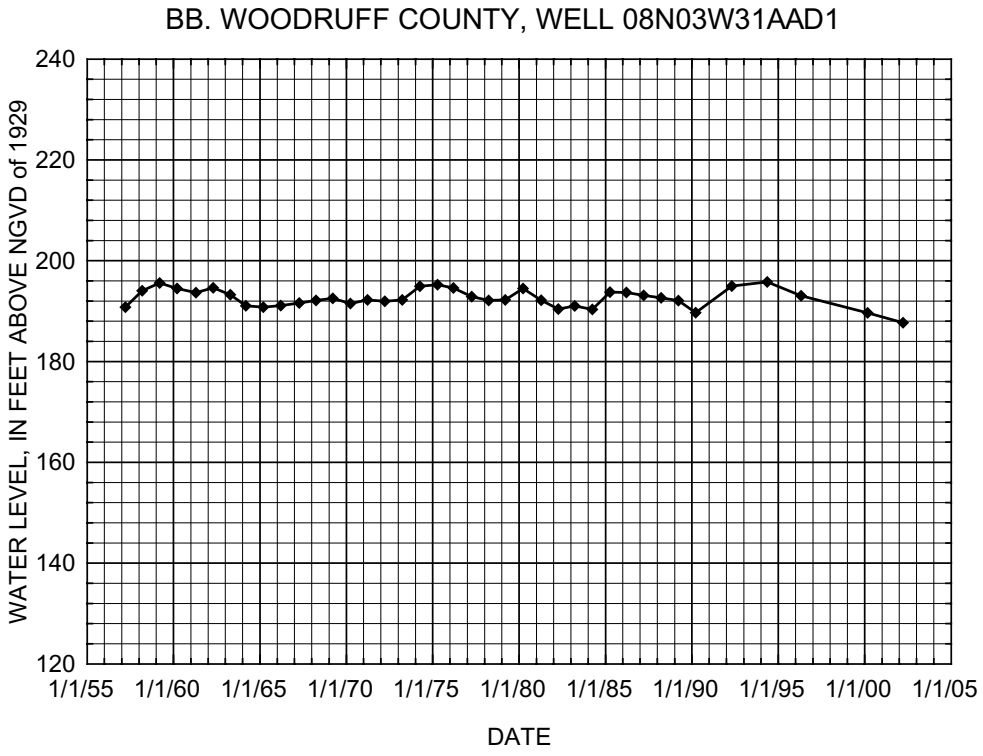


Figure 3. Water-level hydrographs for selected wells in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

The analysis of long-term water-level changes (1977-2002) in the cone of depression in Arkansas and Prairie Counties shows the effects of the elongation of this cone of depression. Both Arkansas and Prairie Counties have two different average rates of decline for the two hydrographs shown for each county. In Arkansas County, well 04S03W32BCB1 (fig. 3A) has an annual decline since 1977 of about 0.7 ft/yr. Well A is located near the center of the cone of depression in Arkansas County and generally shows a decline during the 47-year period of record. Well B is located near the Arkansas River and shows a stable water level for the 44-year period of record. The water level in the Arkansas River is maintained by a lock and dam system and can be a source of water for the alluvial aquifer in southern and western Arkansas County. In Prairie County, well 01S05W14BBC1 (fig. 3V) is near the center of the cone of depression and has an average rate of decline of about 0.4 ft/yr. Well 03N06W01BCB1 (fig. 3W) is located in the north part of the cone of depression and has an annual decline since 1977 of about 0.8 ft/yr. These two hydrographs show that the rate of decline is about two times greater in the north part of the cone of depression than in the center and supports the potentiometric-surface evidence that this cone of depression is expanding.

Water-level changes in neighboring counties show the expansion of the cone of depression centered in Arkansas, Lonoke, and Prairie Counties. In Lonoke County, well 01S10W01ACB1 (fig. 3Q) has an annual decline of 0.5 ft/yr over 25 years since 1977 and shows a near continuous decline in water level during the 44 years of record. In Jefferson County, well 06S05W15BCA1 (fig. 3N) has an annual decline of 0.2 ft/yr during the period 1977 to 2002.

Comparison of Water-Level Changes from 1998 to 2002

The water-level difference map (plate 2) shows the difference in water level in the alluvial aquifer from spring 1998 to spring 2002. Water-level surfaces for 1998 and 2002 were produced by integrating all the points along the water-level contour lines for those years along with points representing the individual water levels from the respective year from those wells that were measured in both years into a continuous mesh of irregular triangles. These two water-level surfaces were interpolated from the triangular meshes into regular grids with 30-meter cell widths. The corresponding cell in the 1998 grid was subtracted from the 2002 cell producing the water-level difference map shown in plate 2. These calculated water-level differences then were altered locally to reflect realistic water-level changes.

Water levels generally rose in the large cones of depression found in Arkansas and Prairie Counties between 1998 and 2002 but declined in the cone of depression in Lonoke County. Water levels generally declined in most of the aquifer, particularly south of the cone of depression in Lonoke, Prairie, and Arkansas Counties and along Crowleys Ridge in Craighead, Poinsett, Cross, St. Francis, and Lee Counties.

Water-level changes show the expansion of the cones of depression in Lee, Monroe, St. Francis, and Woodruff Counties, and in Craighead, Cross, and Poinsett Counties. In Monroe County, data for well 03N01W20ABA1 (fig. 3S) show that water levels have an annual decline of 0.5 ft/yr since 1977. Water levels in well 01N03E02BBC1 (fig. 3O) in Lee County have an annual decline of 0.5 ft/yr since 1977. Water levels at well 14N02E18BDD1 (fig. 3F) in Craighead County has an annual decline of 1.0 ft/yr and water levels at well 07NO3E05ADA1 (fig. 3H) in Cross County has an annual decline of 1.0 ft/yr since 1977. In Poinsett County, data for well 11N02E26AAB1 (fig. 3U) show that water levels have an annual decline of 1.4 ft/yr since 1977. The cone of depression is expanding northward and southward along Crowleys Ridge and westward toward Jackson County. In Jackson County, water levels in well 12N02W25ABB2 (fig. 3M) has an annual decline of 0.7 ft/yr and water levels from well 08N03W31AAD1 (fig. 3BB) in Woodruff County has an annual decline of 1.0 ft/yr since 1977.

Specific Conductance

Water samples were collected from 64 wells screened in the alluvial aquifer and measured on site for specific conductance and temperature (appendix 2). Specific conductance ranged from 262 microsiemens per centimeter at 25 degrees Celsius (µS/cm) at a well in Randolph County to 2,730 µS/cm at a well in Chicot County (appendix 2). Two areas of relatively high specific conductance (greater than 1,200 µS/cm) occur in eastern Lincoln and western Chicot Counties. Other values in Chicot County are as low as 438 µS/cm. Values of specific conductance less than 300 µS/cm are found in Woodruff, Jackson, and Clay Counties and values larger than 800 µS/cm are found in Craighead, Chicot, St. Francis, and Arkansas Counties.

Generally, the occurrences of higher specific conductance in the alluvial aquifer probably are caused by movement of water containing elevated concentrations of dissolved solids from sources at depth (Bryant and others, 1985). Water with higher concentrations of dissolved solids may have moved upward where the confining units are thin or absent, along faults, or through unplugged or deteriorated casings of abandoned oil and gas test wells (Fitzpatrick, 1985). Morris and Bush (1986) cite two possible sources of high dissolved-solids concentration water—a zone of ground-water stagnation present in the alluvial aquifer caused by localized restricted horizontal or vertical flow, and upward movement of water with higher dissolved-solids concentration from deeper formations in response to pumping.

Summary

The Mississippi River Valley alluvial aquifer is increasingly relied upon for agriculture and aquaculture in eastern Arkansas. In 1995, estimated withdrawals from the alluvial

aquifer in Arkansas totaled about 5,062 Mgal/d; in 2000, withdrawals had increased about 39 percent to about 7,050 Mgal/d.

The regional direction of ground-water flow is generally to the south and east except where affected by intense ground-water withdrawals. In spring of 2002, the highest water-level altitude measured was 287 feet above NGVD of 1929 in northeastern Clay County. The lowest water-level altitude measured was 78 feet above NGVD of 1929 in southwestern Ashley County. Comparisons of water-level changes in cones of depression from 1998 to 2002 show both increases and decreases in depth and areal extent. A large cone of depression in the potentiometric surface is located in Arkansas, Lonoke, and Prairie Counties. This cone of depression generally has deepened from 1998 to 2002 in Lonoke County but has become more shallow in Arkansas County. Two shallower depressions west of Crowleys Ridge located in Craighead, Cross, and Poinsett Counties and in St. Francis, Woodruff, Lee, and Monroe Counties have coalesced into a single depression between 1998 and 2002. Water levels generally declined throughout most of the aquifer from 1998 to 2002.

Water-level data from 143 wells with 26 or more years of record indicate long-term water levels in the alluvial aquifer declined a median of 0.29 ft/yr for the period covering 1977 to 2002. The maximum annual water-level decline was about 1 ft in Cross County but Arkansas County, with its large cone of depression, shows an annual median decline of only about 0.1 ft as do Craighead and Phillips Counties.

Specific conductance measurements made on water samples collected from 64 wells during the summer of 2002 ranged from 262 µS/cm at a well in Randolph County to 2,730 µS/cm at a well in Chicot County. Two areas of relatively high specific conductance (greater than 1,200 µS/cm) occur in eastern Lincoln and western Chicot Counties.

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APPENDIXES

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
Arkansas County								
02S04W11DBB1	343233	912415	USGS	152	213	100.48	113	3/7/2002
02S05W15AAB1	343213	913127	USGS	180	213	110.72	102	4/2/2002
02S05W31BBB1	342937	913536	USGS	90	198	60.62	137	4/2/2002
03S02W27ABB1	342448	911251	USGS	87	197	69.80	127	3/7/2002
03S03W05CCD1	342737	912132	USGS	150	201	96.54	104	4/2/2002
03S03W27BBC1	342455	911944	USGS	120	195	90.00	105	4/2/2002
03S04W02BBB1	342831	912454	USGS	116	198	91.30	106	4/2/2002
03S04W03DCA16	342753	912515	USGS	126	205	99.10	106	3/6/2002
03S05W03CCC1	342752	913227	USGS	110	215	105.66	109	4/2/2002
03S06W35ADD1	342411	913652	USGS	--	190	53.29	137	3/7/2002
04S01W04ACD2	342233	910733	USGS	52	155	6.48	149	3/7/2002
04S01W19AAD1	342012	910919	USGS	157	196	66.25	130	3/6/2002
04S01W31DCB1	341753	910949	USGS	130	179	54.40	125	3/6/2002
04S02W11AAA1	342209	911123	USGS	--	195	67.37	128	3/7/2002
04S02W29CCC1	341846	911539	USGS	140	191	83.66	107	3/6/2002
04S03W17ADD1	342102	912058	USGS	--	200	106.18	94	3/6/2002
04S03W32BCB1	341820	912202	USGS	--	192	106.18	86	3/6/2002
04S04W02ABB1	342313	912424	USGS	155	200	108.07	92	3/6/2002
04S04W35ABC1	341835	912437	NRCS	--	193	107.00	86	4/22/2002
04S05W16CDC1	342045	913321	USGS	120	201	71.10	130	3/7/2002
04S05W24DAA1	342001	912930	USGS	150	198	90.43	108	3/7/2002
04S06W15DBB1	342122	913827	USGS	100	190	31.24	159	3/7/2002
05S01W16BAB1	341552	910729	USGS	--	183	48.84	134	3/6/2002
05S02W16ABD1	341552	911358	USGS	154	190	73.91	116	3/6/2002
05S04W07CCC1	341555	912932	USGS	120	194	76.51	117	3/7/2002
05S04W32BBA1	341316	912822	USGS	--	191	59.36	132	3/7/2002
05S06W02DDD1	341724	913651	USGS	60	183	20.12	163	3/7/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
05S06W07DDC1	341642	914130	USGS	32	180	9.36	171	3/7/2002
06S02W23DCD1	340853	911206	USGS	--	188	73.54	114	3/6/2002
06S03W10BBA1	341136	911954	USGS	155	184	83.12	101	3/6/2002
06S03W27AAA1	340858	911913	USGS	132	183	67.69	115	3/6/2002
06S04W18CBB1	341019	912949	USGS	150	190	39.52	151	3/7/2002
07S02W04BBB1	340707	911452	USGS	--	176	31.12	145	3/6/2002
07S02W17BBA1	340707	911452	USGS	95	184	55.04	129	3/6/2002
07S03W18CCD1	340435	912316	USGS	--	186	43.37	143	3/6/2002
07S03W32BBC1	340240	912216	USGS	128	177	25.96	151	3/6/2002
07S04W01DDD1	340625	912327	USGS	155	186	47.41	139	3/6/2002
08S02W08ACA1	340041	911506	USGS	--	179	43.02	136	3/6/2002
08S03WT2299	340147	912203	USGS	158	178	25.47	153	3/6/2002
				Ashley County				
15S04W26DCC1	332232	912902	USGS	64	127	30.68	96	2/26/2002
16S06W08CAA1	331941	914438	USGS	105	185	75.53	109	2/26/2002
16S06W27BAB1	331729	914240	USGS	115	182	81.66	100	4/30/2002
17S04W03ABB1	331528	913010	USGS	105	124	27.02	97	4/30/2002
17S04W15DDC1	331252	912954	USGS	57	116	24.22	92	2/26/2002
17S04W21ABA1	331252	913108	USGS	--	117	19.21	98	4/30/2002
17S06W01ADD1	331518	913956	USGS	144	182	81.25	101	2/26/2002
17S06W35CAC1	331049	914136	USGS	140	179	77.03	102	4/30/2002
17S07W05CDD1	331502	915050	USGS	130	185	91.49	94	2/26/2002
18S04W23DDD1	330658	912856	NRCS	100	103	21.00	82	4/29/2002
18S05W11CCD1	330841	913538	NRCS	75	118	20.00	98	4/29/2002
18S05W22DDA1	330712	913555	NRCS	100	125	16.00	109	4/29/2002
18S08W01AAB1	331015	915225	USGS	128	181	86.18	95	2/26/2002
18S08W28DDD2	330625	915528	USGS	156	163	85.63	78	2/13/2002
19S04W06BAB2	330504	913329	USGS	98	110	22.23	88	2/26/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
19S04W14BBB1	330310	912913	NRCS	100	107	25.00	82	4/29/2002
19S05W08ACA1	330405	913815	NRCS	--	111	13.00	98	4/29/2002
19S05W16ABB1	330323	913718	NRCS	100	116	19.00	97	4/29/2002
19S05W22DCD1	330139	913615	NRCS	--	107	18.00	89	4/29/2002
19S06W07BCC1	330404	914608	USGS	--	135	31.43	103	2/26/2002
				Chicot County				
13S03W27AAA1	333253	912310	NRCS	--	138	46.00	92	3/21/2002
13S03W34BAA1	333110	912539	USGS	100	133	37.82	95	2/25/2002
13S03W34CAA1	333136	912336	USGS	75	132	34.91	97	2/25/2002
13S03W35BAC1	333154	912246	USGS	90	134	35.71	98	2/25/2002
14S02W09BDD1	332859	911729	NRCS	--	133	28.00	105	3/27/2002
14S02W18BBDD1	332859	912038	NRCS	--	129	29.00	100	3/27/2002
14S03W07BBD1	333011	912620	USGS	77	134	24.19	110	2/25/2002
14S03W32CDB2	332613	912551	USGS	90	134	34.69	99	2/25/2002
15S02W20DDC1	332227	911920	USGS	70	126	28.02	98	2/25/2002
15S02W20DDC1	332227	911920	NRCS	70	126	29.00	97	3/21/2002
15S04W13DAD1	332338	912730	NRCS	--	131	36.00	95	3/21/2002
16S03W11ADC1	331920	912234	USGS	--	118	27.34	91	2/26/2002
17S01E17CDA1	331259	910716	USGS	110	118	25.83	92	2/26/2002
17S01E18ADA1	331326	910758	USGS	--	121	17.03	104	2/26/2002
17S01W06BCC1	331501	911505	USGS	100	115	21.79	93	2/25/2002
17S02W10AAA1	331429	911712	USGS	90	114	26.20	88	4/30/2002
17S03W18CBC1	331257	912736	NRCS	--	117	33.00	84	3/21/2002
17S03W28DBA1	331127	912441	USGS	95	110	23.26	87	2/25/2002
18S01W19DAB1	330709	911423	USGS	--	110	13.35	97	2/25/2002
18S01W33BAD1	330543	911245	NRCS	--	116	12.00	104	3/28/2002
18S03W22ABA2	330728	912341	USGS	86	103	11.43	92	4/30/2002
19S01W17BCC1	330250	911406	USGS	120	106	18.62	87	2/25/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
19S03W14ABB1	330304	912251	USGS	95	111	22.10	89	2/25/2002
				Clay County				
18N08E03DAB1	361323	901153	USGS	105	257	4.68	252	3/27/2002
18N08E11BAA1	361253	901117	NRCS	100	259	7.70	251	4/15/2002
19N03E24AAA1	361655	904157	USGS	--	278	19.22	259	3/27/2002
19N04E11DAA1	361805	903621	NRCS	--	280	22.60	257	4/15/2002
19N04E19AAA1	361654	904050	USGS	--	282	29.85	252	3/27/2002
19N04E19BAA1	361649	904125	NRCS	100	279	21.90	257	4/15/2002
19N05E15BBD1	361716	903152	NRCS	110	289	31.70	257	4/15/2002
19N06E18DBC1	361642	902815	NRCS	--	297	34.00	263	4/15/2002
19N07E25BCB1	361519	901700	NRCS	--	268	14.40	254	4/15/2002
19N08E02ABB1	361859	901104	USGS	--	269	2.85	266	3/27/2002
19N08E08DCA1	361729	901402	NRCS	--	270	26.30	244	4/15/2002
19N09E19CDC1	361539	900908	NRCS	--	265	5.80	259	4/15/2002
20N03E25BAA1	362112	904225	NRCS	100	288	23.30	265	4/15/2002
20N04E03ADA1	362425	903725	NRCS	--	290	18.20	272	4/15/2002
20N04E06BB1	362444	904131	USGS	110	290	19.75	270	3/27/2002
20N05E22CAD1	362118	903132	NRCS	--	290	26.70	263	4/15/2002
20N05E30CAC1	362003	903454	NRCS	--	283	16.10	267	4/15/2002
20N05E34DBA1	361939	903117	USGS	110	285	27.25	258	3/27/2002
20N06E09BBA1	362327	902620	NRCS	--	290	19.80	270	4/15/2002
20N06E28CCD1	362005	902630	NRCS	--	290	26.50	264	4/15/2002
20N08E22BDC1	362111	901220	NRCS	--	275	6.50	269	4/15/2002
20N09E09ABC1	362306	900642	NRCS	--	279	4.00	275	4/15/2002
20N09E33DDC1	361904	900628	NRCS	--	270	5.50	265	4/15/2002
21N03E15CBC1	362738	904453	USGS	90	292	8.90	283	4/15/2002
21N03E36CDD1	362450	904214	NRCS	--	290	19.30	271	4/15/2002
21N04E09DBC1	362828	903853	NRCS	--	291	10.10	281	4/15/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
21N05E17ABB1	362755	903329	USGS	105	298	23.55	274	3/27/2002
21N05E22BAB1	362704	903132	NRCS	105	288	6.10	282	4/15/2002
21N06E11BBB1	362839	902421	NRCS	100	296	14.50	282	4/15/2002
21N06E28BB1	362605	902608	USGS	130	293	19.05	273	3/27/2002
21N07E01DDC1	362835	901607	NRCS	90	303	21.50	282	4/15/2002
21N07E19BDA1	362640	902148	NRCS	--	295	20.00	275	4/15/2002
21N08E18CCC1	362651	901550	USGS	110	324	37.45	287	3/27/2002
21N08E36ABB1	362502	900958	USGS	90	283	1.00	282	5/2/2002
21N09E31BDA1	362447	900851	NRCS	100	284	2.00	282	4/15/2002
Craighead County								
13N01E03AAA1	354739	905753	NRCS	135	240	55.20	185	4/3/2002
13N01E21CAB	354434	905945	NRCS	120	240	60.00	180	4/3/2002
13N01E23CAB1	354430	905736	NRCS	118	245	66.00	179	4/3/2002
13N01E23DAA1	354435	905652	USGS	118	242	68.84	173	3/26/2002
13N02E02AAB1	354731	905032	NRCS	130	251	82.40	169	4/3/2002
13N02E03AAA1	354733	905129	NRCS	105	250	84.40	166	4/3/2002
13N02E15BBD2	354540	905220	NRCS	120	245	107.00	138	4/3/2002
13N03E10BDB1	354625	904546	NRCS	150	265	82.00	183	4/3/2002
13N03E23CDA1	354419	904434	NRCS	135	249	78.30	171	4/3/2002
13N03E28CDB1	354322	904652	NRCS	121	250	102.50	148	4/3/2002
13N03E29AAA1	354403	904713	USGS	122	251	101.45	150	3/26/2002
13N03E35AAA1	354308	904401	NRCS	150	249	89.00	160	4/3/2002
13N04E12ABB1	354635	903656	USGS	110	231	25.48	206	3/26/2002
13N04E15DBA1	354521	903857	NRCS	130	230	27.70	202	3/28/2002
13N04E26BCC1	354340	903829	NRCS	100	225	29.00	196	3/28/2002
13N05E02CCC1	354648	903202	NRCS	120	230	13.00	217	3/25/2002
13N05E06DCC1	354637	903547	NRCS	110	229	20.90	208	3/25/2002
13N05E22BAD1	354449	903243	USGS	--	226	13.58	212	3/26/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
13N05E24BAC1	354451	903045	NRCS	120	225	7.80	217	3/25/2002
13N06E03ACB1	354711	902610	NRCS	105	221	7.80	213	3/25/2002
13N07E02CAB1	354642	901901	NRCS	120	226	4.00	222	3/28/2002
13N07E05ABB1	354716	902158	NRCS	100	225	6.50	219	3/28/2002
13N07E20BBA1	354440	902216	USGS	22	223	1.95	221	3/26/2002
13N07E23BCD1	354419	901909	NRCS	120	225	5.90	219	3/28/2002
13N07E35BCD1	354233	901837	NRCS	120	221	7.80	213	3/28/2002
14N01E03ACB1	355246	905816	NRCS	96	249	49.80	199	4/1/2002
14N01E10BAB1	355204	905828	NRCS	96	246	48.00	198	4/1/2002
14N01E31DCA1	354817	910121	NRCS	126	251	56.50	195	4/1/2002
14N02E18BDD1	355041	905419	USGS	120	242	53.98	188	3/26/2002
14N02E22AAA1	355007	905129	NRCS	132	255	71.40	184	4/1/2002
14N05E25ABB1	354921	903025	USGS	--	238	19.53	218	3/26/2002
14N06E06BAA1	355234	902934	NRCS	120	240	22.50	218	3/25/2002
14N06E20CCD1	354922	902850	USGS	150	226	5.88	220	3/26/2002
14N06E27AAB1	354911	902559	USGS	30	226	0.65	225	3/26/2002
14N07E07BCB1	355124	902323	NRCS	98	230	5.00	225	3/29/2002
14N07E14DDC1	354956	901831	NRCS	120	230	5.50	225	3/28/2002
14N07E26DBB1	354834	901843	USGS	100	228	3.10	225	3/26/2002
14N07W26DCA1	354820	901836	USGS	--	230	14.02	216	3/26/2002
15N02E01BCA1	355748	904955	NRCS	100	254	31.30	223	4/3/2002
15N02E12DCB1	355626	904930	NRCS	120	250	30.20	220	4/3/2002
15N03E19ADA1	355502	904802	USGS	116	262	43.43	219	3/26/2002
15N05E22BAB1	355513	903241	NRCS	197	260	35.80	224	3/25/2002
15N06E04BAD1	355744	902706	NRCS	104	239	14.60	224	3/25/2002
15N06E20DDD1	355426	902739	USGS	--	234	9.28	225	3/26/2002
15N07E10DAB1	355622	901934	NRCS	106	235	6.00	229	3/28/2002
15N07E10DBA1	355628	901944	USGS	120	236	6.00	230	3/26/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
15N07E21DAB1	355444	902043	NRCS	110	236	7.50	229	3/28/2002
15N07E35DCB1	355241	901831	NRCS	120	231	8.00	223	3/28/2002
Crittenden County								
04N07E21AAD1	345644	902121	USGS	82	202	10.06	192	3/26/2002
05N07E08BDC1	350407	902234	NRCS	110	204	21.70	182	4/18/2002
05N07E28CBA1	350121	902140	USGS	--	201	18.32	183	3/26/2002
05N07E34BAB1	350059	902030	USGS	100	203	15.09	188	3/26/2002
05N07E34CDD1	350010	902028	NRCS	110	205	9.60	195	4/17/2002
05N08E11CCD2	350345	901308	USGS	63	211	27.00	184	3/21/2002
06N07E13BAA1	350850	901808	USGS	130	205	20.15	185	3/26/2002
06N07E14ABA1	350848	901858	NRCS	110	211	20.80	190	4/12/2002
07N06E29CBC1	351152	902914	NRCS	120	210	38.60	171	4/18/2002
07N07E31CCC1	351042	902359	USGS	110	207	32.46	175	3/26/2002
07N08E04BBD1	351538	901505	NRCS	120	224	19.50	205	4/18/2002
07N09E05CDD1	351453	900934	USGS	120	214	14.47	200	3/26/2002
08N06E01DCC1	352021	902408	NRCS	120	215	33.00	182	4/18/2002
08N06E06DDB1	352030	902920	NRCS	120	214	32.30	182	4/19/2002
08N07E13CCC2	351828	901812	USGS	100	221	29.47	192	3/26/2002
08N07E14DAA2	351854	901833	USGS	--	219	30.08	189	3/26/2002
08N07E32DAA1	351618	902146	NRCS	110	215	21.90	193	4/18/2002
08N08E06ABB1	352103	901644	NRCS	110	223	28.80	194	4/19/2002
09N07E02CDB1	352537	901905	NRCS	130	225	34.60	190	4/17/2002
09N07E10DDA1	352448	901925	USGS	60	221	28.15	193	3/26/2002
09N07E31BAB1	352160	902327	USGS	110	221	32.32	189	3/26/2002
09N07E31BAB1	352160	902327	NRCS	110	221	33.60	187	4/18/2002
09N08E04CDC1	352527	901444	NRCS	120	225	28.00	197	4/19/2002
Cross County								
06N02E11BDB1	350934	905132	NRCS	--	220	61.00	159	4/18/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
06N02E12AAA1	350934	904952	NRCS	--	235	80.00	155	4/18/2002
07N01E05CDA1	351518	910049	USGS	140	217	70.18	147	3/21/2002
07N01E05DCA1	351514	910033	NRCS	160	215	72.00	143	4/18/2002
07N01E06CAA1	351530	910154	NRCS	--	220	69.00	151	4/18/2002
07N01E11AAA1	351501	905705	USGS	120	217	73.35	144	3/21/2002
07N01E33BBA1	351134	910010	NRCS	--	215	70.00	145	4/18/2002
07N02E29DDC1	351138	905409	USGS	100	220	68.42	152	3/21/2002
07N03E05ADA1	351549	904739	USGS	160	254	110.71	143	3/21/2002
07N03E32DCC1	351045	904810	USGS	--	251	95.95	155	3/2/2002
07N04E04DBB1	351534	904021	NRCS	--	201	30.00	171	4/18/2002
07N05E19CCC1	351238	903645	USGS	--	207	36.48	171	3/21/2002
07N05E24CCC1	351232	903121	NRCS	110	205	36.60	168	4/18/2002
07N05E25ABA1	351229	903045	USGS	140	205	35.16	170	3/21/2002
07N05E25ABA1	351229	903045	NRCS	140	205	37.00	168	4/18/2002
08N01E16DBB1	351855	905933	NRCS	140	225	84.00	141	4/18/2002
08N02E12DCC1	351938	905002	NRCS	--	230	89.00	141	4/18/2002
08N02E17AAA1	351923	905354	NRCS	--	225	83.00	142	4/18/2002
08N04E34CCD1	351605	903945	NRCS	--	205	31.00	174	4/18/2002
08N05E32ADD1	351632	903440	USGS	--	204	31.98	172	3/21/2002
09N01E04ACD1	352608	905914	NRCS	140	225	85.00	140	4/18/2002
09N01E33BBA2	352203	910001	USGS	--	225	77.00	148	3/21/2002
09N01E36AAB1	352155	905605	NRCS	160	225	83.00	142	4/18/2002
09N02E20AAA1	352402	905342	NRCS	120	230	91.00	139	4/18/2002
09N02E30CBB1	352243	905551	NRCS	--	225	86.00	139	4/18/2002
09N03E17CDD1	352422	904753	NRCS	--	245	102.00	143	4/18/2002
09N03E17DDC1	352409	904726	USGS	160	251	103.32	148	3/21/2002
09N04E03DBB1	352614	903918	NRCS	120	215	31.00	184	4/18/2002
09N05E32BCB1	352151	903525	NRCS	--	206	37.00	169	4/18/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
09N05E32BDB1	352151	903512	USGS	--	210	31.95	178	3/21/2002
Desha County								
07S01E19ABA1	340428	910303	NRCS	120	154	13.00	141	4/18/2002
08S03W33ABD1	335803	912338	USGS	60	165	6.14	159	3/4/2002
09S01W08BDA1	335608	911234	NRCS	--	156	23.00	133	4/11/2002
09S01W15CBB1	335501	911055	NRCS	--	152	37.00	115	4/11/2002
09S02W20DAB1	335419	911835	NRCS	--	152	33.00	119	4/11/2002
09S02W26DDC1	335257	911530	USGS	94	149	30.35	119	2/27/2002
09S03W05BAC1	335704	912506	NRCS	--	161	43.00	118	4/11/2002
09S03W13BAB1	335500	911922	NRCS	--	156	31.00	125	4/11/2002
09S03W17DCB1	335448	912457	USGS	126	155	33.74	121	3/4/2002
09S04W06BCA1	335756	913243	USGS	--	161	32.78	128	3/4/2002
10S01W23CDA1	335305	911032	NRCS	--	151	27.00	124	4/11/2002
10S02W11ADD1	335045	911517	NRCS	--	146	27.00	119	4/11/2002
10S02W24DBC1	334850	911453	USGS	70	143	25.62	117	2/27/2002
10S03W26CAA1	334806	912145	USGS	96	155	42.94	112	2/27/2002
11S02W15ADD1	334446	911635	NRCS	--	144	32.00	112	4/11/2002
11S03W16CBA1	334439	912433	NRCS	--	155	32.00	123	4/11/2002
11S03W31BBA1	334228	912651	USGS	--	148	31.47	117	2/27/2002
12S01W33BAA1	333718	911205	USGS	95	135	25.70	109	2/27/2002
13S02W17ADA1	333421	911858	NRCS	--	138	43.00	95	4/11/2002
13S02W27CAC1	333224	911735	USGS	120	133	30.38	103	2/27/2002
13S02W32DBD1	333126	911917	NRCS	--	135	38.00	97	4/11/2002
13S03W10DAA1	333506	912302	USGS	86	140	44.20	96	2/27/2002
13S03W11CAB1	333503	912241	NRCS	--	142	46.00	96	4/11/2002
Drew County								
11S04W08DBA1	334532	913136	USGS	70	160	23.98	136	2/27/2002
11S05W08CCC1	334546	913837	USGS	153	185	35.05	150	2/27/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
11S06W34DAC2	334239	914226	USGS	175	209	66.20	143	2/27/2002
12S04W03ABB1	334134	912946	USGS	--	155	22.92	132	2/27/2002
12S04W25DBB1	333739	912738	NRCS	90	149	28.00	121	4/9/2002
13S04W09ACD1	333512	913034	NRCS	90	145	16.40	129	4/9/2002
13S04W28CDD1	333206	913100	USGS	65	139	18.09	121	2/26/2002
13S04W29CAB1	333231	913206	NRCS	100	135	12.00	123	4/10/2002
13S04W33BAA1	333206	913100	USGS	130	138	18.09	120	2/26/2002
13S05W29ADA1	333248	913747	USGS	--	185	46.04	139	5/1/2002
13S06W03DDC1	333545	914202	USGS	110	191	59.16	132	2/26/2002
13S06W21DAA1	333324	914258	NRCS	142	207	81.00	126	4/1/2002
14S04W03ADD1	333050	912929	NRCS	92	141	24.00	117	4/9/2002
14S04W05CBA1	333047	913218	NRCS	90	131	13.00	118	4/10/2002
14S04W05CBC1	333042	913226	NRCS	90	131	14.00	117	4/10/2002
14S04W22CAA1	332805	912957	NRCS	100	135	16.00	119	4/9/2002
14S05W23DCB1	332802	913512	USGS	42	161	22.70	138	2/27/2002
				Greene County				
16N03E03BA1	360316	904516	USGS	100	260	28.81	231	3/28/2002
16N03E05BBB1	360316	904750	NRCS	105	257	26.90	230	4/11/2002
16N03E12BBC1	360218	904333	NRCS	120	275	48.30	227	4/11/2002
16N03E16DDD1	360049	904547	NRCS	100	258	26.00	232	4/11/2002
16N03E29ACC1	355926	904722	NRCS	100	257	29.80	227	4/11/2002
16N06E03CCC1	360224	902626	USGS	194	258	40.63	217	3/27/2002
16N06E09ABB1	360215	902651	NRCS	90	261	52.10	209	4/5/2002
16N06E21BAA1	360031	902705	NRCS	130	249	29.80	219	4/5/2002
16N06E28ABB1	355938	902657	USGS	--	251	28.42	223	3/27/2002
17N03E02DCC1	360806	904352	NRCS	100	267	29.60	237	4/11/2002
17N03E28CDB1	360422	904626	NRCS	100	260	27.10	233	4/11/2002
17N04E07AD1	360718	904122	NRCS	100	273	38.80	234	4/11/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
17N04E29ADD1	360434	904019	NRCS	110	282	59.80	222	4/11/2002
17N04E30CDC1	360409	904218	USGS	100	265	34.96	230	3/28/2002
17N06E15ABC1	360631	902546	NRCS	168	268	35.20	233	4/5/2002
17N06E22CBB1	360520	902521	NRCS	200	268	32.60	235	4/5/2002
17N07E03CCC1	360744	901951	NRCS	87	246	4.10	242	4/5/2002
17N07E18ABB1	360638	902235	USGS	--	245	5.48	240	3/27/2002
17N07E29CBC1	360419	902201	NRCS	80	245	1.70	243	4/5/2002
18N03E24ACA1	361119	904216	NRCS	120	271	32.10	239	4/11/2002
18N04E04AAC1	361356	903854	NRCS	127	273	28.60	244	4/11/2002
18N04E21CBD1	361052	903725	USGS	--	294	53.04	241	3/27/2002
18N04E28DAD1	361003	903845	NRCS	100	277	37.90	239	4/11/2002
18N07E17BAB1	361203	902105	NRCS	100	262	6.40	256	4/5/2002
18N07E20BBA1	361110	902113	USGS	--	257	3.77	253	3/27/2002
18N08E29CBA1	360952	901447	NRCS	105	250	4.40	246	4/5/2002
19N03E26AD1	361601	904258	USGS	100	281	27.70	253	3/27/2002
19N03E33DDD1	361418	904516	NRCS	100	276	33.30	243	4/11/2002
19N04E30DBB1	361532	904119	NRCS	100	281	35.60	245	4/11/2002
19N05E34AAD1	361437	903102	NRCS	130	282	36.80	245	4/11/2002
11N04W02ABB1	353650	912416	NRCS	--	227	9.10	218	4/10/2002
12N04W09CAA1	354046	912533	USGS	--	236	21.11	215	3/27/2002
12N04W14DD1	353929	912236	USGS	60	231	15.74	215	3/27/2002
12N04W34CBB1	353720	912513	USGS	--	231	8.60	222	3/27/2002
12N05W36AAA1	353738	912827	USGS	--	236	12.62	223	3/27/2002
12N05W36AAA1	353738	912827	NRCS	--	236	14.10	222	4/10/2002
14N03W12CAB1	355152	911541	NRCS	--	230	1.00	229	4/10/2002
14N03W14CBB1	355101	911703	NRCS	--	235	13.50	222	4/10/2002
14N03W14DAA2	355107	911602	USGS	--	230	0.70	229	3/27/2002
14N03W14DBB1	355106	911640	USGS	65	230	1.50	229	3/27/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
				Jackson County				
09N01W15DDD1	352357	910433	NRCS	90	220	58.00	162	4/8/2002
09N01W22ADD1	352332	910433	USGS	125	215	59.07	156	3/21/2002
09N01W30BAC1	352258	910813	NRCS	120	218	42.60	175	4/3/2002
09N02W32BBB1	352215	911344	NRCS	100	220	31.50	189	4/3/2002
09N02W32CBB1	352152	911348	USGS	117	220	29.92	190	3/21/2002
10N01W05ADD1	353132	910702	NRCS	--	227	44.80	182	3/28/2002
10N01W10ABA1	353055	910445	NRCS	135	223	55.70	167	3/28/2002
10N02W29ABB1	352829	911312	USGS	--	227	27.93	199	3/21/2002
11N01W26AAD1	353330	910323	USGS	95	227	64.77	162	3/21/2002
11N01W26AAD1	353330	910323	NRCS	95	227	63.72	163	3/28/2002
11N01W29AAD1	353339	910635	USGS	97	225	39.52	185	3/27/2002
11N02W25BBD1	353322	910855	NRCS	100	221	25.10	196	3/28/2002
11N03W06DAB1	353655	912009	USGS	100	223	10.15	213	3/21/2002
11N03W12DDB1	353542	911515	NRCS	150	231	16.00	215	4/2/2002
12N01W11BCB1	354127	910416	NRCS	110	233	37.30	196	3/28/2002
12N01W30CCC2	353812	910821	NRCS	140	227	32.90	194	3/28/2002
12N01W36CBC1	353724	910317	NRCS	120	236	48.90	187	3/28/2002
12N02W25ABB2	353910	910852	USGS	--	234	36.86	197	3/21/2002
13N01W20AAA1	354514	910627	USGS	147	242	38.59	203	3/21/2002
13N01W23BCC1	354444	910413	NRCS	100	246	44.00	202	3/28/2002
13N02W34CBB1	354306	911151	NRCS	100	240	20.00	220	4/2/2002
13N03W15CDD1	354526	911749	USGS	--	232	14.77	217	3/21/2002
13N03W15DCB1	354540	911718	NRCS	80	238	11.30	227	4/2/2002
13N03W36ABB1	354337	911532	NRCS	110	241	16.20	225	4/3/2002
14N01W08AAA1	355216	910623	NRCS	80	252	34.50	218	4/3/2002
14N01W09AAA1	355220	910515	USGS	--	251	40.36	211	3/27/2002
14N01W19BBB1	355032	910823	NRCS	100	246	31.20	215	4/3/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
14N01W26BCB1	354922	910407	NRCS	110	247	43.10	204	4/3/2002
14N01W33CCD1	354759	910610	NRCS	100	245	38.20	207	3/28/2002
14N02W22BBC1	355026	911145	NRCS	100	250	24.50	226	4/3/2002
Jefferson County								
03S07W36ACC1	342410	914253	NRCS	--	185	19.00	166	4/26/2002
03S08W24BBC1	342620	914953	USGS	135	202	48.62	153	3/5/2002
03S09W06DDA1	342840	920037	USGS	--	225	36.79	188	3/5/2002
03S09W22AAA1	342640	915728	NRCS	100	218	38.50	180	5/2/2002
03S09W29CBD1	342517	920023	USGS	--	216	25.90	190	3/5/2002
03S09W36ACC1	342428	915555	NRCS	--	214	38.00	176	5/2/2002
03S10W25BCA2	342537	920242	NRCS	--	216	18.00	198	5/3/2002
03S10W26BBB2	342427	920250	NRCS	--	215	17.50	198	5/3/2002
04S07W35DDB1	341836	914347	NRCS	--	185	26.50	159	4/26/2002
04S08W13DCB1	342123	914926	USGS	110	204	43.70	160	3/5/2002
04S08W33CDA1	341848	915244	NRCS	--	209	31.00	178	4/26/2002
04S09W02CBD1	342325	915717	NRCS	110	212	32.00	180	5/2/2002
04S09W32DDA1	341859	920009	NRCS	--	212	18.00	194	5/3/2002
05S06W31CAA1	341330	914206	USGS	--	189	15.41	174	3/5/2002
05S07W29DDD1	341411	914654	NRCS	110	194	13.50	181	4/26/2002
05S08W12DAA1	341712	914907	USGS	101	194	16.71	178	3/5/2002
06S05W15BCA1	341023	913245	USGS	120	177	20.20	157	3/5/2002
06S06W23AAD1	341007	913712	USGS	107	189	19.26	170	3/5/2002
06S07W14BAA1	341125	914426	USGS	110	199	15.14	184	3/5/2002
07S07W16BAA1	340722	914828	NRCS	--	190	29.00	161	4/26/2002
07S07W18CAC1	340647	915037	USGS	65	186	25.82	160	3/5/2002
07S08W06BAA1	340859	915647	USGS	160	202	19.64	183	3/5/2002
Lawrence County								
15N01E11ADD1	355657	905638	NRCS	100	255	40.80	214	4/11/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
15N01E23DAD1	355502	905637	NRCS	100	250	44.40	206	4/10/2002
15N01E26DDA1	355402	905639	USGS	100	251	49.55	201	3/27/2002
15N01W03BAB1	355831	910441	NRCS	105	259	37.50	222	4/15/2002
15N01W35CBB1	355336	910356	USGS	--	250	43.05	207	3/27/2002
16N01E11DAC2	360203	905639	USGS	--	262	44.16	218	3/27/2002
16N01E35AAA1	355908	905632	NRCS	105	256	41.80	214	4/10/2002
16N01W30DDC1	355937	910723	NRCS	105	255	22.00	233	4/15/2002
16N02E09AAD1	360219	905212	NRCS	110	261	38.00	223	4/12/2002
16N02E19ACA1	360031	905442	NRCS	110	260	38.60	221	4/12/2002
16N02E34CBB1	355831	905208	NRCS	100	255	42.00	213	4/10/2002
17N01E02BBA1	360901	905707	NRCS	90	260	11.40	249	4/15/2002
17N01E21CBC1	360543	905931	NRCS	110	265	21.00	244	4/9/2002
17N01E27AAA1	360519	905732	NRCS	110	270	32.00	238	4/9/2002
17N01W36AAB1	360435	910158	NRCS	85	257	12.30	245	4/9/2002
17N02E04DCA1	360758	905224	NRCS	110	270	37.50	233	4/12/2002
17N02E19CDC1	360516	905449	USGS	105	265	38.48	227	3/27/2002
17N02E19CDC1	360516	905449	NRCS	105	265	37.10	228	4/12/2002
17N02E21ABD1	360554	905225	NRCS	105	268	39.50	229	4/12/2002
17N02E25CBD1	360423	904948	NRCS	100	265	34.10	231	4/12/2002
				Lee County				
01N01E04AAB1	344358	910015	NRCS	140	175	25.00	150	4/10/2002
01N01E09CCC1	344215	910054	NRCS	140	182	28.00	154	4/12/2002
01N01E24CBD1	344033	905729	NRCS	140	185	13.30	172	4/12/2002
01N02E01ADD1	344330	905016	NRCS	140	207	25.00	182	4/17/2002
01N02E11BAB1	344255	905208	NRCS	140	202	22.00	180	4/17/2002
01N02E12ABB1	344254	905040	NRCS	140	206	27.00	179	4/10/2002
01N02E22CBA1	344056	905318	NRCS	140	200	25.00	175	4/17/2002
01N02E33CBB1	343858	905434	NRCS	140	186	11.50	175	4/12/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
01N02E33CCB1	343851	905433	NRCS	140	185	10.00	175	4/12/2002
01N03E02BBC1	344339	904601	USGS	168	236	53.46	183	3/14/2002
01N03E27ADD1	343952	904605	NRCS	120	204	10.50	194	4/17/2002
01N03E35BBA1	343923	904549	USGS	120	202	12.87	189	3/14/2002
02N01E21BAA1	344633	910005	NRCS	140	185	30.80	154	4/12/2002
02N01E23BAA1	344631	905817	USGS	137	198	47.57	150	3/14/2002
02N01E23BAA2	344632	905820	USGS	137	202	47.57	154	3/14/2002
02N01W12BAA1	344828	910330	USGS	95	185	40.55	144	3/20/2002
02N01W34DDC1	344410	910520	NRCS	140	180	44.50	136	4/10/2002
02N02E08ADC1	344807	905339	USGS	120	201	40.01	161	3/14/2002
02N02E21ABC1	344622	905358	USGS	120	200	38.20	162	3/14/2002
02N02E22BBB1	344628	905327	NRCS	140	200	32.00	168	4/10/2002
02N02E36DDC1	344355	905020	NRCS	140	205	25.00	180	4/17/2002
02N03E08AAD1	344811	904838	USGS	100	211	44.45	167	3/20/2002
02N03E09DDD1	344723	904707	NRCS	120	220	48.50	172	4/18/2002
02N03E29CAD1	344500	904846	NRCS	140	220	44.00	176	4/10/2002
02N04E03ABD1	344855	903954	NRCS	140	192	23.00	169	4/16/2002
02N04E15DAC1	344637	903950	USGS	60	192	18.57	173	3/20/2002
03N01E03CBC1	345355	905941	NRCS	140	205	62.00	143	4/10/2002
03N01E16CBA1	345222	910040	USGS	110	202	60.66	141	3/20/2002
03N01E32BCC1	344951	910150	NRCS	140	200	59.00	141	4/10/2002
03N02E12CDC1	345239	905053	NRCS	140	210	45.00	165	4/16/2002
03N02E13BBA1	345237	905107	USGS	65	212	48.76	163	3/20/2002
03N02E21CBC1	345111	905428	NRCS	140	209	52.50	157	4/16/2002
03N02E29DAD1	345014	905430	USGS	135	205	43.13	162	3/14/2002
03N03E05CDD1	345327	904837	NRCS	110	204	44.00	160	4/9/2002
03N03E11DCC1	345245	904507	NRCS	140	229	64.00	165	4/16/2002
03N03E18DAB1	345206	904919	NRCS	140	196	30.00	166	4/16/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
03N03E32CAB1	344933	904926	USGS	116	204	48.80	155	3/14/2002
03N04E07CBB1	345245	904312	NRCS	140	200	31.50	169	4/16/2002
03N05E03ADB1	345403	903316	NRCS	140	197	21.50	176	4/16/2002
03N05E14DDA1	345148	903203	USGS	120	193	13.96	179	3/20/2002
03N05E26ADC1	345020	903215	NRCS	140	185	6.50	179	4/16/2002
Lincoln County								
07S06W03CCA2	340828	914114	NRCS	110	190	13.00	177	4/19/2002
07S07W36CBD1	340411	914529	NRCS	123	183	41.00	142	4/19/2002
08S04W06ABD1	340341	913116	NRCS	95	171	17.00	154	4/19/2002
08S04W08BBB2	340254	913101	USGS	65	171	19.76	151	3/4/2002
08S04W29ABC1	340021	913044	NRCS	100	176	42.00	134	4/19/2002
08S04W31CBA1	335901	913150	USGS	99	162	31.48	130	3/4/2002
08S05W12AAD1	340246	913214	NRCS	83	165	21.00	144	4/19/2002
08S05W21DCD1	340027	913533	NRCS	120	169	36.00	133	4/19/2002
08S05W32DCC1	335840	913644	NRCS	100	172	44.00	128	4/19/2002
08S06W02ACB1	340339	913958	USGS	68	181	41.39	140	3/4/2002
08S07W05DDD1	340301	914903	USGS	97	190	28.68	161	3/2/2002
09S04W06CBB1	335721	913252	NRCS	110	163	32.00	131	4/19/2002
09S05W14ABC1	335553	913439	USGS	98	173	36.62	136	3/4/2002
09S05W17BCB1	335552	913820	USGS	97	171	39.69	131	3/4/2002
09S05W19CCC1	335428	913941	NRCS	110	171	34.00	137	4/19/2002
09S06W04BCD1	335821	914346	USGS	63	181	38.85	142	3/4/2002
09S06W04BDD1	335759	914335	NRCS	100	178	38.00	140	4/19/2002
09S06W23CDB1	335440	914136	USGS	70	175	29.27	146	3/4/2002
10S05W06DCC1	335155	913908	USGS	65	175	28.92	146	3/4/2002
Lonoke County								
01N07W27AAD1	344103	914410	USGS	148	220	131.55	88	4/2/2002
01N08W03DDA1	344411	915050	NRCS	--	229	129.50	100	4/19/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
01N08W14DAA1	344237	914946	NRCS	--	230	130.00	100	4/19/2002
01N08W26CCB1	344035	915043	USGS	155	212	100.67	111	4/2/2002
01N09W07DAA1	344337	920030	NRCS	--	240	49.20	191	4/17/2002
01N09W13DAB1	344235	915517	USGS	150	226	85.75	140	4/2/2002
01N09W25BAA1	344120	915538	NRCS	--	226	87.50	139	4/17/2002
01N10W11BBD1	344356	920323	USGS	100	240	30.55	209	4/2/2002
01N10W15CDA1	344236	920415	NRCS	100	240	30.80	209	4/17/2002
01S06W31ABB1	343459	914131	USGS	120	200	78.37	122	3/18/2002
01S06W32BBB1	343501	914056	NRCS	--	201	79.30	122	4/17/2002
01S07W12ABA1	343834	914230	USGS	140	207	67	140	3/18/2002
01S08W24CDD1	343606	914912	USGS	127	210	79.35	131	3/18/2002
01S08W29DBA1	343544	915312	USGS	88	219	74.50	145	3/18/2002
01S09W02DDD1	343857	915624	NRCS	--	230	88.50	142	4/17/2002
01S09W36CCC1	343435	915619	USGS	95	220	60.76	159	3/18/2002
01S10W01ACB1	343927	920215	USGS	--	236	46.00	190	3/18/2002
02N07W07DAA1	344845	914707	NRCS	--	232	132.60	99	4/17/2002
02N07W16BAB1	344815	914540	USGS	184	240	135.09	105	3/22/2002
02N08W16ABC1	344806	915114	USGS	128	230	118.40	112	3/22/2002
02N08W23CAB1	344659	915118	NRCS	--	229	133.50	96	4/19/2002
02N09W02BDB1	344955	915841	USGS	140	251	118.84	132	4/2/2002
02N09W17CBC1	344753	920010	USGS	--	255	89.99	165	2/1/2002
02N09W17CBC2	344751	920010	USGS	--	255	85.92	169	2/1/2002
02N09W17CBC3	344747	920008	USGS	--	255	83.97	171	2/1/2002
02N09W17CCB1	344747	920007	USGS	127	253	83.88	169	3/8/2002
02N09W18DAA1	344755	920022	USGS	--	255	84.35	171	3/8/2002
02N09W18DAD2	344754	920020	USGS	--	255	83.55	171	2/1/2002
02N09W18DAD3	344754	920011	USGS	--	255	90.42	165	2/1/2002
02S07W05CDC1	343326	914715	NRCS	--	205	66.90	138	4/19/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
02S07W10CCB1	343246	914525	USGS	--	201	61.03	140	3/8/2002
02S07W20ACD1	343112	914655	NRCS	--	201	58.70	142	4/19/2002
02S08W13BBB1	343232	914935	USGS	--	200	57.08	143	3/8/2002
02S08W34DBB1	343003	915150	USGS	--	214	60.67	153	3/8/2002
02S09W30CDD1	343014	920116	USGS	80	226	36.56	189	3/8/2002
02S09W35AB1	343008	915653	NRCS	100	217	51.00	166	4/19/2002
03N07W08BDB1	345407	914638	USGS	125	250	92.71	157	4/16/2002
03N07W15DBC2	345253	914417	USGS	145	227	79.22	148	3/22/2002
03N07W29ADA1	345129	914558	USGS	120	234	87.30	147	4/16/2002
03N07W35CDC2	344957	914332	USGS	--	232	113.25	119	3/22/2002
03N08W03BAA1	345519	915054	USGS	162	260	88.18	172	4/15/2002
03N08W03CCC1	345430	915123	USGS	162	260	96.38	164	4/15/2002
03N08W05CCC1	345429	915323	USGS	130	257	77.23	180	4/15/2002
03N08W08ABA1	345427	915248	USGS	150	258	90.43	168	4/15/2002
03N08W10ACB1	345415	915053	USGS	150	250	84.12	166	4/15/2002
03N08W10ADD1	345401	915023	USGS	165	250	82.29	168	4/15/2002
03N08W11ABD1	345419	914936	USGS	160	260	97.50	163	4/16/2002
03N08W11ACA1	345413	914934	USGS	144	256	94.92	161	4/17/2002
03N08W21BCC1	345220	915220	USGS	155	247	79.35	168	3/22/2002
03N08W26CDC1	345100	915007	NRCS	150	235	107.50	128	4/19/2002
03N08W29BBB1	345147	915333	USGS	152	249	108.95	140	4/15/2002
03N08W29BCC1	345125	915333	USGS	150	250	124.06	126	4/15/2002
03N08W32ABB2	345057	915259	USGS	154	250	115.68	134	3/19/2002
03N08W34ADD1	345035	915028	USGS	130	240	113.30	127	4/15/2002
03N10W34ABB1	345101	920352	USGS	116	257	57.50	200	4/1/2002
04N08W05ACA1	350020	915247	USGS	138	238	44.08	194	4/16/2002
04N08W10BDD1	345917	915055	USGS	130	218	24.56	193	4/15/2002
04N08W15BCB2	345833	915121	USGS	104	225	32.08	193	3/19/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
04N08W16DCC1	345757	915154	USGS	155	225	43.18	182	4/15/2002
04N08W20ADD1	345735	915229	USGS	90	248	63.89	184	4/15/2002
04N08W26AAD1	345652	914917	USGS	130	246	66.89	179	4/15/2002
04N08W28CAC1	345620	915216	USGS	141	235	50.88	184	4/15/2002
04N08W28CAD1	345626	915204	USGS	115	249	66.36	183	4/15/2002
04N08W28CCC1	345615	915225	USGS	137	240	56.53	183	4/15/2002
04N08W36DBB1	345541	914914	USGS	130	259	87.50	172	4/15/2002
Mississippi County								
10N08E21ABA1	352852	901415	NRCS	110	224	26.40	198	4/10/2002
10N08E21BDC1	352830	901407	NRCS	100	224	25.00	199	4/10/2002
10N08E22ABA2	352851	901312	USGS	100	224	23.20	201	3/26/2002
10N09E08ACC1	352949	900926	USGS	110	230	14.64	215	3/26/2002
11N09E34BBB1	353218	900715	USGS	94	235	17.12	218	3/26/2002
11N10E09BCB1	353530	900202	NRCS	110	236	14.80	221	4/10/2002
12N08E08BCB1	354047	901559	USGS	120	225	6.44	219	3/26/2002
12N08E28DDB1	353707	901406	NRCS	120	225	12.00	213	4/10/2002
12N09E12ABC1	354054	900449	NRCS	120	232	8.70	223	4/11/2002
12N10E04CAA1	354124	900136	NRCS	120	235	9.40	226	4/11/2002
12N10E07BCD1	354036	900404	NRCS	110	234	11.50	223	4/11/2002
12N10E21DBA1	353842	900122	NRCS	110	236	14.90	221	4/10/2002
13N08E24ABB1	354428	901112	NRCS	120	230	11.00	219	4/10/2002
13N09E30CCD1	354248	901029	USGS	--	230	6.91	223	3/25/2002
13N10E34DBB1	354218	900024	USGS	98	235	6.10	229	3/25/2002
14N08E12DAB1	355104	901052	USGS	--	235	3.85	231	3/25/2002
14N08E20DAA1	354921	901458	NRCS	110	225	4.00	221	4/10/2002
14N08E26CC1	354803	901235	NRCS	100	230	4.00	226	4/10/2002
14N10E18ABC1	355022	900345	USGS	101	236	9.25	227	3/25/2002
14N11E03BCB1	355158	895433	USGS	128	247	3.87	243	3/25/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
14N11E17CCB1	354955	895639	NRCS	120	240	7.90	232	4/11/2002
14N11E33CAA1	354727	895508	NRCS	120	240	7.80	232	4/11/2002
14N12E05DCB1	355134	894935	USGS	--	250	10.40	240	3/25/2002
15N08E08DBC2	355605	901526	USGS	120	236	7.87	228	3/26/2002
15N10E21ABC1	355447	900135	NRCS	120	240	9.00	231	4/10/2002
15N12E01BCD1	355704	894601	NRCS	100	258	12.60	245	4/11/2002
16N10E28BBD1	355906	900156	USGS	120	238	5.28	233	3/25/2002
16N10E28BBD1	355906	900156	NRCS	120	238	8.00	230	4/10/2002
16N11E23ADA1	355947	895231	USGS	--	255	10.10	245	3/25/2002
				Monroe County				
01N01W03CDB1	344322	910557	NRCS	100	185	49.00	136	4/17/2002
01N01W21CDC2	344037	910707	USGS	150	181	33.87	147	3/13/2002
01N02W12CBC1	344242	911032	USGS	110	182	36.21	146	5/1/2002
01N03W23BAC1	344124	911743	NRCS	100	170	13.00	157	4/10/2002
01N03W24BBB1	344135	911651	USGS	125	185	31.11	154	3/13/2002
01N04W33BBB2	343960	912649	USGS	--	218	93.82	124	3/13/2002
01S01W13CDD1	343611	910341	USGS	135	178	20.08	158	3/12/2002
01S01W16DB	343615	910632	NRCS	100	175	16.50	159	4/10/2002
01S01W18DCD1	343618	910849	USGS	110	178	23.25	155	3/13/2002
01S02W20BBB1	343613	911456	USGS	100	170	12.00	158	3/12/2002
01S02W20BBB1	343613	911456	NRCS	100	170	11.00	159	4/10/2002
01S03W20BBA1	343538	912118	USGS	140	210	73.16	137	3/13/2002
01S03W20BBA1	343538	912118	NRCS	140	210	78.50	132	4/10/2002
01S04W01BAB1	343906	912317	USGS	160	210	76.91	133	3/13/2002
02N01W19ADD1	344624	910814	NRCS	80	188	48.00	140	4/17/2002
02N01W19BBA1	344645	910912	USGS	75	191	51.15	140	3/13/2002
02N03W35BCA1	344455	911745	NRCS	100	188	29.00	159	4/10/2002
02S01W01BCD1	343305	910408	NRCS	100	176	20.00	156	4/10/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
02S02W01BCA1	343322	911031	USGS	--	171	11.54	159	3/13/2002
02S02W11DAC1	343209	911101	USGS	110	164	6.53	157	5/1/2002
03N01W20ABA1	345201	910723	USGS	--	189	46.28	143	3/13/2002
03N02W31ADC1	344958	911447	USGS	95	190	37.90	152	3/13/2002
03N03W36AAA1	345027	911547	USGS	120	176	18.91	157	3/13/2002
04N02W01BCC1	345929	911004	NRCS	100	175	37.00	138	4/17/2002
04N02W05BBB1	345957	911311	NRCS	100	188	13.00	175	4/17/2002
04N02W27CDD3	345540	911150	USGS	181	200	45.15	155	3/13/2002
04N02W28DDD3	345535	911221	USGS	137	192	32.82	159	3/13/2002
04N02W30BBB1	345628	911525	USGS	119	185	14.90	170	3/13/2002
Phillips County								
01S01E20DDB1	343529	910058	NRCS	114	185	16.80	168	4/16/2002
01S02E09CBB1	343719	905434	USGS	110	185	9.49	176	3/14/2002
01S02E09CBB1	343719	905434	NRCS	110	185	9.50	176	4/16/2002
01S02E32BCC1	343350	905526	NRCS	120	200	31.60	168	4/16/2002
01S03E02ADD1	343814	904511	NRCS	120	200	14.70	185	4/16/2002
01S03E10ABB1	343741	904634	NRCS	120	205	13.00	192	4/16/2002
01S03E20BDD1	343533	904846	NRCS	120	210	29.00	181	4/16/2002
01S04E05DCD1	343802	904151	NRCS	120	230	43.00	187	4/16/2002
01S04E05DCD1	343802	904151	USGS	120	230	47.20	183	5/1/2002
02S01E28CCB1	342916	910058	USGS	108	174	18.37	156	3/14/2002
02S02E29DDD1	342901	905444	NRCS	125	180	23.50	157	4/16/2002
02S02E33ACC1	342824	905412	NRCS	120	177	22.70	154	4/16/2002
02S03E15ACD1	343110	904621	USGS	112	174	11.49	163	3/14/2002
02S03E34BCD1	342828	904653	NRCS	120	165	18.40	147	4/18/2002
02S04E27AAC1	342932	904001	USGS	175	179	8.00	171	4/18/2002
02S04E27AAC1	342932	904001	NRCS	175	179	8.50	171	4/18/2002
03S02E35DDA1	342256	905130	USGS	50	163	20.71	142	3/14/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
03S03E04DAA1	342735	904710	USGS	36	171	19.72	151	5/1/2002
03S04E02CAA1	342732	903918	NRCS	120	176	11.00	165	4/18/2002
03S04E02CAA1	342732	903918	USGS	120	176	12.00	164	5/1/2002
04S01E01AAD1	342238	905700	NRCS	120	156	17.00	139	4/18/2002
04S01E14CDD1	342014	905837	NRCS	120	155	12.10	143	4/18/2002
04S01E23CCA1	341931	905853	USGS	--	156	13.45	143	3/14/2002
04S01E29CDC1	341844	910148	NRCS	120	150	12.20	138	4/18/2002
04S02E01DBB1	342220	905053	NRCS	--	163	12.20	151	4/18/2002
05S02E18BDA1	341535	905628	USGS	130	156	17.47	139	3/14/2002
				Poinsett County				
10N01E02AAA	353205	905654	NRCS	100	235	93.00	142	4/4/2002
10N01E14CC1	352910	905814	USGS	150	231	87.48	144	3/25/2002
10N01E16CCB1	352922	910005	USGS	120	225	70.82	154	3/25/2002
10N01E32CBB1	352657	910053	NRCS	120	222	50.00	172	4/4/2002
10N01E33ACB1	352746	905931	NRCS	153	220	74.00	146	4/4/2002
10N02E13BCC1	352949	905026	NRCS	167	237	99.21	138	3/25/2002
10N02E20BAB1	352906	905418	NRCS	155	237	99.00	138	4/4/2002
10N03E14DAB1	352947	904405	USGS	--	263	114.62	148	3/25/2002
10N03E29BBD1	352820	904805	NRCS	100	236	90.00	146	4/4/2002
10N03E35CDD1	352656	904436	USGS	--	275	121.67	153	3/25/2002
10N04E35BBA1	352745	903831	NRCS	100	212	20.00	192	4/3/2002
10N05E15BDD1	352937	903253	USGS	--	207	11.45	196	3/26/2002
10N07E22AAC1	352847	901935	USGS	--	215	28.20	187	3/26/2002
11N01E17DDC1	353437	910015	NRCS	100	232	76.00	156	4/4/2002
11N01E17DDD1	353437	910013	USGS	100	230	74.60	155	3/25/2002
11N01E26AA1	353340	905653	USGS	140	236	92.03	144	3/25/2002
11N01E34AAA	353256	905759	NRCS	100	229	84.00	145	4/4/2002
11N02E05BDA1	353704	905408	USGS	175	245	91.40	154	3/25/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
11N02E10CBC1	353555	905228	NRCS	170	245	116.00	129	4/4/2002
11N02E26AAB1	353350	905034	USGS	158	241	104.07	137	3/25/2002
11N02E30BBB1	353352	905540	NRCS	100	239	98.00	141	4/4/2002
11N02E34CBA1	353238	905222	NRCS	130	240	94.00	146	4/4/2002
11N03E10DDA1	353546	904457	USGS	145	243	102.00	141	3/25/2002
11N03E18BAB1	353538	904852	USGS	157	243	101.50	142	3/25/2002
11N04E36ABA1	353251	903654	NRCS	100	211	19.00	192	4/3/2002
11N07E18CAB1	353435	902320	USGS	100	217	14.34	203	3/26/2002
12N01E07CDA1	354054	910141	USGS	120	236	52.50	184	3/25/2002
12N01E22DAB1	353922	905809	NRCS	115	235	72.00	163	4/4/2002
12N02E25DCC1	353820	904944	NRCS	145	245	108.00	137	4/4/2002
12N02E34CCC1	353724	905230	NRCS	180	245	109.00	136	4/4/2002
12N03E01CBD1	354154	904329	NRCS	190	250	91.00	159	4/4/2002
12N03E04DAD1	354158	904600	USGS	120	247	100.81	146	3/25/2002
12N03E04DAD1	354158	904600	NRCS	120	247	102.00	145	4/4/2002
12N03E36ACB1	353749	904319	USGS	120	250	95.66	154	3/25/2002
12N04E08CDA	354053	904112	NRCS	100	250	86.00	164	4/4/2002
12N05E16ABA1	354039	903333	NRCS	140	221	10.00	211	4/3/2002
12N05E34ABA1	353805	903230	USGS	100	215	9.50	206	3/26/2002
12N07E04BAA1	354202	902060	USGS	60	223	4.24	219	3/26/2002
				Prairie County				
01N06W05CCB1	344353	914049	USGS	155	220	116.15	104	3/12/2002
01S04W28BBC1	343529	912650	NRCS	180	206	99.50	107	4/18/2002
01S04W28BDB1	343523	912630	USGS	112	205	83.17	122	3/12/2002
01S05W14BBC1	343722	913109	USGS	118	211	108.14	103	3/12/2002
01S05W31DDA1	343417	913432	USGS	120	206	95.34	111	3/12/2002
02N04W02BCB1	344916	912419	USGS	140	188	20.65	167	3/11/2002
02N04W32CCB1	344436	912738	USGS	--	221	84.08	137	3/12/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
02N05W06BAB1	344958	913421	USGS	145	221	88.40	133	3/11/2002
02N05W13AAB1	344805	912854	USGS	130	223	76.20	147	3/12/2002
02N05W29DDB2	344545	913309	USGS	135	228	116.89	111	3/12/2002
02N06W17ABB1	344809	913959	USGS	180	235	122.18	113	3/12/2002
02S06W14BBB1	343213	913729	USGS	105	201	75.65	125	3/12/2002
03N04W03AAC1	345439	912424	USGS	106	187	25.92	161	3/11/2002
03N05W03BDD2	345444	913115	USGS	110	207	64.12	143	3/11/2002
03N06W01BCB1	345455	913601	USGS	115	216	77.39	139	3/11/2002
03N06W19BDD1	345207	914110	USGS	105	221	83.73	137	3/11/2002
04N04W07ADC1	345850	912733	USGS	110	195	24.52	170	3/11/2002
04N05W07CDC1	345043	913441	USGS	--	212	74.33	138	3/11/2002
04N05W31DDC1	345514	913406	USGS	104	206	75.18	131	3/11/2002
04N06W05CCC1	345934	914018	USGS	100	206	61.02	145	3/11/2002
04N07W03DCB1	345942	914412	USGS	100	255	85.93	169	3/11/2002
04N07W20DDB1	345709	914607	USGS	160	255	103.11	152	4/16/2002
04N07W28BBA1	345701	914545	USGS	110	258	93.08	165	3/11/2002
05N05W14DCD1	350252	913034	USGS	--	205	36.00	169	3/11/2002
05N05W25BAA1	350153	912949	NRCS	100	187	17.20	170	4/18/2002
05N05W28DDA1	350119	913228	NRCS	85	191	22.50	169	4/18/2002
Pulaski County								
01S10W29CC1	343538	920708	USGS	100	239	17.13	222	3/5/2002
02S10W14DC1	343205	920334	USGS	60	225	25.97	199	3/5/2002
02S10W16CCA1	343217	920549	USGS	--	231	21.98	209	3/5/2002
Randolph County								
18N01E13BAB1	361230	905551	NRCS	100	266	15.40	251	4/17/2002
18N01E28AAD1	361040	905820	NRCS	120	265	15.70	249	4/18/2002
18N01E34AAC1	360943	905729	USGS	--	266	16.63	249	3/28/2002
18N02E03DAD1	361336	905043	NRCS	120	280	32.40	248	4/18/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
18N02E17CBB1	361204	905356	NRCS	--	265	16.10	249	4/18/2002
18N02E20BDA1	361125	905332	NRCS	110	274	32.50	242	4/18/2002
18N02E22DCD1	361046	905105	USGS	110	273	36.34	237	3/28/2002
18N02E34BCC1	360933	905150	NRCS	100	265	56.00	209	4/18/2002
19N02E04AAB1	361930	905145	NRCS	80	268	6.50	262	4/17/2002
19N02E09ABD1	361826	905157	NRCS	80	266	1.40	265	4/17/2002
19N02E22DAB1	361622	905049	NRCS	90	266	0.30	266	4/17/2002
20N02E01ADD1	362424	904811	USGS	65	280	9.44	271	3/28/2002
20N02E12BAA1	362352	904848	NRCS	60	281	4.30	277	4/17/2002
20N02E14DAB1	362232	904930	NRCS	100	274	8.90	265	4/17/2002
20N02E21CDD1	362117	905107	NRCS	110	270	6.20	264	4/17/2002
20N03E06DAD1	362406	904707	NRCS	65	281	6.50	275	4/17/2002
20N03E07AAD1	362424	904811	NRCS	65	281	10.70	270	4/17/2002
20N03E28BA1	362114	904538	USGS	--	276	11.75	264	3/28/2002
20N03E33CCA1	361941	904552	NRCS	--	287	21.70	265	4/17/2002
St. Francis County								
04N01E05AAA1	345952	910054	NRCS	140	207	68.00	139	4/16/2002
04N01E13ADA1	345755	905638	USGS	--	206	56.87	149	3/21/2002
04N01W20BBB1	345716	910759	NRCS	140	200	57.00	143	4/16/2002
04N01W25DBD1	345549	910303	NRCS	140	199	68.00	131	4/16/2002
04N01W28CDD1	345535	910634	USGS	--	208	68.00	140	4/1/2002
04N02E03DDD3	345848	905219	USGS	151	210	42.26	168	4/1/2002
04N02E16ACD1	345733	905341	NRCS	140	209	49.00	160	4/16/2002
04N02E19BBB1	345701	905633	USGS	72	209	56.08	153	4/1/2002
04N02E27AAA1	345604	905220	NRCS	140	211	46.00	165	4/16/2002
04N03E21DAD1	345623	904655	USGS	--	236	59.23	177	4/1/2002
04N04E15ABA1	345752	903948	NRCS	120	201	32.00	169	4/18/2002
04N05E22BBB1	345651	903357	USGS	--	200	28.48	172	3/22/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
05N01E06CDA1	350437	910218	NRCS	--	211	67.00	144	4/16/2002
05N01E15BCB1	350303	905942	USGS	94	209	61.34	148	4/1/2002
05N01E27BBA1	350136	905929	USGS	--	209	63.63	145	3/21/2002
05N02E20ADC1	350157	905437	USGS	79	211	53.57	157	4/1/2002
05N03E20AAA2	350214	904801	USGS	153	250	104.55	145	3/21/2002
05N05E19DCA1	350128	903630	USGS	110	203	34.23	169	3/22/2002
05N05E21CAB1	350144	903448	NRCS	140	203	43.00	160	4/18/2002
05N05E33BCC1	350004	903506	NRCS	120	196	28.00	168	4/18/2002
05N06E05BBB1	350508	902922	NRCS	120	195	34.00	161	4/18/2002
05N06E34CAB1	350026	902657	USGS	110	200	28.05	172	3/22/2002
06N01E33ACA1	350559	905943	USGS	140	211	64.42	147	4/1/2002
06N01E33ACA2	350552	905942	USGS	--	211	64.42	147	4/1/2002
06N02E13DCA1	350813	905003	USGS	--	231	73.11	158	4/1/2002
06N02E15BDD1	350842	905247	USGS	75	215	52.23	162	4/1/2002
06N02E16CCC1	350804	905403	NRCS	120	216	63.00	153	4/16/2002
06N02E24AAA1	350755	905002	USGS	147	232	70.26	162	4/1/2002
06N03E17CAA1	350822	904810	NRCS	--	258	101.00	157	4/18/2002
06N04E36CCD1	350512	903744	NRCS	120	200	35.00	165	4/18/2002
06N05E22ACC1	350723	903252	USGS	--	200	46.70	153	4/1/2002
06N06E20ABB2	350747	902841	USGS	150	200	34.00	166	3/21/2002
				White County				
05N07W09AAA1	350447	914441	USGS	30	205	19.10	186	4/1/2002
05N07W10CCC1	350400	914436	USGS	80	203	7.68	195	4/1/2002
06N06W04BAA1	351047	913910	USGS	70	220	37.97	182	4/1/2002
06N06W04BAD1	351037	913903	NRCS	--	215	41.00	174	4/16/2002
06N06W13DBB1	350918	913552	NRCS	--	213	48.50	165	4/16/2002
06N06W18BBC1	350851	914152	USGS	--	210	19.00	191	4/1/2002
06N06W18BCA1	350835	914150	NRCS	--	210	21.50	189	4/16/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
06N06W34AAB1	350624	913754	USGS	--	213	59.86	153	4/1/2002
06N07W17DCC1	350822	914635	USGS	90	217	13.94	203	4/1/2002
06N08W13ABA1	350908	914824	USGS	60	228	8.20	220	4/1/2002
06N08W26DDB1	350640	914931	USGS	89	230	12.62	217	4/1/2002
07N05W01AAA1	351553	912858	USGS	--	205	15.00	190	3/29/2002
07N05W32BAB1	351137	913406	USGS	80	214	27.76	186	4/1/2002
07N06W19CAB1	351259	914142	USGS	38	224	9.93	214	5/2/2002
08N04W06CCB1	352028	912847	USGS	74	214	16.02	198	3/29/2002
08N05W32CBC1	351616	913417	USGS	--	199	0.60	198	3/29/2002
Woodruff County								
04N03W03AB1	350021	911820	USGS	100	185	12.13	173	3/20/2002
05N01W13CDC1	350244	910331	NRCS	135	210	71.60	138	3/25/2002
05N01W31CCC1	350106	910900	NRCS	140	210	57.30	153	3/25/2002
05N02W20DCB1	350208	911356	USGS	--	192	13.17	179	3/20/2002
05N03W25DDB1	350133	911531	NRCS	120	190	12.70	177	3/25/2002
05N03W31BAC1	350110	912127	NRCS	120	178	0.80	177	3/25/2002
05N04W12DBA1	350427	912211	USGS	92	186	3.11	183	3/20/2002
06N01W06BAB1	351048	910835	USGS	--	202	32.80	169	3/20/2002
06N02W19AAA1	350802	911419	NRCS	130	225	46.50	179	3/25/2002
06N03W15BAB1	350903	911807	USGS	111	189	4.38	184	3/20/2002
06N03W31BCB1	350623	912144	USGS	--	185	0.98	184	3/20/2002
07N01W04ACB1	351541	910626	NRCS	125	225	60.00	165	3/26/2002
07N02W16DBB1	351353	911225	NRCS	110	206	23.70	182	3/25/2002
07N03W06BAC1	351607	912109	NRCS	100	211	25.15	186	3/27/2002
07N03W19AAA1	351335	912025	USGS	100	203	11.75	191	3/20/2002
07N03W31BBA1	351152	912103	NRCS	120	190	9.40	181	3/27/2002
08N01W06DDD1	352028	910747	USGS	--	218	41.90	176	3/20/2002
08N01W10AAA1	352018	910431	NRCS	160	211	57.20	154	3/26/2002

Appendix 1. Information pertaining to water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, spring 2002.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service; --, no data; NGVD of 1929; National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Local well number	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD of 1929)	Depth to water (feet below land-surface datum	Water-level altitude (feet above NGVD of 1929)	Date of measure-ment
08N02W27DDB1	351711	911107	NRCS	60	213	27.00	186	3/26/2002
08N02W31DDD1	351611	911411	USGS	40	195	2.51	192	3/20/2002
08N03W31AAD1	351655	912028	USGS	110	212	24.29	188	3/20/2002
08N04W27AAA1	351757	912341	USGS	--	200	3.21	197	3/20/2002
09N03W28ABB1	352310	911845	NRCS	120	220	19.90	200	3/26/2002
09N03W29AAD1	352258	911921	USGS	--	220	21.42	199	3/20/2002
09N03W32ACA1	352205	911936	NRCS	120	217	19.00	198	3/26/2002

Appendix 2. Specific conductance and temperature data from wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, summer 2002.

[µS/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; --, no data]

Local well number	Latitude (degrees)	Longitude (degrees)	Well depth (feet)	Date	Specific conductance (µS/cm)	Temperature (degrees Celsius)
Arkansas County						
02S04W14CD1	343100	912445	130	6/24/2002	757	18.3
04S03W17ADD1	342102	912058	--	6/24/2002	655	18.4
04S06W16BD1	342130	914000	--	6/25/2002	340	18.1
05S04W07CCC1	341555	912932	120	6/24/2002	844	18.5
Ashley County						
16S06W27BAB1	331729	914240	115	6/17/2002	559	19.9
17S07W05CDD1	331502	915050	130	6/17/2002	692	19.6
18S08W01AAB1	331015	915225	128	6/17/2002	592	20.5
Chicot County						
13S03W35BAC1	333154	912246	90	6/17/2002	438	18.7
17S01W06BCC1	331501	911505	100	6/17/2002	806	19.1
17S03W04ADA1	331510	912427	--	6/17/2002	2,730	19.8
Clay County						
19N08E02ABB1	361859	901104	--	6/20/2002	292	16.2
19N08E28BB1	361519	901318	105	6/20/2002	275	16.0
20N08E24DDA1	362057	900934	110	6/20/2002	284	16.2
21N04E34DDC1	362445	903729	104	6/20/2002	457	16.2
Craighead County						
13N03E29AAA1	354403	904713	122	6/19/2002	801	17.1
15N06E19AAB1	355517	902857	110	6/19/2002	401	17.2
16N07E32ADD1	355813	902138	100	6/19/2002	302	17.4
Crittenden County						
06N07E13BAA1	350850	901808	130	6/19/2002	478	17.6
07N07E31CCC1	351042	902359	110	6/19/2002	443	17.3
Cross County						
07N01E05CDA1	351518	910049	140	6/19/2002	630	17.3
09N01E33BBA1	352204	905959	120	6/19/2002	453	17.4
09N05E32BDB1	352151	903512	--	6/19/2002	410	17.6
Desha County						
09S04W06BCA1	335756	913243	--	6/18/2002	667	18.8
10S03W26CAA1	334806	912145	96	6/18/2002	684	20.1

Appendix 2. Specific conductance and temperature data from wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, summer 2002.—Continued

[µS/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; --, no data]

Local well number	Latitude (degrees)	Longitude (degrees)	Well depth (feet)	Date	Specific conductance (µS/cm)	Temperature (degrees Celsius)
Drew County						
11S04W08DBA1	334532	913136	70	6/17/2002	399	19.1
14S04W27AA1	332734	912925	100	6/17/2002	629	19.1
Greene County						
16N06E28ABB1	355938	902657	--	6/20/2002	553	16.4
Jackson County						
09N02W32CBB1	352152	911348	117	6/20/2002	275	17.2
10N02W29ABB1	352829	911312	--	6/20/2002	359	16.8
14N01W09AAA1	355220	910515	--	6/20/2002	366	16.8
Jefferson County						
03S07W16AAA1	342714	914538	102	6/24/2002	727	18.3
03S09W31DDA1	342415	920049	--	6/24/2002	644	18.0
04S08W13DCB1	342123	914926	110	6/24/2002	497	18.3
06S06W23AAD1	341007	913712	107	6/24/2002	555	18.2
Lawrence County						
16N02E05BA1	360326	905352	100	6/20/2002	566	16.6
Lee County						
01N03E23CCC1	344025	904604	120	6/18/2002	596	18.4
03N03E32CAB1	344933	904926	116	6/18/2002	512	18.0
Lincoln County						
08S04W19CC1	340021	913205	100	6/18/2002	1,250	18.3
09S06W04BCD1	335821	914346	63	6/18/2002	374	18.4
09S07W01DC1	335714	914637	100	6/18/2002	337	18.7
Lonoke County						
01N07W29BBB1	344114	914720	--	6/25/2002	418	18.2
02N07W02BBA1	344957	914338	--	6/25/2002	319	18.1
02S08W13BBB1	343232	914935	--	6/25/2002	608	17.9
Mississippi County						
12N08E08BCB1	354047	901559	120	6/19/2002	478	17.3
Monroe County						
01N04W33BB2	343958	912646	140	6/21/2002	545	17.7
01S04W01BAB1	343906	912317	160	6/21/2002	519	17.5

Appendix 2. Specific conductance and temperature data from wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, summer 2002.—Continued

[µS/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; --, no data]

Local well number	Latitude (degrees)	Longitude (degrees)	Well depth (feet)	Date	Specific conductance (µS/cm)	Temperature (degrees Celsius)
03N02W31ADC1	344958	911447	95	6/21/2002	357	17.5
03N03W36AAA1	345027	911547	120	6/21/2002	673	17.3
Phillips County						
02S01E28CCB1	342916	910058	108	6/18/2002	452	18.1
Poinsett County						
10N03E14DAB1	352947	904405	--	6/19/2002	590	17.6
10N03E35CDD1	352656	904436	--	6/19/2002	509	17.3
11N02E26AAB1	353350	905034	158	6/19/2002	730	17.3
11N07E18CAB1	353435	902320	100	6/19/2002	481	17.3
Prairie County						
01S04W28BD1	343521	912624	149	6/21/2002	767	18.2
02N05W06BAB1	344958	913421	145	6/21/2002	916	18.6
02N05W29DDB2	344545	913309	135	6/21/2002	586	18.1
Pulaski County						
01S10W07BDC1	343820	920712	--	6/24/2002	661	18.1
Randolph County						
18N01E34AAC1	360943	905729	--	6/20/2002	262	16.4
St. Francis County						
04N01E13DDA1	345708	905638	--	6/18/2002	814	18.0
04N01W28CDD1	345535	910634	--	6/18/2002	730	18.4
06N02E13DCA1	350813	905003	--	6/19/2002	694	18.0
White County						
06N06W34AAB1	350624	913754	--	6/20/2002	692	16.8
Woodruff County						
05N04W12DBA1	350427	912211	92	6/20/2002	263	17.1
08N03W31AAD1	351655	912028	110	6/20/2002	453	16.8

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Prepared in cooperation with the
ARKANSAS SOIL AND WATER CONSERVATION COMMISSION and the
ARKANSAS GEOLOGICAL COMMISSION

SCIENTIFIC INVESTIGATIONS REPORT 2004-5129
Potentiometric surface of the alluvial aquifer--PLATE 1
Reed, T.B., 2004, Status of water levels and selected water-quality conditions in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2002

LOCATION OF STUDY AREA

EXPLANATION

CONES OF DEPRESSION AND OTHER AREAS OF REDUCED WATER LEVEL

140 — POTENTIOMETRIC CONTOUR--Shows altitude at which water level would have stood in tightly cased wells. Dashed where approximately located. Hachures indicate depression. Contour interval 10 feet. Datum is National Geodetic Vertical Datum of 1929. Measurements made during the spring of 2002

WELL COMPLETED IN ALLUVIAL AQUIFER--Letter, when present, corresponds to hydrograph

EXTENT OF STUDY AREA

DIRECTION OF GROUND-WATER FLOW

NOTE: The potentiometric contours are generalized to portray synoptically the head in a dynamic hydrologic system, not taking into account the variation in well depth, non-simultaneous measurements of water level, or various effects of pumping, and may not conform exactly with individual measurements of water level.

0 10 20 30 40 MILES
0 10 20 30 40 KILOMETERS

POTENTIOMETRIC SURFACE OF THE MISSISSIPPI RIVER VALLEY ALLUVIAL AQUIFER, SPRING 2002

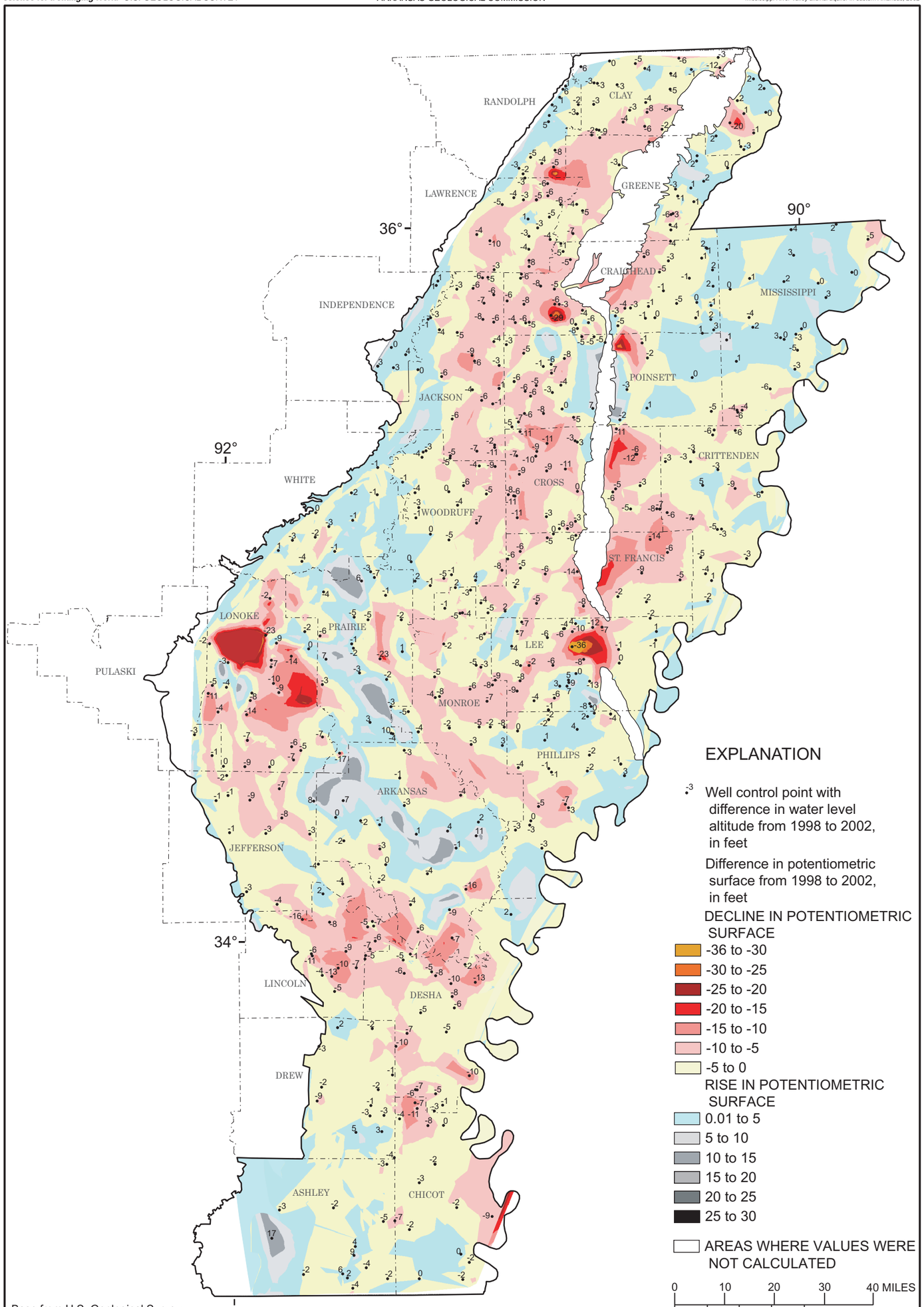
T.B. REED

2004

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Prepared in cooperation with the
ARKANSAS SOIL AND WATER CONSERVATION COMMISSION and the
ARKANSAS GEOLOGICAL COMMISSION

SCIENTIFIC INVESTIGATIONS REPORT 2004-5129
Potentiometric difference for the alluvial aquifer--Plate 2
Status of water levels and selected water-quality in the
Mississippi River Valley alluvial aquifer in eastern Arkansas, 2002



Base from U.S. Geological Survey
digital data, 1:500,000

POTENTIOMETRIC DIFFERENCE FOR THE MISSISSIPPI RIVER VALLEY ALLUVIAL AQUIFER FROM 1998 TO 2002

T.B.REED

2004

Reed, T.B.—STATUS OF WATER LEVELS AND SELECTED WATER-QUALITY CONDITIONS IN THE MISSISSIPPI RIVER VALLEY ALLUVIAL AQUIFER IN EASTERN ARKANSAS, 2002—U.S. Geological Survey Scientific Investigations Report 2004-5129

1879–2004