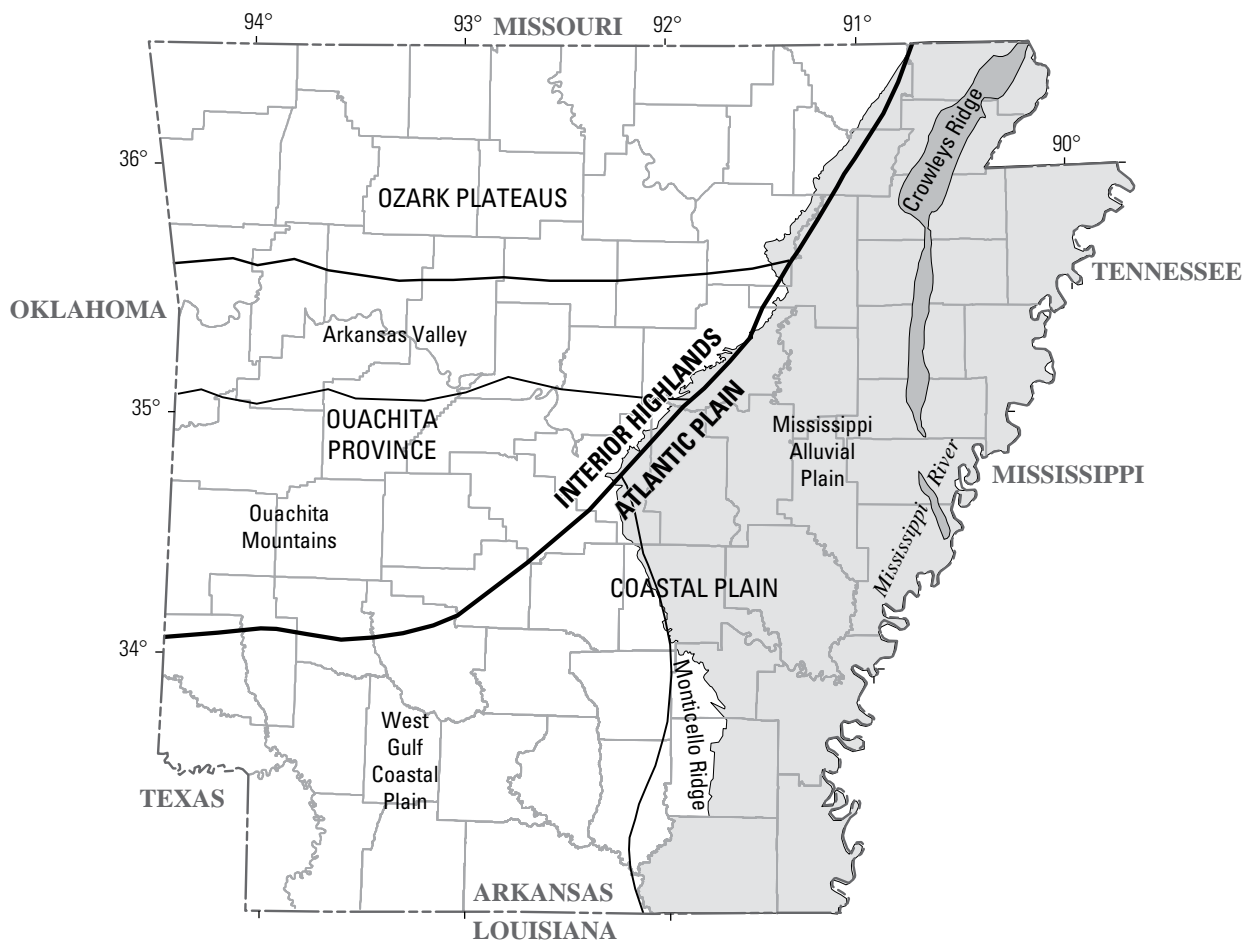


Prepared in cooperation with the Arkansas Natural Resources Commission and the Arkansas Geological Survey

Water Levels and Water Quality in the Mississippi River Valley Alluvial Aquifer in Eastern Arkansas, 2012



Scientific Investigations Report 2015–5059

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By T.P. Schrader

Prepared in cooperation with the Arkansas Natural Resources Commission and
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Conversion Factors

Inch/Pound to International System of Units

Multiply	By	To obtain
	Length	
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
	Area	
square mile (mi ²)	2.590	square kilometer (km ²)
	Flow rate	
foot per year (ft/yr)	0.3048	meter per year (m/yr)
gallon per minute (gal/min)	0.06309	liter per second (L/s)
million gallons per day (Mgal/d)	0.04381	cubic meter per second (m ³ /s)

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as
 $^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$.

Datum

Vertical coordinate information is referenced to the National Geodetic Vertical Datum of 1929 (NGVD 29).

Horizontal coordinate information is referenced to North American Datum of 1983 (NAD 83).

Altitude, as used in this report, refers to distance above the vertical datum.

Supplemental Information

Specific conductance is given in microsiemens per centimeter at 25 degrees Celsius ($\mu\text{S}/\text{cm}$ at 25 °C).

Concentrations of chemical constituents in water are given either in milligrams per liter (mg/L) or micrograms per liter ($\mu\text{g}/\text{L}$).

Water Levels and Water Quality in the Mississippi River Valley Alluvial Aquifer in Eastern Arkansas, 2012

By T.P. Schrader

Abstract

During the spring of 2012, the U.S. Geological Survey, in cooperation with the Arkansas Natural Resources Commission and the Arkansas Geological Survey, measured water levels in 342 wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas. The Arkansas Natural Resources Commission measured water levels in 11 wells, and the U.S. Department of Agriculture-Natural Resources Conservation Service measured water levels in 239 wells completed in the alluvial aquifer and provided these data to the Arkansas Natural Resources Commission. In 2010, estimated water withdrawals from the alluvial aquifer in Arkansas totaled about 7,592 million gallons per day. Withdrawals more than doubled between 1985 and 2010, about a 115-percent increase.

The regional direction of groundwater flow is generally to the south and east except where flow is affected by groundwater withdrawals. East of Crowleys Ridge, water flows from north to south along Crowleys Ridge and northeast to southwest along the Mississippi River. West of Crowleys Ridge, water flows from northeast to southwest along Crowleys Ridge from Clay County to Craighead County. From Craighead County to Monroe County, a depression redirects groundwater flow from all directions. A depression in Arkansas, Lonoke, and Prairie Counties alters groundwater flow from all directions. South of the Arkansas River, the flow is towards the southeast, except near depressions in Lincoln and Desha Counties and Desha and Chicot Counties where flow is towards the depression. In 2012, the lowest water-level altitude was 73 feet (ft) in Arkansas County. The highest water-level altitude was 288 ft in northeastern Clay County on the western side of Crowleys Ridge.

The 2012 potentiometric-surface map shows eight depressions, two large depressions and six small depressions. One large depression begins in southeastern Arkansas County, at the Arkansas and Desha County line, extends north into Prairie County, west into Lonoke County, and east into the westernmost part of Monroe County. The area in Lonoke, Prairie, and White Counties in the northwestern half of the depression has a water-level altitude measurement of 90 ft and has expanded into the northern third of Prairie County.

The 2012 potentiometric-surface map shows a general north-south depression with the southern end in central Monroe County through western Lee, St. Francis, Cross,

Poinsett, and Craighead Counties and eastern Woodruff and Jackson Counties. There are two deeper areas in this depression, one at the Monroe and Lee County line, with a low water-level altitude measurement of 123 ft, and the second in Poinsett County, with a low water-level altitude measurement of 113 ft. The six small depressions are located in northern Ashley County, in southern Desha and northern Chicot Counties, in eastern Lincoln and western Chicot Counties, at the Arkansas and Desha County line, in northern Phillips County, and in southeastern Greene County.

A map showing the difference in water levels was constructed using 541 differences in water levels measured during 2008 and 2012. The difference in measured water levels from 2008 to 2012 ranged from -27.4 ft to 18.7 ft, with a mean of -1.0 ft. The largest decline of -27.4 ft occurred in Lonoke County, and the largest rise of 18.7 ft occurred in Prairie County. Four areas were predominated by declines—west of Crowleys Ridge from Greene County south to Lee County, including Lawrence and southern Woodruff Counties; east of Crowleys Ridge from Clay County south to Poinsett County and Mississippi County; Lonoke and Jefferson Counties; and Ashley, Chicot, Desha, and Drew Counties. Three areas are predominated by rises in measured water levels—east of Crowleys Ridge in Crittenden, Cross, Lee, and St. Francis Counties; Jackson and northern Woodruff Counties; and Arkansas, Monroe, Phillips, Prairie, and White Counties.

Long-term water-level changes were evaluated using hydrographs from 319 wells in the alluvial aquifer for the period from 1988 to 2012. The annual rise or decline in water level for the entire study area was -0.45 feet per year (ft/yr) with a range from -2.08 to 0.84 ft/yr. Arkansas County had two different rates of annual decline for the two hydrographs shown, about 0.97 ft/yr and about 0.26 ft/yr.

In Craighead, Cross, Lee, Poinsett, and St. Francis Counties, water levels are declining at a greater rate in areas west of Crowleys Ridge than in areas east of Crowleys Ridge. Two hydrographs are shown in each of Craighead, Cross, Lee, Poinsett, and St. Francis Counties, one on the west side of Crowleys Ridge and one on the east side of Crowleys Ridge. The hydrographs west of Crowleys Ridge have annual water-level declines from -0.91 to -1.24 ft/yr. The hydrographs east of Crowleys Ridge have annual water-level declines from -0.07 to -0.40 ft/yr. The mean county annual water-level declines for these counties range from -0.55 to -0.87 ft/yr.

2 Water Levels and Water Quality in the Mississippi River Valley Alluvial Aquifer in Eastern Arkansas, 2012

Water samples were collected in the summer of 2012 from 142 wells completed in the alluvial aquifer and measured onsite for specific conductance, temperature, and pH. Samples were collected from 94 wells for dissolved chloride analysis. Specific conductance ranged from 91 microsiemens per centimeter at 25 degrees Celsius ($\mu\text{S}/\text{cm}$ at 25 °C) in Drew County to 984 $\mu\text{S}/\text{cm}$ at 25 °C in Monroe County. The mean specific conductance was 547 $\mu\text{S}/\text{cm}$ at 25 °C. Temperature ranged from 18.1 degrees Celsius (°C) in Crittenden County to 22.4 °C in Prairie County. The mean temperature was 22.1 °C. The pH ranged from 8.3 in Randolph County to 6.2 in Drew County and had a median of 7.3. Dissolved chloride concentrations ranged from 3.34 milligrams per liter (mg/L) in Randolph County to 182 mg/L in Lincoln County. The mean chloride concentration was 27.6 mg/L.

Introduction

The Mississippi Alluvial Plain 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 (fig. 1). 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 Atlantic Plain and the Interior Highlands) and the Monticello Ridge (a topographic feature in southeastern Arkansas) (fig. 1).

During the spring of 2012, the U.S. Geological Survey (USGS), in cooperation with the Arkansas Natural Resources Commission (ANRC) and the Arkansas Geological Survey, measured water levels in 342 wells completed in the alluvial aquifer in eastern Arkansas. The ANRC measured water levels in 11 wells and the U.S. Department of Agriculture-Natural Resources Conservation Service (NRCS) measured water levels in 239 wells completed in the alluvial aquifer and provided these data to the ANRC. The USGS incorporated those data into a database and developed a potentiometric-surface map of the alluvial aquifer for the spring of 2012 using all 592 water-level measurements made by the three agencies. Water samples collected in the summer of 2012 from 142 wells completed in the alluvial aquifer were measured onsite for specific conductance, temperature, and pH. Dissolved chloride samples were collected from 94 wells and were analyzed by

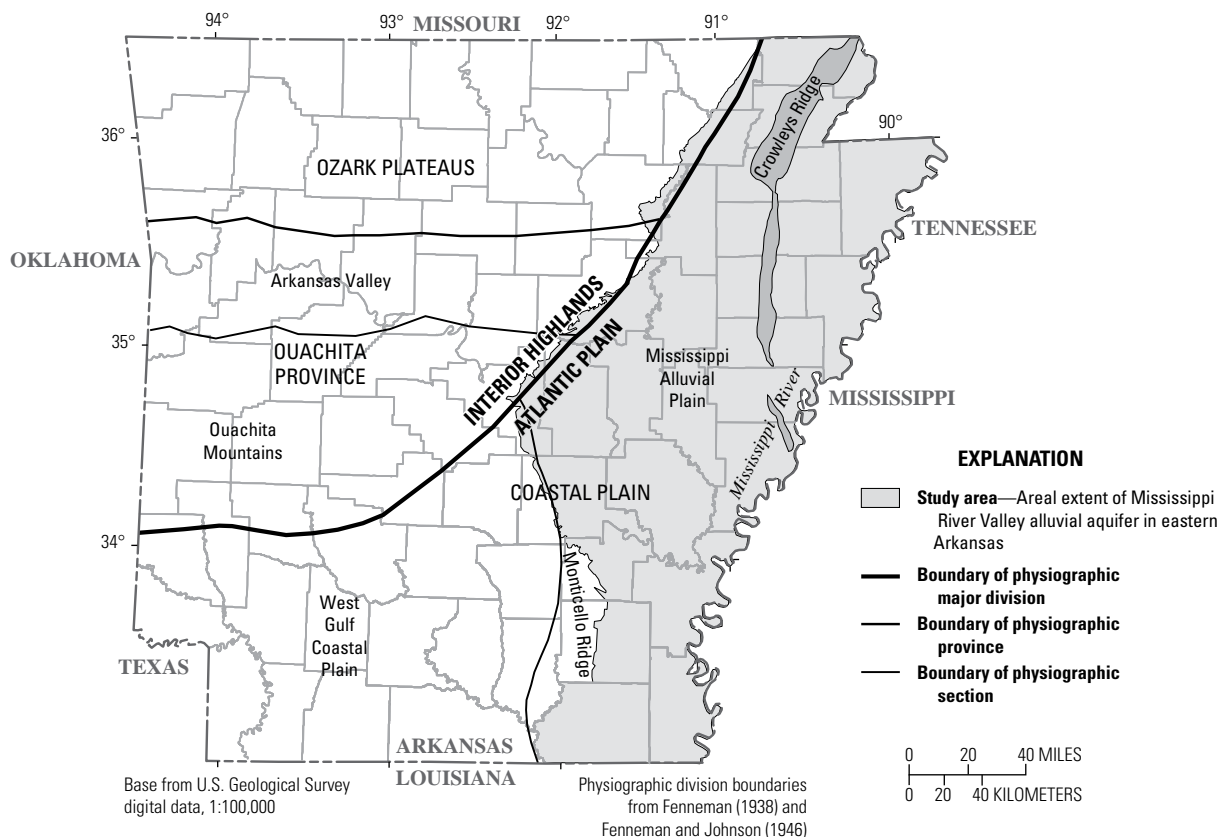


Figure 1. Location of study area.

the USGS National Water Quality Laboratory. These analyses provided information for a database of selected water-quality data for the alluvial aquifer. Information in this report includes (1) groundwater levels for spring 2012, (2) a potentiometric-surface map, (3) a water-level difference map comparing water levels from 2008 to 2012, (4) selected water-level hydrographs, and (5) a groundwater water-quality data table for the summer of 2012.

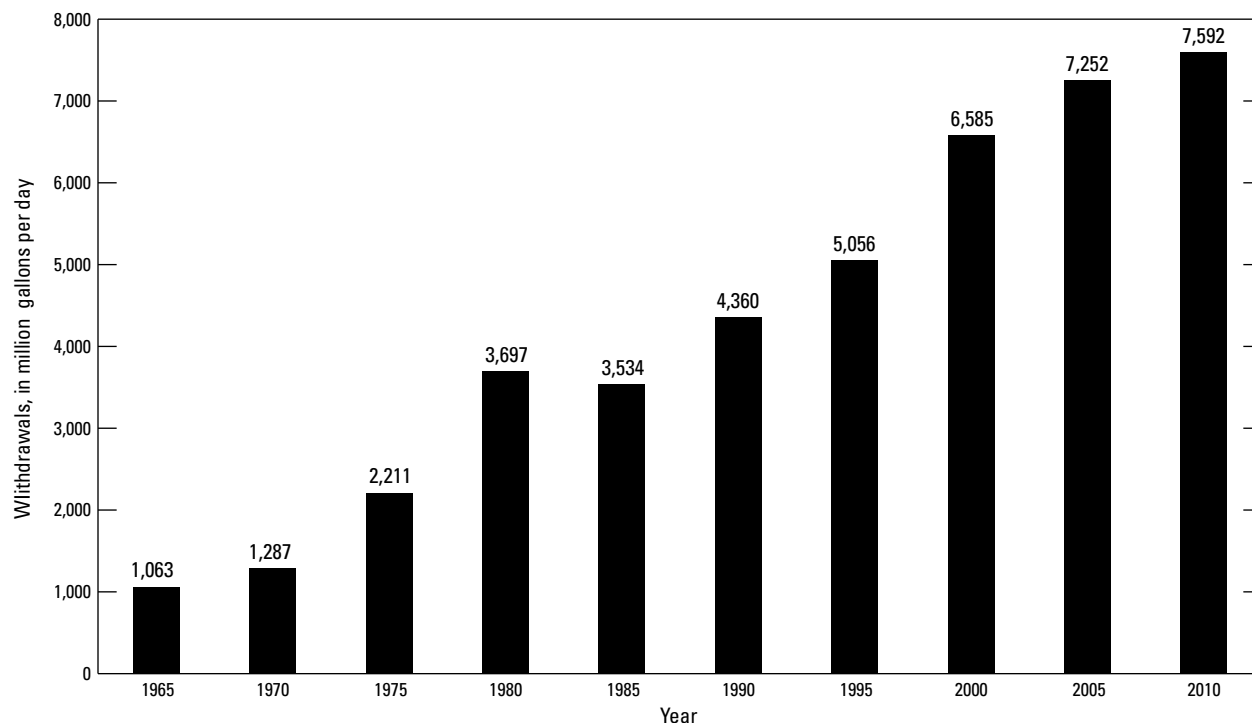
Water Use

The alluvial aquifer is increasingly relied upon for agriculture and aquaculture water supply in eastern Arkansas. Estimated water withdrawals from the alluvial aquifer in Arkansas totaled about 7,592 million gallons per day (Mgal/d) in 2010 (Terrance W. Holland, U.S. Geological Survey, written commun., 2013) and about 1,063 Mgal/d in 1965 (fig. 2) (Halberg and Stephens, 1966), with an increase of about 614 percent. Withdrawals have more than doubled between 1985 and 2010, with an increase of about 115 percent. Starting in 1970 and continuing in 5-year intervals through 2005, estimated water withdrawals from the alluvial aquifer in Arkansas totaled about 1,287 Mgal/d, 2,211 Mgal/d,

3,697 Mgal/d, 3,534 Mgal/d, 4,360 Mgal/d, 5,056 Mgal/d, 6,585 Mgal/d, and 7,252 Mgal/d (Halberg, 1972, 1977; Holland and Ludwig, 1981; Holland, 1987, 1993, 1999, 2004, 2007).

Well-Numbering System

The well-numbering system used in this report is based upon the Public Land Survey System used in Arkansas. The component parts of a well number are the township designation; the range designation; the section number; three-letter designation that indicates, respectively, the quarter section, the quarter-quarter section, and the quarter-quarter-quarter section in which the well is located; and the 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. 3) is located in Township 1 South, Range 3 West, 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.



Data compiled from Halberg and Stephens (1966); Halberg (1972, 1977); Holland and Ludwig (1981); Holland (1987, 1993, 1999, 2004, 2007); and Terrance W. Holland (U.S. Geological Survey, written commun., 2013).

Figure 2. Water withdrawals from the Mississippi River Valley alluvial aquifer in Arkansas, 1965–2010.

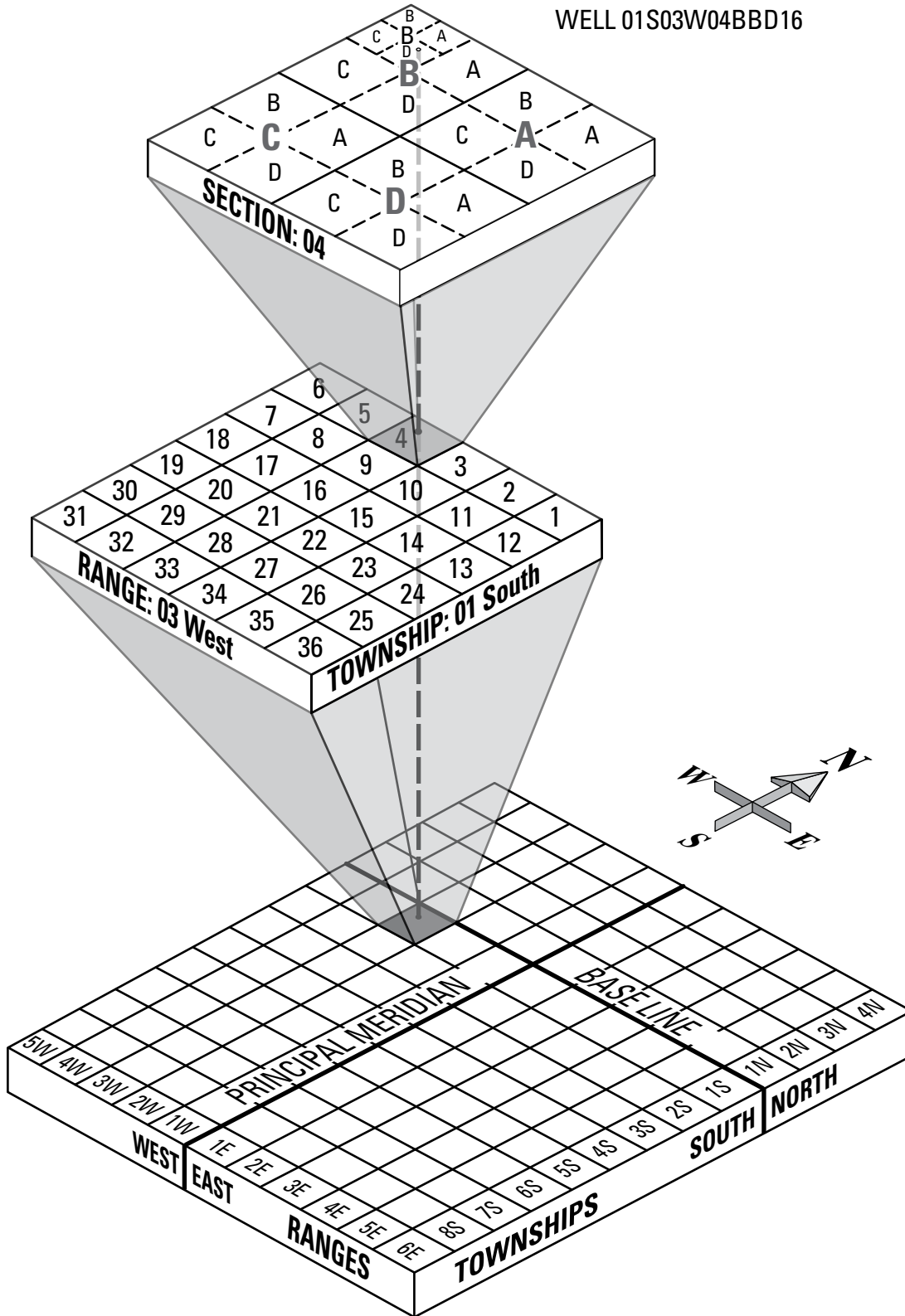


Figure 3. Well-numbering system.

Methods

Water levels were measured from March to May 2012 by personnel from the USGS, ANRC, and NRCS from wells completed in the alluvial aquifer. Measurements were made using steel or electric tapes graduated in hundredths of a foot. Water levels were collected according to USGS technical procedures (Cunningham and Schalk, 2011). The steel and electric tapes were calibrated prior to collecting water-level measurements. Calibration was performed by comparing the steel or electric tapes to a standardized steel tape used only for calibration. Tape calibrations are performed annually.

Well locations were verified using Global Positioning System (GPS) receivers to acquire the horizontal-coordinate information, latitude and longitude, based on the North American Datum of 1983 (NAD 83). The latitude and longitude of the wells in Arkansas were recorded from a GPS receiver accurate to one-tenth of a second of latitude and longitude (approximately 10–20 feet [ft]). The latitude and longitude of each well were transferred to topographic maps, and the altitude of each well (National Geodetic Vertical Datum of 1929 [NGVD 29]) was determined from the topographic contours at the location on the map. Altitude is accurate to about 2.5 to 5 ft, or half the contour interval on the map. Wells with altitudes reported to the hundredths of a foot had levels measured to the well using surveying equipment.

Two methods are used for calculating the annual rise or decline of water levels. One method is to take the difference between the final and initial water levels and divide by the period of time. This method uses two measurements, and calculated values are dependent solely on the final and initial water levels. A second method uses the linear regression of water levels and time of measurement to calculate the annual rise or decline of water levels. Linear regression is more robust because it includes all the measurements to determine the trend line, resulting in a value that is dependent on all water levels during the period of record. The slope, β (equation 1), of the line is the annual rise or decline of water levels. The intercept, b_0 , is the projected water level in the year 1900, the origin for the graph. The predevelopment water level will not be discussed as this condition cannot be demonstrated. The equation of the regression line or line of best fit, $Y = aX + b$, may be written as:

$$h = \beta t + b_0 \quad (1)$$

where

h	is water-level altitude, in feet;
β	is the slope of the line, in feet per year;
t	is time, in years; and
b_0	is the y-intercept or water-level altitude at time equal to 1900, in feet.

Five assumptions are associated with linear regression: (1) Y is linearly related to X, (2) data used to fit the linear regression are representative of the data of interest, (3) variance of the residuals is constant and does not depend on X or on anything else, (4) the residuals are independent, and (5) the residuals are normally distributed. The assumption of a normal distribution is involved only when testing hypotheses, which requires the residuals from the regression equation to be normally distributed (Helsel and Hirsch, 1992).

The R^2 term is the coefficient of determination, the correlation coefficient, or the fraction of variance explained by the regression. The R^2 value gives the proportions of the total variability that can be accounted by the independent variable (Helsel and Hirsch, 1992). Values of R^2 can range from 0.00 to 1.00. A large value of R^2 can indicate a linear change in water level. A low value of R^2 can indicate sporadic change in water level.

Water-quality samples were collected for specific conductance, pH, and temperature using the procedures described in the National Field Manual for the Collection of Water-Quality Data (U.S. Geological Survey, variously dated). Samples also were collected for dissolved chloride analysis at the USGS National Water Quality Laboratory (Fishman and Friedman, 1989). Wells were purged a minimum of three-casing volumes at a pumping rate that ranged from 100 to 500 gallons per minute. The purge process is important to obtain an accurate water-quality sample that is representative of the aquifer conditions without the effects of the borehole environment. Casing volumes for the wells were calculated from the well-casing diameter, depth to water, and well depth. The cross-sectional area of the casing was calculated from the casing diameter, and the height of the water column was determined by subtracting the depth to water from the well depth. The area and the height of the water column were multiplied for a casing volume in cubic feet, then converted to gallons. The calculated purge volume at each well was then divided by the pumping rate to determine the minimum pumping time for purging.

During the purge process, specific conductance, pH, and temperature were measured from selected wells using specific-conductance and pH meters with temperature compensation until measurements stabilized (Fishman and Friedman, 1989). A field meter was calibrated twice daily by comparing the measurements of two specific conductance standards and two pH calibration standards. Specific conductance is a measure of the electrical conductance of a solution normalized to 25 degree Celsius ($^{\circ}\text{C}$), an indicator of the presence of charged ionic species or dissolved solids. As the ion concentration increases in groundwater, the conductivity of the groundwater increases. The pH is a measure of the acidity of the water, an indicator of the hydrogen ion concentration and activity.

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). The coarse sediments contained in the lower sections of the alluvial and terrace deposits are 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).

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 deposits of Tertiary age trending north-south from the Missouri-Arkansas border. Crowleys Ridge is a prominent topographic feature on the otherwise low-relief surface of the Mississippi Alluvial Plain and forms a physical barrier to groundwater flow in the alluvial aquifer.

Water Levels

Water-level measurements in wells completed in the alluvial aquifer (app. 1) were used to produce a regional potentiometric-surface map (pl. 1). The water-level altitudes for the potentiometric-surface map were calculated by subtracting the depth-to-water measurement from the land-surface altitude, then rounding to the nearest foot. All water levels on the potentiometric-surface map (pl. 1), the long-term hydrographs, and appendix 1 are in feet of altitude, referenced to NGVD 29. A difference in water-level map from 2008 to 2012 (pl. 2) was produced by subtracting water-level measurements in 2012 from measurements in 2008. Data from wells that have water-level measurements with a minimum 25-year period of record were used to produce hydrographs. The water-level changes shown in the hydrographs indicate long-term changes in hydrologic conditions. Long-term water-level changes shown by many of the hydrographs reflect the development of depressions in the potentiometric surface.

Potentiometric-Surface Map

The potentiometric-surface map (pl. 1) shows the altitude at which water would have stood in tightly cased wells completed in the alluvial aquifer. The map on plate 1 is based on water-level measurements (342 by USGS, 11 by ANRC, and 239 by NRCS) made in 592 wells during the spring of 2012 (app. 1). The potentiometric 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 altitude. The general direction of groundwater flow is perpendicular to the contours in the direction of decreasing potentiometric-surface altitude. In 2012, the lowest water-level altitude was 73 ft in Arkansas County. The highest water-level altitude was 288 ft in northeastern Clay County on the western side of Crowleys Ridge.

The regional direction of groundwater flow is generally to the south and east except where flow is affected by groundwater withdrawals. The groundwater flow direction is affected over substantial areas by depressions (pl. 1). East of Crowleys Ridge, water flows from north to south along Crowleys Ridge and northeast to southwest along the Mississippi River. West of Crowleys Ridge, water flows from northeast to southwest along Crowleys Ridge from Clay County to Craighead County. From Craighead County to Monroe County, a depression alters groundwater flow from all directions. The depression in Arkansas, Lonoke, and Prairie Counties also alters groundwater flow from all directions. The flow along large sections of the Arkansas, Mississippi, and White Rivers is away from the rivers. South of the Arkansas River, the flow is towards the southeast, except near the depressions in Lincoln and Desha Counties and Desha and Chicot Counties where flow is towards the depressions.

Previous reports described three large depressions in the alluvial aquifer potentiometric surface (Stanton and others, 1998; Joseph, 1999; Schrader, 2001; Reed, 2004; Schrader, 2006, 2008, 2010). A large, elongated area of depression extends across Arkansas, Lonoke, Prairie, and White Counties. Two shallow depressions in Lee, Monroe, St. Francis, and Woodruff Counties and in Craighead, Cross, and Poinsett Counties have now merged into a single depression.

The 2012 potentiometric-surface map shows eight depressions, two large depressions and six small depressions. One large depression begins in southeastern Arkansas County, at the Arkansas and Desha County line, and extends north into Prairie County, west into Lonoke County, and east into the westernmost part of Monroe County. The area in Arkansas County within the southeastern half of the depression has not expanded horizontally during recent years, although the center of the depression has deepened. The lowest water-level altitude measurement is 73 ft. The Arkansas and White Rivers that bound Arkansas County on the southwestern and eastern county lines are hydrologically connected to the alluvial aquifer and provide recharge. The area in Lonoke, Prairie, and White Counties in the northwestern half of the depression has a low water-level altitude measurement of 90 ft and has expanded into the northern third of Prairie County.

Along the western side of Crowleys Ridge, two previously documented areas of depression expanded and merged into a single depression by 2002 (Reed, 2004). The 2012 potentiometric-surface map shows a general north-south depression with the southern end in central Monroe County extending through western Lee, St. Francis, Cross, Poinsett, and Craighead Counties and eastern Woodruff and Jackson Counties. Two deeper areas occur in this depression, one at the Monroe and Lee County line, with a low water-level altitude measurement of 123 ft, and the second in Poinsett County, with a low water-level altitude measurement of 113 ft.

Six small depressions are shown in the 2012 potentiometric-surface map. Beginning at the south end of the map, there is a depression in northern Ashley County, with a low water-level altitude measurement of 96 ft. The depression in northern Chicot and southern Desha Counties was first evident in the 1998 potentiometric surface (Joseph, 1999) and has a low water-level altitude measurement of 86 ft. The depression in eastern Lincoln and western Desha Counties was first evident in the 2002 potentiometric surface (Schrader, 2006) and has a low water-level altitude measurement of 110 ft. The depression at the Desha and Arkansas County line was first evident in the 2006 potentiometric surface (Schrader, 2008) and has a low water-level altitude measurement of 113 ft. The depression in northern Phillips County is shown for the first time in the 2012 potentiometric surface and has a low water-level altitude measurement of 149 ft. The depression in southeastern Greene County was first evident in the 1998 potentiometric surface (Joseph, 1999) and has a low water-level altitude measurement of 214 ft. Continued monitoring of the potentiometric surface will determine if these small depressions are the result of short-term variations or long-term changes in the hydrologic conditions in the alluvial aquifer.

Water-Level Difference from 2008 to 2012

A map showing the difference in water level (pl. 2) was constructed using 541 differences in water levels measured during 2012 (app. 2) and 2008 (Schrader, 2010). Differences in water level were calculated by subtracting the 2012 depth-to-water measurement from the 2008 depth-to-water measurement. Positive values indicate a rise and negative values indicate a decline in water level. Rises in water level are indicated on plate 2 with blue triangles pointing upward; declines in water level are indicated with red triangles pointing downward. The triangle size is scaled to the value of rise or decline.

The difference in measured water levels from 2008 to 2012 ranged from -27.4 ft to 18.7 ft, with a mean of -1.0 ft. The largest decline of -27.4 ft occurred in Lonoke County and the largest rise of 18.7 ft occurred in Prairie County. Out of the 541 differences on plate 2, 335 were declines (61.9 percent), 16 were no difference (values of 0.0 ft; 3.0 percent), and 190 were rises (35.1 percent). Four areas are predominated by declines—west of Crowleys Ridge from Greene County

south to Lee County, including eastern Lawrence and southern Woodruff Counties; east of Crowleys Ridge from Clay County south to Mississippi and Poinsett Counties; Lonoke and Jefferson Counties; and Desha, Drew, Chicot, and Ashley Counties. Three areas are predominated by rises in measured water levels—Jackson and northern Woodruff Counties; east of Crowleys Ridge in Crittenden, Cross, St. Francis, and Lee Counties; and White, Prairie, Monroe, Arkansas, and Phillips Counties.

Long-Term Hydrographs

Long-term water-level changes were evaluated using hydrographs from 319 wells in the alluvial aquifer for the period from 1988 to 2012. The minimum 25-year period is used to show long-term trends not dominated by short-term variations in climate and localized pumping rates on water levels in a single well. Linear regression was used to calculate the trend in water-level change for each well for this period. The slope of the trend line represents the annual rise or decline in water level during the 25-year period. Negative values denote a decline in water level and positive values indicate a rise. The hydrographs were grouped by county. The number of wells, the range of values for the annual rise or decline in water level, the mean, the median, and the correlation coefficient (R^2) for each county are listed in table 1. The mean county annual rises and declines in water level for the entire study area were -0.45 feet per year (ft/yr) with a range from -2.08 to 0.84 ft/yr. Selected hydrographs are shown in figure 4 (wells A–FF, pl. 1).

Long-term water-level changes varied substantially across the study area. The mean rise or decline for Independence and White Counties have an annual rise from 1988 to 2012. The rise in Independence County was determined from the data of one well. Mean county annual declines between -0.50 ft/yr and 0.00 ft/yr occurred in Arkansas, Ashley, Chicot, Clay, Crittenden, Drew, Greene, Jefferson, Mississippi, Monroe, Phillips, Prairie, Pulaski, Randolph, and Woodruff Counties. The mean county annual declines between -1.00 ft/yr and -0.50 ft/yr occurred in Craighead, Cross, Desha, Jackson, Lee, Lincoln, Lonoke, Poinsett, and St. Francis Counties.

The analysis of long-term water-level changes (1988–2012) in Arkansas, Lonoke, and Prairie Counties shows the elongation of the depression in these three counties. Arkansas County has two different rates of annual decline for the two hydrographs shown. Well 04S03W32BCB1 (fig. 4A, pl. 1) shows an annual water-level decline of about 0.97 ft/yr since 1988. Well 04S03W32BCB1 is located near the center of the depression in Arkansas County and generally shows a water-level decline during the 76-year period of record. Well 07S04W01DDD1 (fig. 4B, pl. 1) has an annual water-level rise of about 0.26 ft/yr since 1988. Well 07S04W01DDD1 is located near the Arkansas River and shows a relatively stable water level to about 1990 with larger fluctuations from 1990 to present. The water level in the Arkansas River

8 Water Levels and Water Quality in the Mississippi River Valley Alluvial Aquifer in Eastern Arkansas, 2012

Table 1. Range, mean, median, and correlation coefficient, R^2 , of annual rise-decline in water level by county for wells in the Mississippi River Valley alluvial aquifer, 1988–2012.

[Annual rise or decline in water level for each well is calculated using linear regression; negative value indicates decline; positive value indicates rise]

County	Number of wells	Range of annual rise-decline in water level (feet/year)	Mean annual rise-decline in water level (feet/year)	Median annual rise-decline in water level (feet/year)	Range of R^2 values for trend line
Arkansas	25	-0.99 to 0.84	-0.14	-0.18	0.15 to 0.83
Ashley	13	-0.77 to 0.11	-0.31	-0.33	0.17 to 0.87
Chicot	8	-1.10 to 0.26	-0.49	-0.42	0.24 to 0.94
Clay	19	-1.06 to -0.01	-0.32	-0.18	0.16 to 0.96
Craighead	16	-1.50 to 0.04	-0.55	-0.42	0.25 to 0.97
Crittenden	7	-0.69 to -0.07	-0.36	-0.37	0.19 to 0.94
Cross	23	-1.20 to -0.18	-0.87	-0.95	0.33 to 0.99
Desha	16	-1.13 to -0.15	-0.67	-0.71	0.17 to 0.92
Drew	7	-0.55 to -0.22	-0.40	-0.37	0.19 to 0.84
Greene	8	-0.77 to 0.04	-0.25	-0.22	0.08 to 0.93
Independence	1	0.15 to 0.15	0.15	0.15	0.23 to 0.23
Jackson	6	-0.80 to -0.26	-0.65	-0.75	0.68 to 0.97
Jefferson	8	-1.21 to -0.15	-0.44	-0.38	0.16 to 0.91
Lee	25	-1.53 to 0.11	-0.64	-0.62	0.20 to 0.94
Lincoln	10	-1.21 to -0.26	-0.71	-0.69	0.23 to 0.84
Lonoke	14	-1.50 to -0.01	-0.73	-0.71	0.22 to 0.98
Mississippi	8	-0.33 to 0.04	-0.08	-0.07	0.16 to 0.60
Monroe	19	-0.84 to 0.26	-0.27	-0.26	0.18 to 0.95
Phillips	17	-0.69 to 0.02	-0.22	-0.22	0.11 to 0.73
Poinsett	25	-2.08 to 0.07	-0.82	-0.91	0.17 to 0.98
Prairie	8	-0.58 to 0.15	-0.21	-0.18	0.13 to 0.95
Pulaski	1	-0.22 to -0.22	-0.22	-0.22	0.46 to 0.46
Randolph	4	-0.51 to -0.04	-0.28	-0.29	0.18 to 0.72
St. Francis	7	-0.91 to -0.18	-0.66	-0.66	0.35 to 0.97
White	8	-0.58 to 0.51	0.12	0.18	0.19 to 0.65
Woodruff	16	-0.99 to 0.66	-0.18	-0.09	0.12 to 0.96

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. Well 04N05W07CDC1 (fig. 4Z, pl. 1) is located in the central part of Prairie County and has an annual decline of about 0.51 ft/yr since 1988. Well 02S07W10CCB1 (fig. 4T, pl. 1), near the western edge of the depression in Lonoke County, shows an annual water-level decline of about 0.69 ft/yr since 1988 and shows a nearly continuous water-level decline during the 55 years of record. These rates of water-level change indicate that this depression has expanded in an elongated direction north and west into Lonoke and Prairie Counties from 1988 to 2012. Water-level declines in neighboring counties are further evidence of the expansion of the depression centered in Arkansas, Lonoke, and Prairie Counties. In Jefferson County, well 03S08W24BBC1 (fig. 4P, pl. 1) has an annual water-level decline of about 0.58 ft/yr

during the period from 1988 to 2012. Long-term declines in this outlying well indicate that the depression is expanding.

In Craighead, Cross, Lee, Poinsett, and St. Francis Counties water levels are declining at a greater rate west of Crowleys Ridge than east of Crowleys Ridge. Two hydrographs are shown in each of Craighead, Cross, Lee, Poinsett, and St. Francis Counties, one on the west side of Crowleys Ridge and one on the east side of Crowleys Ridge. The hydrographs west of Crowleys Ridge have annual water-level declines from -0.91 to -1.24 ft/yr during the period from 1988 to 2012. The hydrographs east of Crowleys Ridge have annual water-level declines from -0.07 to -0.40 ft/yr during the period from 1988 to 2012. The mean county annual declines for these counties are from -0.55 to -0.87 ft/yr during the period from 1988 to 2012. The annual declines for these counties indicate the two different conditions in each county.

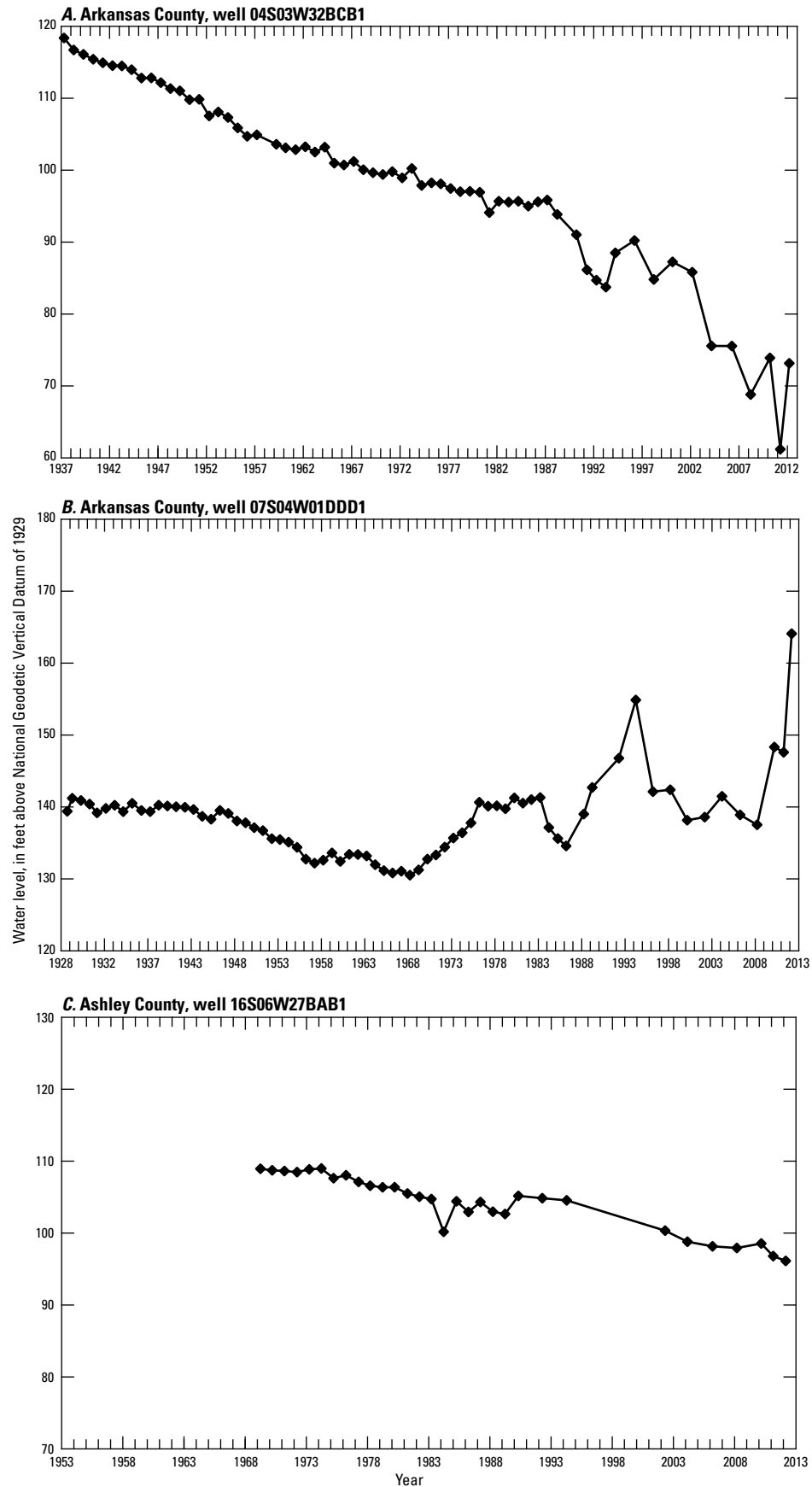


Figure 4. Water-level hydrographs for selected wells completed in the Mississippi River Valley alluvial aquifer in Arkansas.

10 Water Levels and Water Quality in the Mississippi River Valley Alluvial Aquifer in Eastern Arkansas, 2012

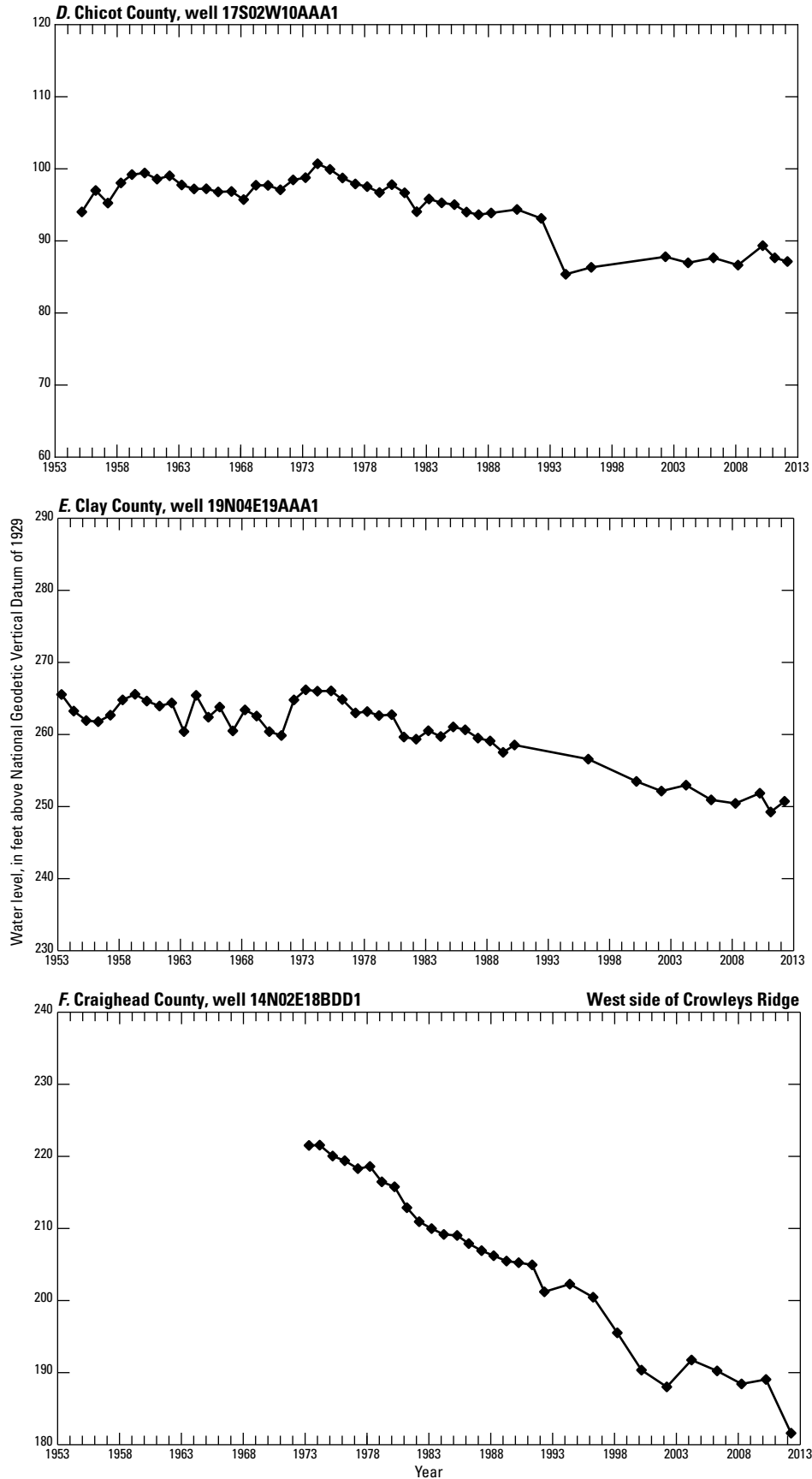


Figure 4. Water-level hydrographs for selected wells completed in the Mississippi River Valley alluvial aquifer in Arkansas.—Continued

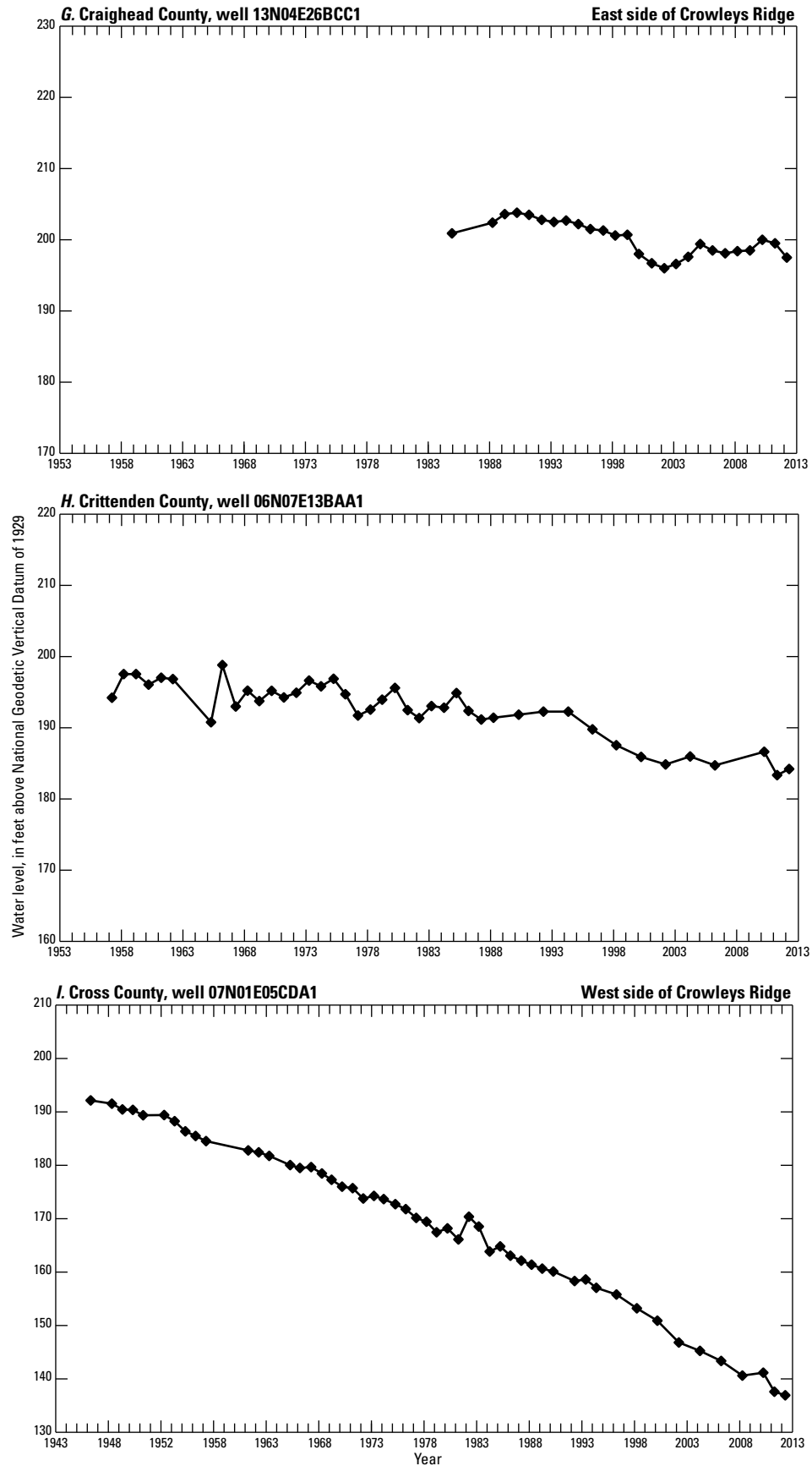


Figure 4. Water-level hydrographs for selected wells completed in the Mississippi River Valley alluvial aquifer in Arkansas.—Continued

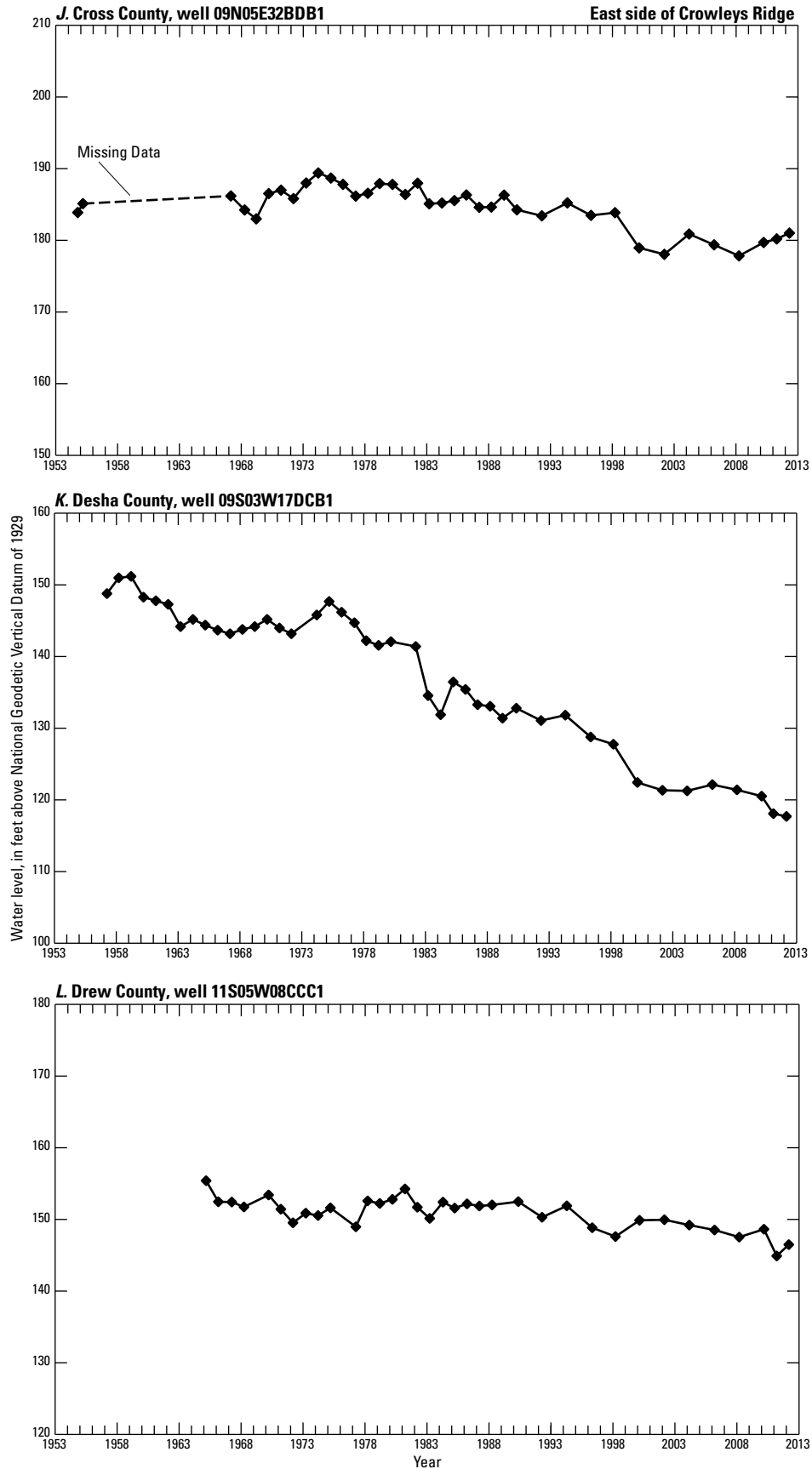


Figure 4. Water-level hydrographs for selected wells completed in the Mississippi River Valley alluvial aquifer in Arkansas.—Continued

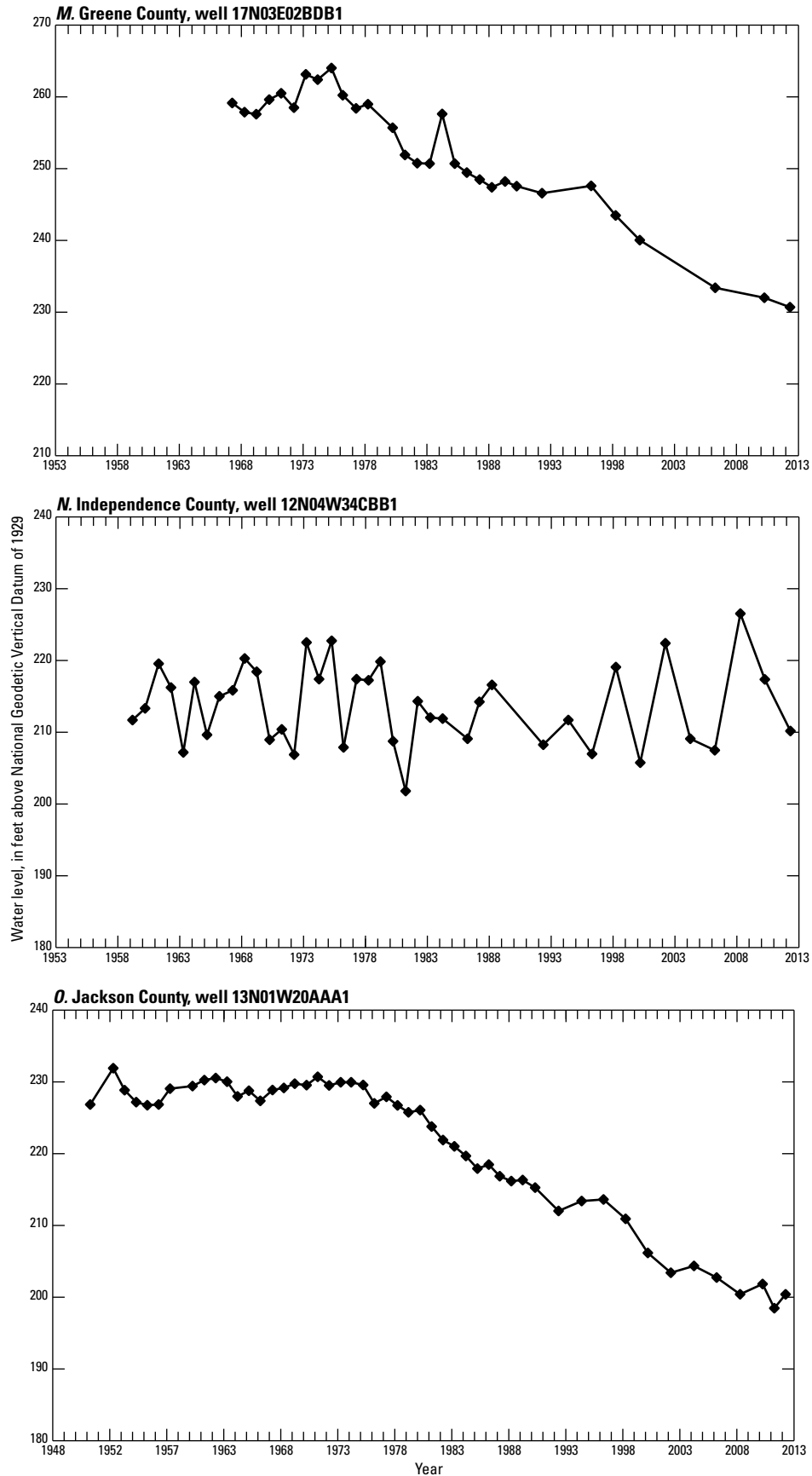


Figure 4. Water-level hydrographs for selected wells completed in the Mississippi River Valley alluvial aquifer in Arkansas.—Continued

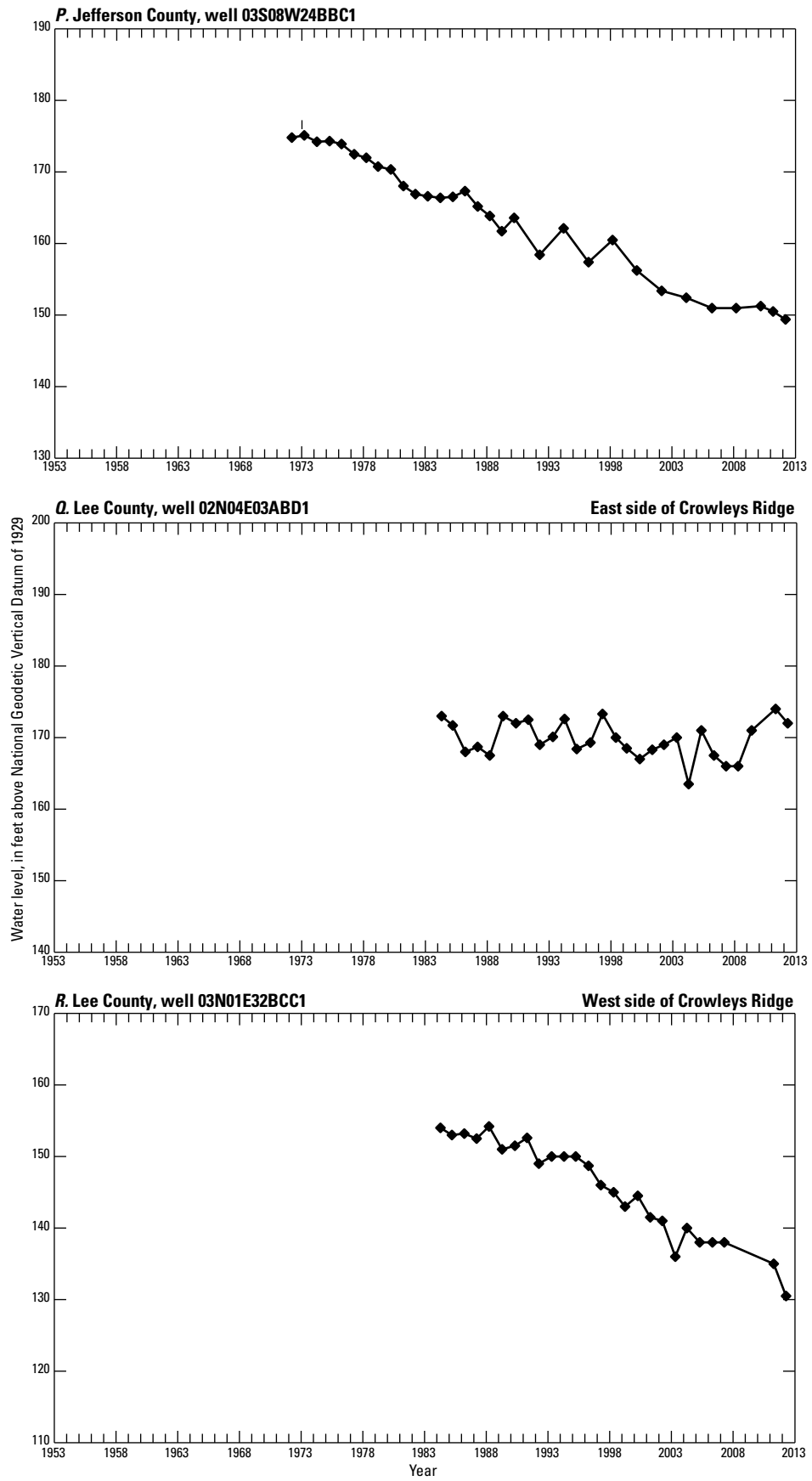


Figure 4. Water-level hydrographs for selected wells completed in the Mississippi River Valley alluvial aquifer in Arkansas.—Continued

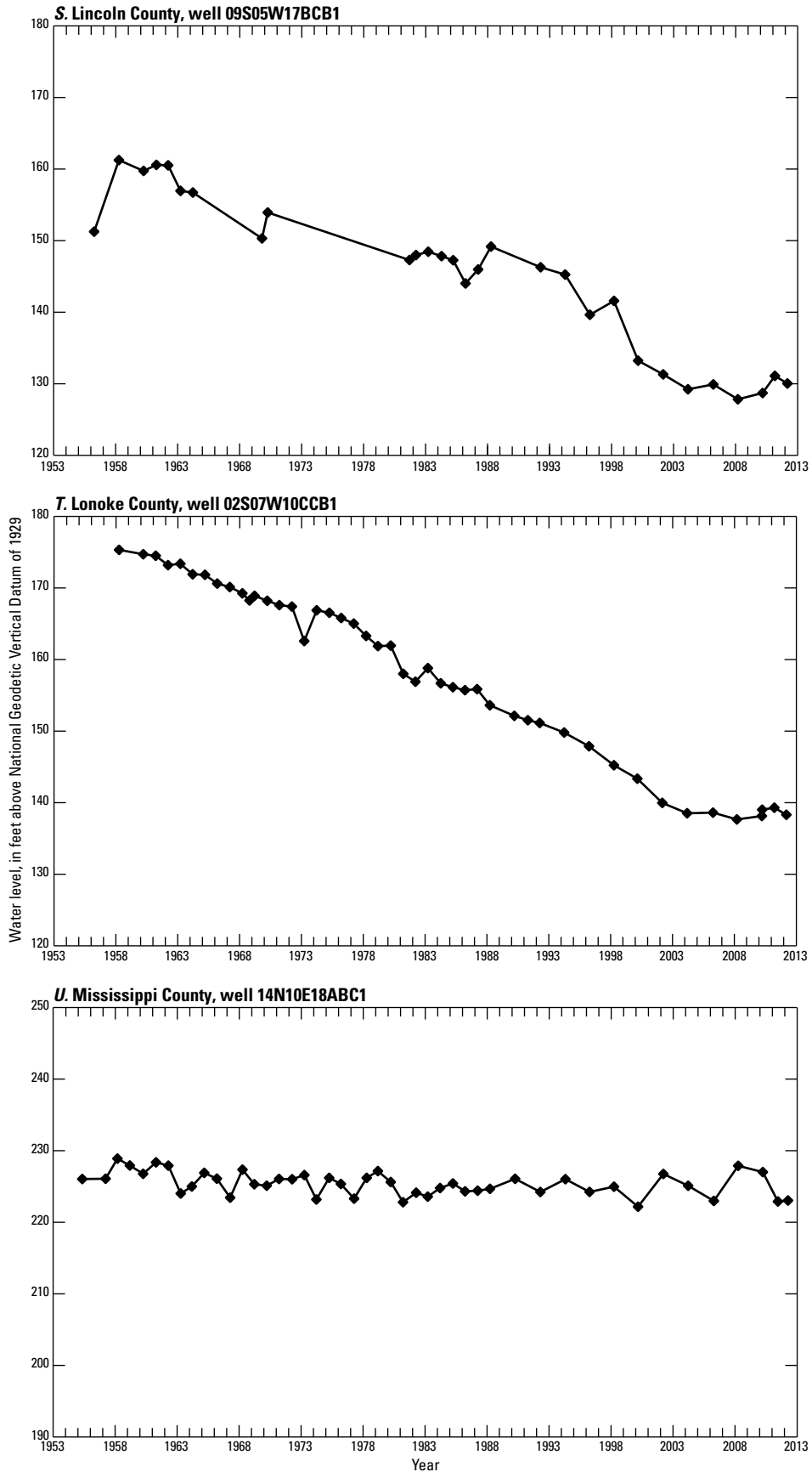


Figure 4. Water-level hydrographs for selected wells completed in the Mississippi River Valley alluvial aquifer in Arkansas.—Continued

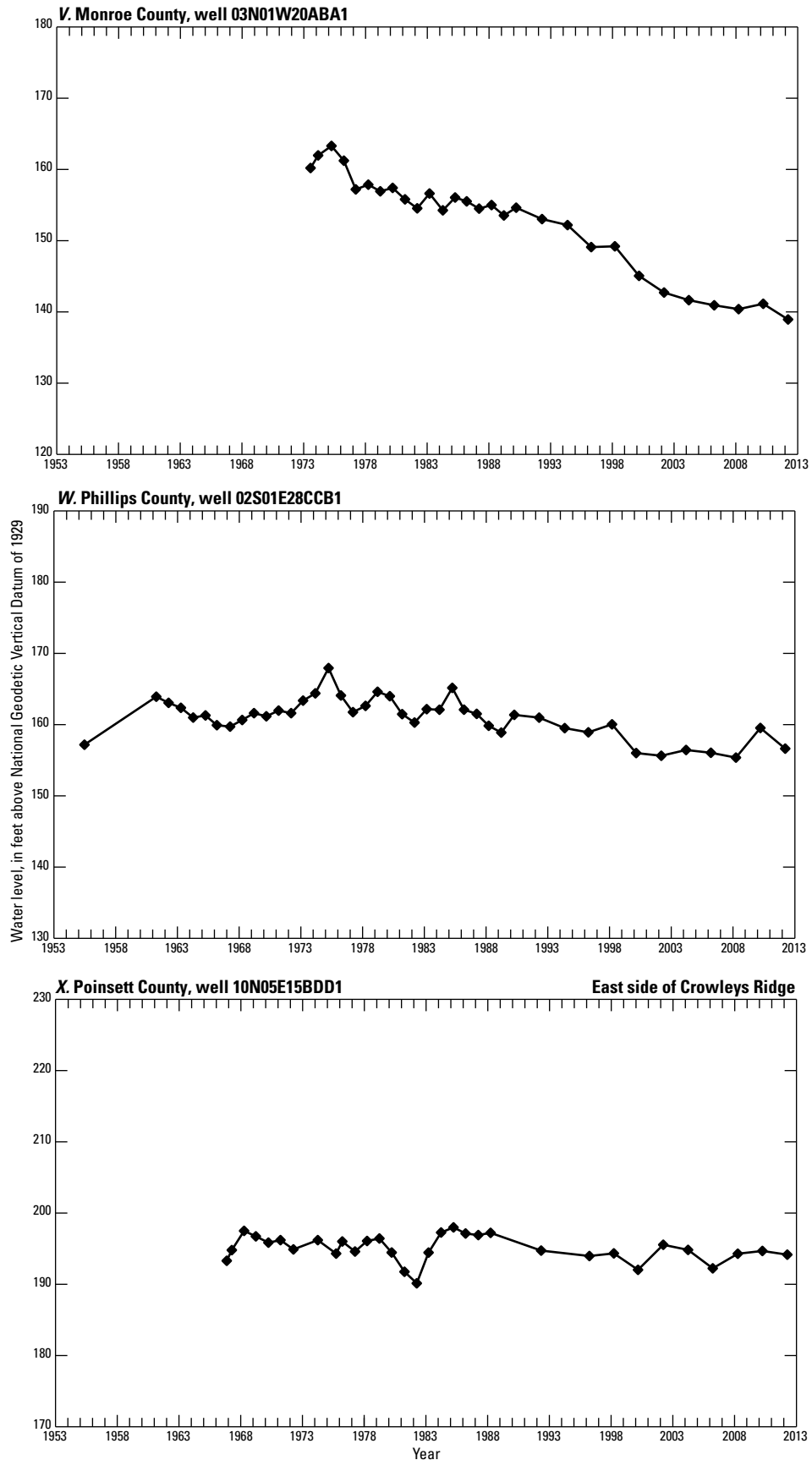


Figure 4. Water-level hydrographs for selected wells completed in the Mississippi River Valley alluvial aquifer in Arkansas.—Continued

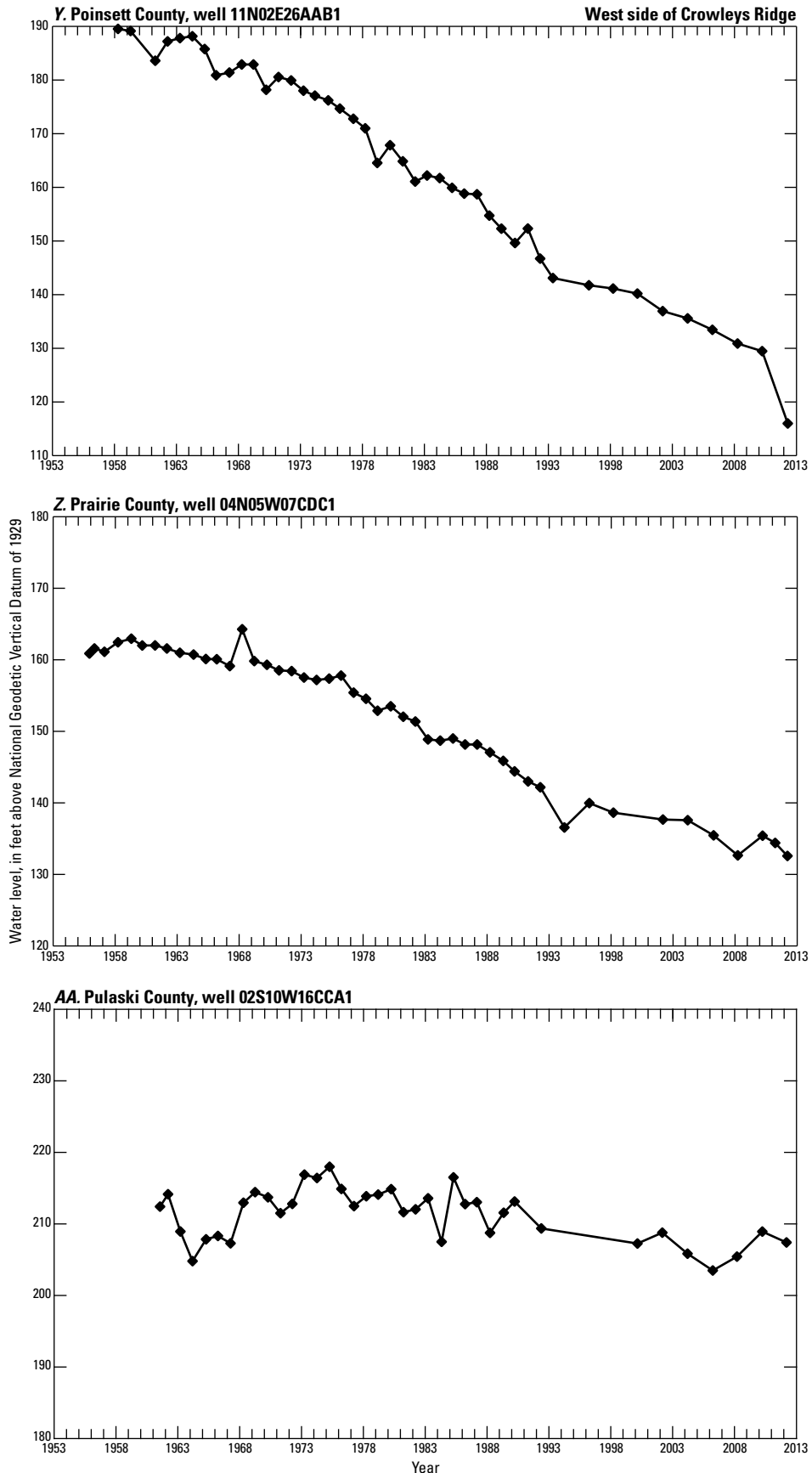


Figure 4. Water-level hydrographs for selected wells completed in the Mississippi River Valley alluvial aquifer in Arkansas.—Continued

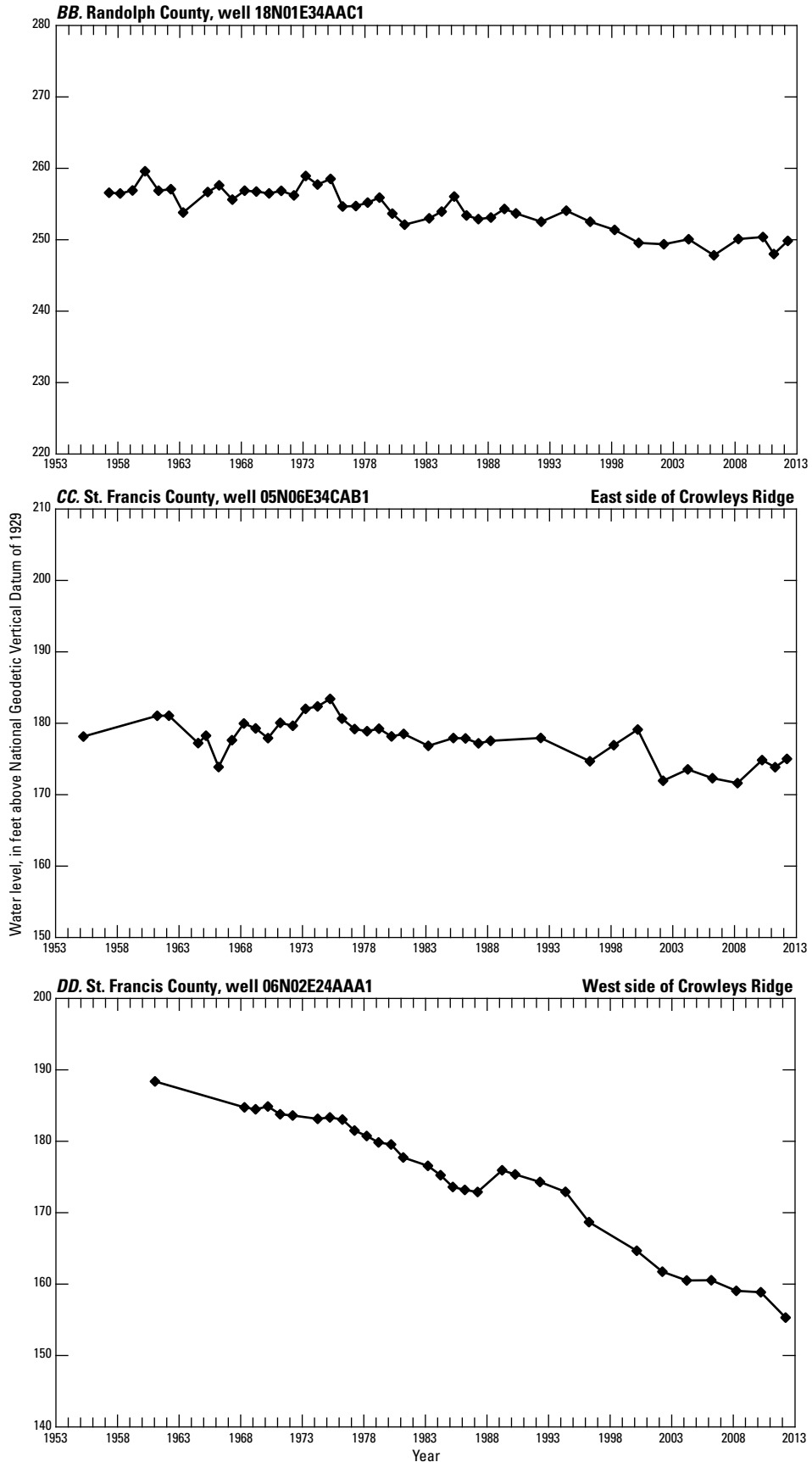


Figure 4. Water-level hydrographs for selected wells completed in the Mississippi River Valley alluvial aquifer in Arkansas.—Continued

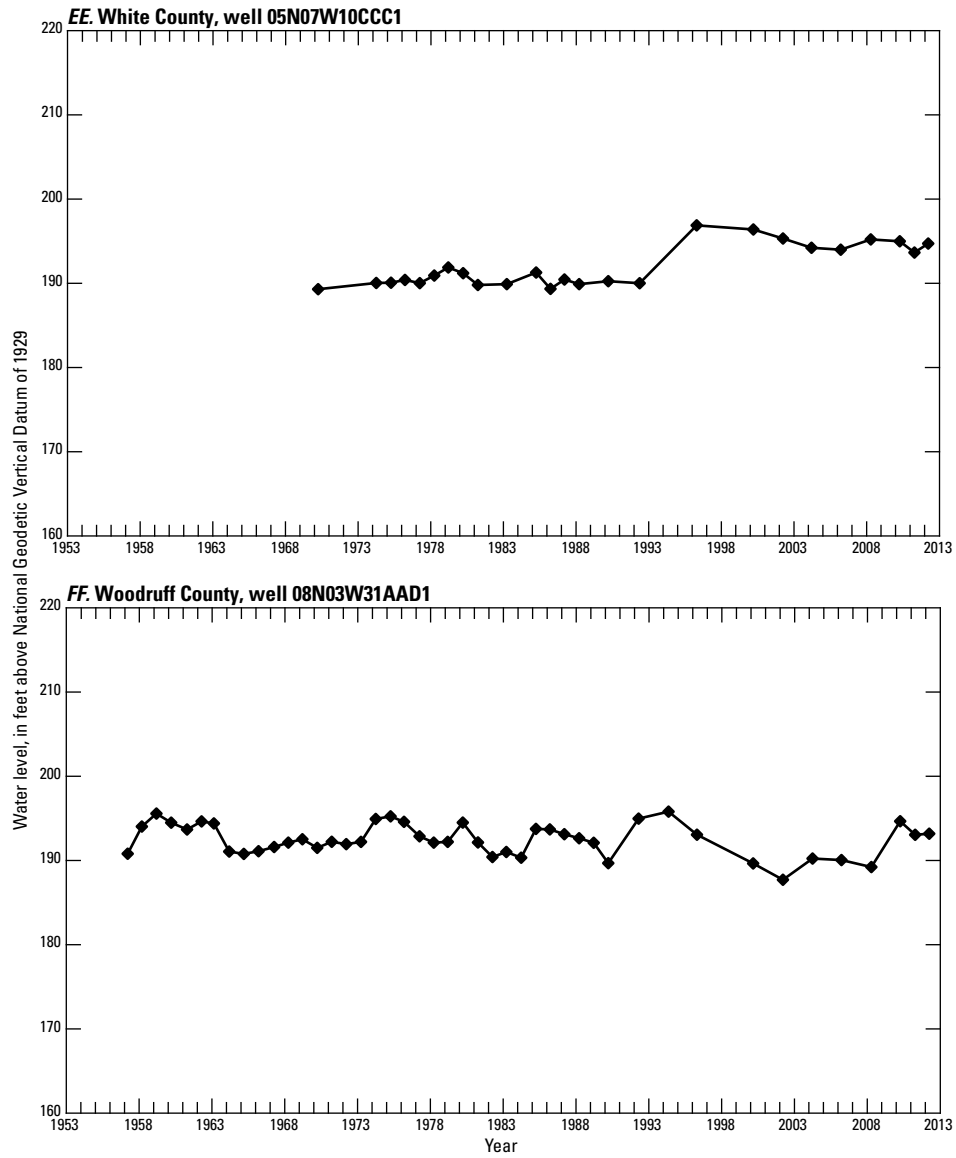


Figure 4. Water-level hydrographs for selected wells completed in the Mississippi River Valley alluvial aquifer in Arkansas.—Continued

Water-Quality Conditions

Water samples collected in the summer of 2012 from 142 wells completed in the alluvial aquifer were measured onsite for specific conductance, temperature, and pH (app. 3). Samples were collected from 94 wells for dissolved chloride analysis at the USGS National Water Quality Laboratory (app. 3).

Specific conductance and dissolved chloride have a large range of values and the temperature and pH have typical ranges for groundwater quality. Specific conductance ranged from 91 microsiemens per centimeter at 25 degrees Celsius ($\mu\text{S}/\text{cm}$ at 25 °C) in Drew County to 984 $\mu\text{S}/\text{cm}$ at 25 °C in Monroe County. The mean specific conductance was 547 $\mu\text{S}/\text{cm}$ at 25 °C. The majority of the values are in the 401–600 $\mu\text{S}/\text{cm}$ at 25 °C range (fig. 5). Dissolved chloride concentrations ranged from 3.34 milligrams per liter (mg/L) in Randolph County to 182 mg/L in Lincoln County. The mean chloride concentration was 27.6 mg/L. Temperature ranged from 18.1 °C in Crittenden County to 22.4 °C in Prairie County. The mean temperature was 20.1 °C. The pH ranged from 6.2 in Drew County to 8.3 in Randolph County and had a median of 7.3.

Specific-conductance data indicate regionally diverse zones of mineralized water across the study area. Generally, the occurrences of higher specific conductance in the alluvial aquifer are associated with the movement of water containing high 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 concentrations—a zone of groundwater 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. The variability in specific conductance in Lincoln County is explained by the local geomorphology. The specific conductance in Lincoln County ranges from 278 $\mu\text{S}/\text{cm}$ to 944 $\mu\text{S}/\text{cm}$. Channel deposits have high recharge and permeability, resulting in lower specific conductance. Backswamp deposits have low recharge and permeability and higher evapotranspiration, resulting in higher specific conductance (Kresse and Clark, 2008).

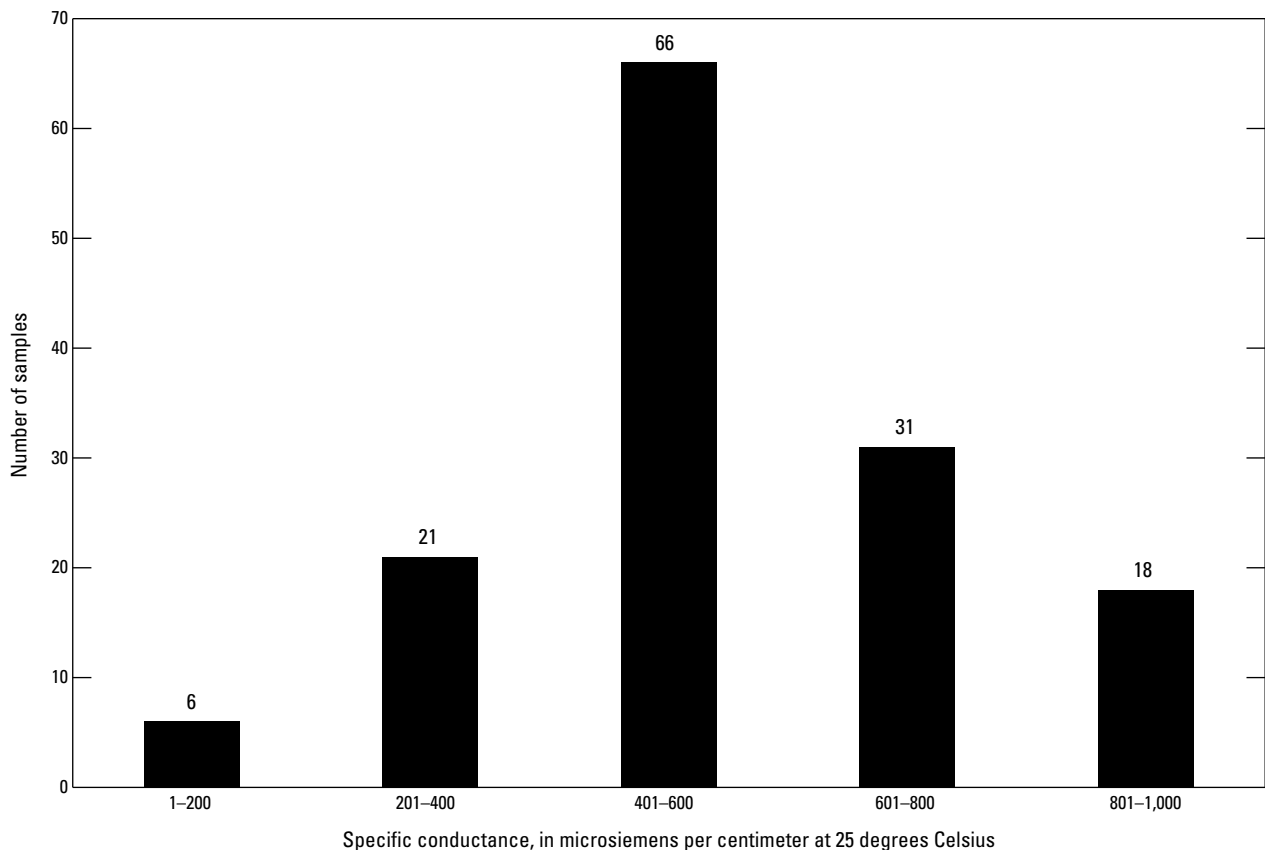


Figure 5. Distribution of specific conductance in samples from the Mississippi River Valley alluvial aquifer in Arkansas, 2012.

Summary

The Mississippi Alluvial Plain 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 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 and the Monticello Ridge. During the spring of 2012, the U.S. Geological Survey (USGS), in cooperation with the Arkansas Natural Resources Commission (ANRC) and the Arkansas Geological Survey, measured water levels in 342 wells completed in the alluvial aquifer in eastern Arkansas. The ANRC measured water levels in 11 wells and the U.S. Department of Agriculture-Natural Resources Conservation Service (NRCS) measured water levels in 239 wells completed in the alluvial aquifer. Information in this report included (1) groundwater levels for spring 2012, (2) a potentiometric-surface map, (3) a water-level difference map comparing water levels from 2008 to 2012, (4) selected water-level hydrographs, and (5) a groundwater water-quality data table for the summer of 2012.

The alluvial aquifer comprises alluvial and terrace deposits of Quaternary age. 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. The coarse sediments contained in the lower sections of the alluvial and terrace deposits are capable of sustaining high-yielding wells. Finer sediments in the upper sections of the alluvial and terrace deposits form a confining unit above much of the aquifer. 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.

The alluvial aquifer is increasingly relied upon for agriculture and aquaculture in eastern Arkansas. Water withdrawals from the alluvial aquifer have increased from about 1,063 million gallons per day (Mgal/d) in 1965 to about 7,592 Mgal/d in 2010, an increase of about 614 percent. Withdrawals have more than doubled between 1985 and 2010, an increase of about 115 percent since 1985.

The regional direction of groundwater flow is generally to the south and east except where flow is affected by groundwater withdrawals. East of Crowley's Ridge, water flows from north to south along Crowley's Ridge and northeast to southwest along the Mississippi River. West of Crowley's Ridge, water flows from northeast to southwest along Crowley's Ridge from Clay County to Craighead County. From Craighead County to Monroe County, a depression alters groundwater flow from all directions. A depression in Arkansas, Lonoke, and Prairie Counties alters groundwater flow from all directions. South of the Arkansas River, the

flow is towards the southeast, except near the depressions in Lincoln and Desha Counties and Desha and Chicot Counties where flow is towards the depression.

The potentiometric-surface map is based on water-level measurements (342 by USGS, 11 by ANRC, and 239 by NRCS) made in 592 wells during the spring of 2012. In 2012, the lowest water-level altitude was 73 feet (ft) in Arkansas County. The highest water-level altitude was 288 ft in northeastern Clay County on the western side of Crowley's Ridge.

The potentiometric-surface map shows eight depressions, two large depressions and six small depressions. One large depression begins in southeastern Arkansas County, at the Arkansas and Desha County line, extends north into Prairie County, west into Lonoke County and east into the westernmost part of Monroe County. The low water-level altitude measurement in the depression area is 73 ft. The area in Lonoke and Prairie Counties in the northwestern half of the depression has a low water-level altitude measurement of 90 ft and expands into the northern third of Prairie County.

The potentiometric-surface map shows a general north-south depression with the southern end in central Monroe County extending through western Lee, St. Francis, Cross, Poinsett, and Craighead Counties and eastern Woodruff and Jackson Counties. There are two deeper areas in this depression, one at the Monroe and Lee County line, with a low water-level altitude measurement of 123 ft, and the second in Poinsett County, with a low water-level altitude measurement of 113 ft.

Six small depressions are shown in the potentiometric-surface map—in northern Ashley County, in southern Desha and northern Chicot Counties, in eastern Lincoln and western Chicot Counties, at the Arkansas and Desha County line, in northern Phillips County, and in southeastern Greene County. Continued monitoring of the potentiometric surface will determine if these small depressions are the result of short-term variations or long-term changes in the hydrologic conditions in the alluvial aquifer.

A map showing the difference in water level was constructed using 541 differences in water levels measured during 2008 and 2012. The difference in measured water levels from 2008 to 2012 ranged from -27.4 ft in Lonoke County to 18.7 ft in Prairie County, with a mean of -1.0 ft. Four areas were predominated by declines—west of Crowley's Ridge from Greene County south to Lee County, including Lawrence and southern Woodruff Counties; east of Crowley's Ridge from Clay County south to Poinsett and Mississippi Counties; Lonoke and Jefferson Counties; and Ashley, Chicot, Desha, and Drew Counties. Three areas are predominated by rises in measured water levels—Jackson and northern Woodruff Counties; east of Crowley's Ridge in Crittenden, Cross, St. Francis, and Lee Counties; and White, Prairie, Monroe, Arkansas, and Phillips Counties.

Long-term water-level changes were evaluated using hydrographs from 319 wells in the alluvial aquifer for

the period from 1988 to 2012. The mean rise or decline for Independence and White Counties had an annual rise from 1988 to 2012. The rise in Independence County was determined from the data of one well. The mean county annual declines between -0.50 feet per year (ft/yr) and 0.00 ft/yr occurred in Arkansas, Ashley, Chicot, Clay, Crittenden, Drew, Greene, Jefferson, Mississippi, Monroe, Phillips, Prairie, Pulaski, Randolph, and Woodruff Counties. The mean county annual declines between -1.00 ft/yr and -0.50 ft/yr occurred in Craighead, Cross, Desha, Jackson, Lee, Lincoln, Lonoke, Poinsett, and St. Francis Counties. The mean county annual rises and declines in water level for the entire study area were -0.45 ft/yr with a range from -2.08 to 0.84 ft/yr.

Arkansas County has two different rates of annual decline for the two hydrographs shown. Well 04S03W32BCB1 shows an annual water-level decline of about 0.97 ft/yr since 1988. Well 07S04W01DDD1 has an annual water-level rise of about 0.26 ft/yr since 1988.

In Craighead, Cross, Lee, Poinsett, and St. Francis Counties, water levels are declining at a greater rate west of Crowleys Ridge than water levels are declining east of Crowleys Ridge. Two hydrographs are shown in each of Craighead, Cross, Lee, Poinsett, and St. Francis Counties, one on the west side of Crowleys Ridge and one on the east side of Crowleys Ridge. The hydrographs west of Crowleys Ridge have annual water-level declines from -0.91 to -1.24 ft/yr during the period from 1988 to 2012. The hydrographs east of Crowleys Ridge have annual water-level declines from -0.07 to -0.40 ft/yr during the period from 1988 to 2012. The mean county annual decline for these counties was from -0.55 to -0.87 ft/yr during the period from 1988 to 2012.

Water samples were collected in the summer of 2012 from 142 wells completed in the alluvial aquifer and measured onsite for specific conductance, temperature, and pH. Samples were collected from 94 wells for dissolved chloride analysis at the USGS National Water Quality Laboratory. Specific conductance ranged from 91 microsiemens per centimeter at 25 degrees Celsius ($\mu\text{S}/\text{cm}$ at 25 °C) in Drew County to 984 $\mu\text{S}/\text{cm}$ at 25 °C in Monroe County. The mean specific conductance was 547 $\mu\text{S}/\text{cm}$ at 25 °C. Dissolved chloride concentrations ranged from 3.34 milligrams per liter (mg/L) in Randolph County to 182 mg/L in Lincoln County. The mean chloride concentration was 27.6 mg/L. Temperature ranged from 18.1 degrees Celsius (°C) in Crittenden County to 22.4 °C in Prairie County. The mean temperature was 22.1 °C. The pH ranged from 6.2 in Drew County to 8.3 in Randolph County and had a median of 7.3.

Selected References

Ackerman, D.J., 1996, Hydrology of the Mississippi River Valley alluvial aquifer, south-central United States—A preliminary assessment of the regional flow system: U.S. Geological Survey Professional Paper 1416–D, 56 p.

Boswell, E.H., Cushing, E.M., and Hosman, R.L., 1968, Quaternary aquifers in the Mississippi Embayment, *with a discussion of Quality of the water*, by H.G. Jeffery: U.S. Geological Survey Professional Paper 448–E, 15 p.

Bryant, C.T., Ludwig, A.H., and Morris, E.E., 1985, Ground water problems in Arkansas: U.S. Geological Survey Water-Resources Investigations Report 85–4010, 24 p.

Cunningham, W.L., and Schalk, C.W., comps., 2011, Groundwater technical procedures of the U.S. Geological Survey: U.S. Geological Survey Techniques and Methods, book 1, chap. A1, 151 p.

Fenneman, N.M., 1938, Physiography of Eastern United States: New York, McGraw-Hill Book Co. Inc., 689 p.

Fenneman, N.M., and Johnson, D.W., 1946, Physical divisions of the United States (Map): Washington, D.C., U.S. Geological Survey, scale 1:7,000,000.

Fishman, M.J., and Friedman, L.C., 1989, Methods for determination of inorganic substances in water and fluvial sediments: U.S. Geological Survey Techniques of Water-Resources Investigations, book 5, chap. A1, 545 p.

Fitzpatrick, D.J., 1985, Occurrence of saltwater in the alluvial aquifer in the Boeuf-Tensas Basin, Arkansas: U.S. Geological Survey Water-Resources Investigation Report 85–4029, 1 sheet.

Gonthier, G.J., and Mahon, G.L., 1993, Thickness of the Mississippi River Valley confining unit, eastern Arkansas: U.S. Geological Survey Water-Resources Investigation Report 92–4121, 4 sheets.

Halberg, H.N., 1972, Use of water in Arkansas, 1970: Arkansas Geological Commission Water Resources Summary Number 7, 17 p.

Halberg, H.N., 1977, Use of water in Arkansas, 1975: Arkansas Geological Commission Water Resources Summary Number 9, 28 p.

Halberg, H.N., and Stephens, J.W., 1966, Use of water in Arkansas, 1965: Arkansas Geological Commission Water Resources Summary Number 5, 12 p.

Helsel, D.R., and Hirsch, R.M., 1992, Statistical methods in water resources: New York, N.Y., Elsevier Science Publishing Co., 522 p.

Holland, T.W., 1987, Use of water in Arkansas, 1985: Arkansas Geological Commission Water Resources Summary Number 14, 30 p.

Holland, T.W., 1993, Use of water in Arkansas, 1990: U.S. Geological Survey Open-File Report 93–48, pamphlet.

- Holland, T.W., 1999, Water use in Arkansas, 1995: U.S. Geological Survey Open-File Report 99-188, 1 sheet.
- Holland, T.W., 2004, Estimated water use in Arkansas, 2000: U.S. Geological Survey Scientific Investigations Report 2004-5230, 31 p.
- Holland, T.W., 2007, Water use in Arkansas, 2005: U.S. Geological Survey Scientific Investigations Report 2007-5241, 31 p.
- Holland, T.W., and Ludwig, A.H., 1981, Use of water in Arkansas, 1980: Arkansas Geological Commission Water Resources Summary Number 14, 30 p.
- Kresse, T.M., and Clark, B.R., 2008, Occurrence, distribution, sources, and trends of elevated chloride concentrations in the Mississippi River Valley alluvial aquifer in southeastern Arkansas: U.S. Geological Survey Scientific Investigations Report 2008-5193, 34 p.
- Joseph, R.L., 1999, Status of water levels and selected water-quality conditions in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 1998: U.S. Geological Survey Water-Resources Investigations Report 99-4035, 54 p.
- Mahon, G.L., and Poynter, D.T., 1993, Development, calibration, and testing of ground-water flow models for the Mississippi River Valley alluvial aquifer in eastern Arkansas using one-square mile cells: U.S. Geological Survey Water-Resources Investigations Report 92-4106, 33 p.
- Morris, E.E., and Bush, W.V., 1986, Extent and source of saltwater intrusion into the alluvial aquifer near Brinkley, Arkansas, 1984: U.S. Geological Survey Water-Resources Investigations Report 85-4322, 123 p.
- Reed, T.B., 2004, 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, 53 p.
- Schrader, T.P., 2001, Status of water levels and selected water-quality conditions in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2000: U.S. Geological Survey Water-Resources Investigations Report 01-4124, 52 p.
- Schrader, T.P., 2006, Status of water levels and selected water-quality conditions in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2004: U.S. Geological Survey Scientific Investigations Report 2006-5128, 82 p.
- Schrader, T.P., 2008, Water levels and selected water-quality conditions in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2006: U.S. Geological Survey Scientific Investigations Report 2008-5092, 72 p.
- Schrader, T.P., 2010, Water levels and selected water-quality conditions in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2008: U.S. Geological Survey Scientific Investigations Report 2010-5140, 71 p.
- Stanton, G.P., Joseph, R.L., and Pugh, A.L., 1998, Status of water levels and selected water-quality conditions in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 1994-1996: U.S. Geological Survey Water-Resources Investigations Report 98-4131, 72 p.
- U.S. Geological Survey, variously dated, National field manual for the collection of water-quality data: U.S. Geological Survey Techniques of Water-Resources Investigations, book 9, chaps. A1-A9, available at <http://pubs.water.usgs.gov/twri9A>.

Appendixes

Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Arkansas County								
02S04W11DBB1	343233	912415	USGS	152	213.04	100.08	113	03/15/2012
02S05W15AAB1	343213	913127	USGS	180	213	123.23	90	03/15/2012
03S02W27ABB1	342448	911251	USGS	87	197	62.76	134	03/14/2012
03S03W05CCD1	342737	912132	USGS	150	201	99.78	101	03/14/2012
03S03W18CCC1	342553	912251	USGS	152.5	196	100.58	95	03/15/2012
03S03W27BBC1	342455	911944	USGS	120	195	93.09	102	03/15/2012
03S04W02BBB1	342831	912454	USGS	116	197.63	93.35	104	03/15/2012
03S04W03DCA16	342753	912515	USGS	126	205	101.29	104	04/24/2012
03S04W03DCA6	342753	912517	USGS	122.3	204	100.41	104	03/15/2012
03S04W03DDA1	342750	912460	USGS	127	202	105.19	97	03/15/2012
03S05W03CCC1	342752	913227	USGS	110	215	103.88	111	03/15/2012
03S05W13CBA2	342630	913007	USGS	136.25	211	106.98	104	03/15/2012
03S06W35ADD1	342411	913652	USGS	--	190	59.93	130	03/15/2012
04S01W04ACD2	342233	910733	USGS	52.4	155	8.24	147	03/14/2012
04S01W19AAD1	342012	910919	USGS	157.2	196	62.44	134	03/14/2012
04S01W31DCB1	341753	910949	USGS	130	179	50.04	129	03/14/2012
04S02W29CCC1	341846	911539	USGS	140	191	85.20	106	03/14/2012
04S03W17ADD1	342102	912058	USGS	--	200	111.77	88	03/15/2012
04S03W32BCB1	341820	912202	USGS	--	192	118.85	73	03/15/2012
04S04W02ABB1	342313	912424	USGS	155	200	110.06	90	03/15/2012
04S04W35ABC1	341835	912437	NRCS	--	193	91.2	102	03/06/2012
04S06W15DBB1	342122	913827	USGS	100	190	34.42	156	03/15/2012
05S01W16BAB1	341552	910729	USGS	--	183	45.90	137	03/14/2012
05S02W16ABD1	341552	911358	USGS	154	190	80.31	110	03/14/2012
05S03W09CBA1	341624	912046	USGS	180.5	196	114.71	81	03/15/2012
05S04W07CCC1	341555	912932	USGS	120	194	73.88	120	03/15/2012
05S04W32BBA1	341316	912822	USGS	--	191	56.62	134	03/15/2012
05S06W02DDD1	341724	913651	USGS	60	182.93	21.98	161	03/15/2012
05S06W07DDC1	341642	914130	USGS	32	180.48	-3.20	184	03/15/2012
06S02W23DCD1	340853	911206	USGS	--	188	74.20	114	03/14/2012
06S03W10BBA1	341136	911954	USGS	155	184	79.36	105	03/14/2012
06S03W27AAA1	340858	911913	USGS	132	183.14	68.28	115	03/14/2012
06S03W32ADD1	340740	912115	USGS	135.5	180	56.82	123	03/14/2012
07S02W04BBB1	340707	911452	USGS	--	176	49.26	127	03/14/2012
07S02W17BBA1	340530	911539	USGS	95	184	48.89	135	03/14/2012
07S03W18CCD1	340435	912316	USGS	--	186.18	41.34	145	03/14/2012
07S03W32BBC1	340240	912216	USGS	128	176.92	24.22	153	03/14/2012

28 Water Levels and Water Quality in the Mississippi River Valley Alluvial Aquifer in Eastern Arkansas, 2012

Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Arkansas County—Continued								
07S04W01DDD1	340625	912327	USGS	155	186	21.91	164	03/14/2012
08S02W08ACA1	340041	911506	USGS	--	179	40.66	138	03/14/2012
08S03WT2299	340147	912203	USGS	158	178	20.53	157	03/14/2012
Ashley County								
15S04W23DBD1	332247	912852	USGS	--	128	34.22	94	03/08/2012
15S04W26DCC1	332232	912902	USGS	64.1	127	32.72	94	03/08/2012
15S07W21CBA1	332316	915001	USGS	27.4	210	7.54	202	03/08/2012
16S06W08CAA1	331941	914438	USGS	105	185	77.33	108	03/08/2012
16S06W25DDD1	331640	913958	USGS	130	182	79.66	102	03/07/2012
16S06W27BAB1	331729	914240	USGS	115	182	85.87	96	03/08/2012
17S04W03ABB1	331528	913010	USGS	105	124	35.26	89	03/07/2012
17S04W15DDC1	331252	912954	USGS	57	116	31.83	84	03/07/2012
17S04W21ABA1	331252	913108	USGS	--	117	28.17	89	03/07/2012
17S05W01AAD1	331459	913402	NRCS	100	122	19	103	03/28/2012
17S06W35CAC1	331049	914136	USGS	140	179	72.42	107	03/07/2012
18S05W11CCD1	330841	913538	NRCS	75	118	21	97	03/16/2012
18S05W22DDA1	330712	913555	NRCS	100	125	23	102	03/16/2012
18S08W01AAB1	331015	915225	USGS	128	181	85.22	96	03/07/2012
18S08W28DDD2	330625	915528	USGS	156	163.26	85.03	78	05/08/2012
19S04W06BAB2	330504	913329	USGS	98	110	29.47	81	03/07/2012
19S04W14BBB1	330310	912913	NRCS	100	107	32.2	75	03/28/2012
19S05W08ACA1	330405	913815	NRCS	--	111	22	89	03/28/2012
19S05W16ABB1	330323	913718	NRCS	100	116	27	89	03/16/2012
19S05W22DCD1	330139	913615	NRCS	--	107	28.4	79	03/28/2012
19S06W07BCC1	330404	914608	USGS	--	134.7	31.56	103	03/07/2012
Chicot County								
13S03W27AAA1	333253	912310	NRCS	--	138	49.3	89	03/16/2012
13S03W34BAA1	333110	912539	USGS	100	133	45.26	88	03/08/2012
13S03W35BAC1	333154	912246	USGS	90	134	44.40	90	03/08/2012
14S02W09BDD1	332859	911729	NRCS	--	133	40.6	92	03/16/2012
14S02W18BBDD1	332859	912038	NRCS	--	129	32.8	96	03/22/2012
14S03W07BBD1	333011	912620	USGS	77	134	30.90	103	03/08/2012
14S03W32CDB2	332613	912551	USGS	90	134	40.14	94	03/08/2012
15S02W20DDC1	332227	911920	USGS	70	126	31.75	94	03/08/2012
16S03W15DAD1	331818	912334	ANRC	97.6	118	33.94	84	03/01/2012
17S01W06BCC1	331501	911505	USGS	100	115	23.21	92	03/08/2012
17S02W10AAA1	331429	911712	USGS	90	114	26.86	87	03/08/2012

Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—
Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Chicot County—Continued								
17S03W18CBC1	331257	912736	NRCS	--	117	35.6	81	03/27/2012
17S03W28DBA1	331127	912441	USGS	95	110	25.63	84	03/08/2012
18S01W33BAD1	330543	911245	NRCS	--	116	10.0	106	03/22/2012
19S03W14ABB1	330304	912251	USGS	95	111	24.22	87	03/08/2012
Clay County								
18N08E03DAB1	361323	901153	USGS	105	257	7.27	250	04/11/2012
18N08E11BAA1	361253	901117	NRCS	100	259	7.6	251	04/03/2012
19N03E24AAA1	361655	904157	USGS	--	278	20.75	257	04/11/2012
19N04E19AAA1	361654	904050	USGS	--	282	31.27	251	04/11/2012
19N04E19BAA1	361649	904125	NRCS	100	279	23.1	256	04/02/2012
19N05E15BBD1	361716	903152	NRCS	110	289	37.3	252	04/02/2012
19N06E18DBC1	361642	902815	NRCS	--	297	41.1	256	04/03/2012
19N07E25BCB1	361519	901700	NRCS	--	268	16.6	251	04/03/2012
19N08E08DCA1	361729	901402	NRCS	--	270	4.9	265	04/03/2012
19N09E19CDC1	361539	900908	NRCS	--	265	6.9	258	04/03/2012
20N03E25BAA1	362112	904225	NRCS	100	288	8.8	279	04/02/2012
20N04E03ADA1	362425	903725	NRCS	--	290	13.9	276	04/02/2012
20N05E22CAD1	362118	903132	NRCS	--	290	29	261	04/02/2012
20N05E30CAC1	362003	903454	NRCS	--	283	18.5	265	04/02/2012
20N05E34DBA1	361939	903117	USGS	110	285	31.69	253	04/11/2012
20N06E09BBA1	362327	902620	NRCS	--	290	22.2	268	04/02/2012
20N06E28CCD1	362005	902630	NRCS	--	290	36.9	253	04/03/2012
20N08E22BDC1	362111	901220	NRCS	--	275	8.1	267	04/03/2012
20N08E24DDA1	362057	900934	USGS	110	276	9.43	267	04/11/2012
20N09E09ABC1	362306	900642	NRCS	--	279	5.4	274	04/03/2012
20N09E33DDC1	361904	900628	NRCS	--	270	6.4	264	04/03/2012
21N03E15CBC1	362738	904453	NRCS	90	292	10.8	281	04/02/2012
21N03E36CDD1	362450	904214	NRCS	--	290	10.5	280	04/02/2012
21N04E09DBC1	362828	903853	NRCS	--	291	12	279	04/02/2012
21N05E17ABB1	362755	903329	USGS	105	298	24.36	274	04/11/2012
21N05E22BAB1	362704	903132	NRCS	105	288	2.1	286	04/02/2012
21N06E11BBB1	362839	902421	NRCS	100	296	14.8	281	04/03/2012
21N06E28BB1	362605	902608	USGS	130	292.5	19.90	273	04/11/2012
21N07E01DDC1	362835	901607	NRCS	90	303	25.2	278	04/03/2012
21N08E03CDB1	362848	901217	NRCS	--	308	20.4	288	04/03/2012
21N08E18CCC1	362651	901550	USGS	110	324	43.03	281	04/11/2012
21N09E31BDA1	362447	900851	NRCS	100	284	5.2	279	04/03/2012

30 Water Levels and Water Quality in the Mississippi River Valley Alluvial Aquifer in Eastern Arkansas, 2012

Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—
Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Craighead County								
13N01E23CAB1	354430	905736	NRCS	118	245	72.2	173	04/04/2012
13N01E23DAA1	354435	905652	USGS	118	242	74.07	168	04/10/2012
13N03E28CDB1	354322	904652	NRCS	135	250	117.5	133	03/28/2012
13N03E29AAA1	354403	904713	USGS	122	251	111.31	140	04/10/2012
13N04E12ABB1	354635	903656	USGS	110	231	25.61	205	04/09/2012
13N04E15DBA1	354521	903857	NRCS	130	230	25.7	204	03/20/2012
13N04E26BCC1	354340	903829	NRCS	100	225	27.5	198	03/20/2012
13N05E02CCC1	354648	903202	NRCS	120	230	15.0	215	03/20/2012
13N05E24BAC1	354451	903045	NRCS	120	225	10.0	215	03/20/2012
13N06E21AAA1	354450	902701	NRCS	150	222	9.0	213	03/20/2012
13N07E02CAB1	354642	901901	NRCS	120	226	10.0	216	03/20/2012
13N07E05ABB1	354716	902158	NRCS	100	225	7.3	218	03/20/2012
13N07E20BBA1	354440	902216	USGS	22.3	223.2	4.92	218	04/10/2012
13N07E35BCD1	354233	901837	NRCS	120	221	14.0	207	03/20/2012
14N01E03ACB1	355246	905816	NRCS	96	249	55.5	194	04/04/2012
14N01E10BAB1	355204	905828	NRCS	96	246	59.4	187	04/04/2012
14N01E31DCA1	354817	910121	NRCS	126	251	66.5	185	04/04/2012
14N02E18BDD1	355041	905419	USGS	120	242	60.40	182	04/10/2012
14N02E22AAA1	355007	905129	NRCS	132	255	79.5	176	03/28/2012
14N02E27AAA1	354916	905125	USGS	127.6	254	84.64	169	05/02/2012
14N05E25ABB1	354921	903025	USGS	--	238	19.61	218	04/10/2012
14N06E06BAA1	355234	902934	NRCS	120	240	21.0	219	03/20/2012
14N06E27AAB1	354911	902559	USGS	30.3	225.93	2.81	223	04/10/2012
14N07E14DDC1	354956	901831	NRCS	120	230	14.5	216	03/20/2012
14N07E26DBB1	354834	901843	USGS	100	228	7.05	221	04/10/2012
15N02E12DCB1	355626	904930	NRCS	120	250	37.7	212	04/04/2012
15N05E22BAB1	355513	903241	NRCS	197	260	36.2	224	03/20/2012
15N06E04BAD1	355744	902706	NRCS	104	239	17.5	222	03/20/2012
15N06E20DDD1	355426	902739	USGS	--	234	9.73	224	04/10/2012
15N07E35DCB1	355241	901831	NRCS	120	231	14.5	217	03/20/2012
Crittenden County								
04N07E21AAD1	345644	902121	USGS	82.1	202	9.87	192	04/09/2012
05N07E28CBA1	350121	902140	USGS	--	201	16.06	185	04/09/2012
05N07E34BAB1	350059	902030	USGS	100	203	14.36	189	04/09/2012
05N08E11CCD2	350345	901308	USGS	63	211	24.91	186	04/09/2012
06N07E13BAA1	350850	901808	USGS	130	205	20.79	184	04/09/2012
07N07E05DAD1	351504	902129	USGS	132	215	30.98	184	04/09/2012

Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—
Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Crittenden County—Continued								
07N07E31CCC1	351042	902359	USGS	110	207	36.53	170	04/09/2012
07N09E05CDD1	351453	900934	USGS	120	214	9.46	205	04/09/2012
08N07E13CCC2	351828	901812	USGS	100	221	31.13	190	04/09/2012
08N07E14DAA2	351854	901833	USGS	--	219	32.62	186	04/09/2012
08N07E35BBC1	351630	901933	ANRC	140.8	221	32.56	188	03/14/2012
09N07E10DDA1	352448	901925	USGS	60	221	28.84	192	04/09/2012
09N07E31BAB1	352160	902327	USGS	110	221	33.20	188	04/09/2012
Cross County								
06N02E11BDB1	350934	905132	NRCS	--	220	67.5	153	04/02/2012
06N05E05AAA1	351042	903432	NRCS	130	205	40.5	165	04/02/2012
07N01E05CDA1	351518	910049	USGS	140	217	80.07	137	05/01/2012
07N01E05DCA1	351514	910033	NRCS	160	215	78.5	137	04/02/2012
07N01E06CAA1	351530	910154	NRCS	--	220	76.6	143	04/02/2012
07N01E11AAA1	351501	905705	USGS	120	217	80.28	137	05/01/2012
07N01E33BBA1	351134	910010	NRCS	--	215	72	143	04/02/2012
07N02E02CDD1	351508	905113	ANRC	149.9	225	84.14	141	03/14/2012
07N02E10ABB1	351504	905217	NRCS	--	230	92	138	04/02/2012
07N02E12BBC1	351447	905040	NRCS	100	225	81	144	04/02/2012
07N02E29CCC1	351142	905152	NRCS	--	220	74	146	04/02/2012
07N02E29DDC1	351138	905409	USGS	100	220	74.65	145	05/01/2012
07N03E05AAD1	351558	904737	NRCS	--	255	105	150	04/02/2012
07N03E32DCC1	351045	904810	USGS	--	251	98.36	153	05/01/2012
07N04E03BDA1	351546	903925	NRCS	--	205	30.5	175	04/02/2012
07N04E07AAA1	351510	904207	NRCS	--	223	41	182	04/02/2012
07N04E27BDA1	351220	903926	NRCS	--	203	26.5	177	04/02/2012
07N05E02AAB1	351600	903103	NRCS	--	210	42.5	168	04/02/2012
07N05E16ACA1	351358	903352	NRCS	--	210	35	175	04/02/2012
07N05E19CCC1	351238	903645	USGS	--	207	35.96	171	05/01/2012
07N05E25ABA1	351229	903045	USGS	140	205	38.28	167	05/01/2012
08N01E02CDD1	352023	905736	NRCS	--	226	93	133	04/03/2012
08N01E16DBB1	351855	905933	NRCS	140	225	90.5	135	04/03/2012
08N01E17CAD1	351852	910046	NRCS	--	220	78	142	04/03/2012
08N02E12DCC1	351938	905002	NRCS	--	230	98	132	04/03/2012
08N02E17AAA1	351923	905354	NRCS	--	225	94	131	04/02/2012
08N05E17CAA1	351904	903508	NRCS	--	211	32	179	04/02/2012
08N05E32ADD1	351632	903440	USGS	--	204	27.23	177	05/01/2012
09N01E04ACD1	352608	905914	NRCS	140	225	93.5	132	04/03/2012

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Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Cross County—Continued								
09N01E33BBA2	352203	910001	USGS	--	225	85.66	139	05/01/2012
09N01E36AAB1	352155	905605	NRCS	160	225	95	130	04/03/2012
09N02E20AAA1	352402	905342	NRCS	120	231	99	132	04/03/2012
09N02E30CBB1	352243	905551	NRCS	--	225	95	130	04/03/2012
09N02E32BBB1	352213	905444	NRCS	--	226	94	132	04/03/2012
09N03E03ACA1	352630	904529	NRCS	--	250	109	141	04/03/2012
09N03E17DDC1	352409	904726	USGS	160	251	109.94	141	05/01/2012
09N04E01AAC1	352622	903648	NRCS	--	205	17	188	04/02/2012
09N05E32BCB1	352151	903525	NRCS	--	206	30	176	04/02/2012
09N05E32BDB1	352151	903512	USGS	--	210	28.99	181	05/01/2012
Desha County								
07S01E19ABA1	340428	910303	NRCS	120	154	14	140	03/13/2012
08S03W33ABD1	335803	912338	USGS	60	165.04	6.57	158	03/13/2012
09S01W08BDA1	335608	911234	NRCS	--	156	23.4	133	04/03/2012
09S01W15CBB1	335501	911055	NRCS	--	152	38.6	113	04/03/2012
09S02W26DDC1 near Watson	335257	911530	USGS	97	149.27	32.31	117	04/24/2012
09S03W05BAC1	335704	912506	NRCS	--	161	48.6	112	03/27/2012
09S03W13BAB1	335500	911922	NRCS	--	156	36.5	120	04/03/2012
09S03W17DCB1	335448	912457	USGS	126	155.08	37.38	118	03/13/2012
09S04W06BCA1	335756	913243	USGS	--	161	37.66	123	03/13/2012
09S04W06CBB1	335629	913257	NRCS	110	162	44	118	03/29/2012
10S01W23CDA1	335305	911032	NRCS	--	151	23	128	04/03/2012
10S02W11ADD1	335045	911517	NRCS	--	146	35	111	04/03/2012
10S02W20ADA1	334916	911825	USGS	93.8	148	42.16	106	03/13/2012
10S03W26CAA1	334806	912145	USGS	96	155	48.71	106	03/13/2012
10S04W03BAB1	335209	912948	USGS	100	166	39.55	126	03/13/2012
10S04W11DDA1	335031	912802	USGS	100	155	35.52	119	03/13/2012
11S02W15ADD1	334446	911635	NRCS	--	144	35.9	108	04/03/2012
11S03W16CBA1	334439	912433	NRCS	--	155	36	119	04/03/2012
11S03W31BBA1	334228	912651	USGS	--	148	35.95	112	03/12/2012
12S01W33BAA1	333718	911205	USGS	95	135	7.39	128	03/12/2012
13S02W17ADA1	333421	911858	NRCS	--	138	47.2	91	03/27/2012
13S02W27CAC1	333224	911735	USGS	120	133	33.92	99	03/12/2012
13S03W11CAB1	333503	912241	NRCS	--	142	56.4	86	04/03/2012

Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—
Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Drew County								
11S04W35CDD1	334144	912842	USGS	93.7	154	30.11	124	03/12/2012
11S05W08CCC1	334546	913837	USGS	153	185	38.52	146	03/12/2012
12S04W03ABB1	334134	912946	USGS	--	155	27.20	128	03/12/2012
12S04W25DBB1	333739	912738	NRCS	90	149	37	112	04/09/2012
13S04W09ACD1	333512	913034	NRCS	90	145	30	115	04/09/2012
13S05W29ADA1	333248	913747	USGS	--	185	41.60	143	03/12/2012
13S06W21DAA1	333324	914258	NRCS	142	207	75	132	03/27/2012
14S04W03ADD1	333050	912929	NRCS	92	141	33	108	03/27/2012
14S04W05CBA1	333047	913218	NRCS	90	131	17	114	03/27/2012
14S04W05CBC1	333042	913226	NRCS	90	131	17	114	03/27/2012
15S04W13DAD1	332338	912730	NRCS		131	1.3	130	03/27/2012
Greene County								
16N03E03BA1	360316	904516	USGS	100	260	36.38	224	05/02/2012
16N03E05BBB1	360316	904750	NRCS	105	257	35.9	221	04/02/2012
16N03E16DDD1	360049	904547	NRCS	100	258	37	221	04/02/2012
16N06E09ABB1	360215	902651	NRCS	90	261	37.8	223	04/03/2012
16N06E21BAA1	360031	902705	NRCS	130	249	35	214	04/03/2012
17N03E02BDB1	360832	904413	USGS	115	266	35.30	231	05/02/2012
17N03E02DCC1	360806	904352	NRCS	100	267	45.6	221	04/02/2012
17N03E35CB1	360347	904437	NRCS	100	259	36.5	223	04/02/2012
17N04E07AD1	360718	904122	NRCS	100	273	43.3	230	04/02/2012
17N04E28DAA1	360431	903917	ANRC	121.2	317	89.79	227	03/14/2012
17N06E15ABC1	360631	902546	NRCS	168	268	36.1	232	04/03/2012
17N07E01BBA1	360832	901724	NRCS	100	250	5.1	245	04/03/2012
17N07E03CCC1	360744	901951	NRCS	87	246	6.3	240	04/03/2012
17N07E18ABB1	360638	902235	USGS	--	245	15.36	230	05/02/2012
17N07E29CBC1	360419	902201	NRCS	80	245	9.3	236	04/03/2012
18N03E24ACA1	361119	904216	NRCS	120	271	36.5	235	04/02/2012
18N04E04AAC1	361356	903854	NRCS	127	273	33.8	239	04/02/2012
18N04E21CBD1	361052	903725	USGS	--	294	58.65	235	05/02/2012
18N06E23ABB1	361109	902402	NRCS	145	280	14.9	265	04/03/2012
18N07E05DAB1	361316	902025	NRCS	--	274	14.1	260	04/03/2012
18N07E17BAB1	361203	902105	NRCS	100	262	7	255	04/03/2012
18N07E20BBA1	361110	902113	USGS		257	10.18	247	05/02/2012
19N03E26AD1	361601	904258	USGS	100	281	29.49	252	04/11/2012
19N03E33DDD1	361418	904516	NRCS	100	276	40.6	235	04/02/2012
19N05E34AAD1	361437	903102	NRCS	130	282	5.8	276	04/02/2012

34 Water Levels and Water Quality in the Mississippi River Valley Alluvial Aquifer in Eastern Arkansas, 2012

Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Independence County								
12N04W14DD1	353929	912236	USGS	60	231	22.03	209	05/02/2012
12N04W34CBB1	353720	912513	USGS	--	231	20.83	210	05/02/2012
14N03W14CB2	355105	911700	NRCS	105	230	5.2	225	04/04/2012
14N03W14DBB1	355106	911640	USGS	65	230	7.82	222	05/02/2012
Jackson County								
09N01W22ADD1	352332	910433	USGS	125	215	62.74	152	04/05/2012
09N02W32CBB1	352152	911348	USGS	117	220	28.95	191	04/05/2012
10N02W29ABB1	352829	911312	USGS	--	227	26.64	200	04/05/2012
11N01W11CBB1	353550	910428	ANRC	129.4	231	58.72	172	08/03/2012
11N01W26AAD1	353330	910323	USGS	95	227	70.59	156	04/26/2012
11N01W29AAD1	353339	910635	USGS	97	225	41.40	184	04/26/2012
11N03W06DAB1	353655	912009	USGS	100	223	12.96	210	04/26/2012
12N02W25ABB2	353910	910852	USGS	--	234	34.21	200	04/26/2012
13N01W20AAA1	354514	910627	USGS	147	242	41.60	200	04/13/2012
14N01W09AAA1	355220	910515	USGS	--	251	45.35	206	04/13/2012
Jefferson County								
03S08W24BBC1	342620	914953	USGS	135	202	52.61	149	03/19/2012
03S09W06DDA1	342840	920037	USGS	--	225	39.46	186	03/19/2012
03S09W14BCD1	342712	915713	NRCS	--	220	72.8	147	04/03/2012
03S09W22AAA1	342640	915728	NRCS	100	218	42	176	04/03/2012
03S09W29CBD1	342517	920023	USGS	--	216	27.08	189	03/19/2012
03S09W36ACC1	342428	915555	NRCS	--	214	38.9	175	03/29/2012
03S10W35BBC1	342449	920359	NRCS	--	215	11	204	04/03/2012
04S07W35DDB1	341836	914347	NRCS	--	185	30.6	154	03/29/2012
04S08W13DCB1	342123	914926	USGS	110	204	47.80	156	03/19/2012
04S09W02CBD1	342325	915717	NRCS	110	212	34.9	177	03/29/2012
05S08W12DAA1	341712	914907	USGS	101	194.25	18.05	176	03/19/2012
06S05W15BCA1	341023	913245	USGS	120	177.14	16.69	160	03/13/2012
06S06W23AAD1	341007	913712	USGS	107	189.01	19.37	170	03/13/2012
06S07W14BAA1	341125	914426	USGS	110	199	15.69	183	03/13/2012
07S07W16BAA1	340722	914828	NRCS	--	190	26	164	03/29/2012
07S08W06BAA1	340859	915647	USGS	160	202.31	20.62	182	03/13/2012
Lawrence County								
15N01E09ABD1	355714	905900	ANRC	130.6	259	58.80	200	03/14/2012
15N01E26DDA1	355402	905639	USGS	100	251	54.76	196	05/02/2012
15N01E32BAA1	355352	910027	ANRC	133.5	254	55.45	199	03/14/2012
15N01W35CBB1	355336	910356	USGS	--	250	49.04	201	05/02/2012
16N01E11DAC2	360203	905639	USGS	--	262	51.61	210	05/02/2012

Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—
Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Lee County								
01N01E04AAB1	344358	910015	NRCS	140	175	37.5	138	04/28/2012
01N01E09CCC1	344215	910054	NRCS	140	182	36	146	04/19/2012
01N01E24CBD1	344033	905729	NRCS	140	185	21	164	04/19/2012
01N02E11BAB1	344255	905208	NRCS	140	202	37	165	04/19/2012
01N02E22CBA1	344056	905318	NRCS	140	200	30.5	170	04/19/2012
01N02E33CBB1	343858	905434	NRCS	140	186	30.5	156	04/19/2012
01N02E33CCB1	343851	905433	NRCS	140	185	15.5	170	04/19/2012
01N03E02BBC1	344339	904601	USGS	168	236.43	55.02	181	04/02/2012
01N03E27ADD1	343952	904605	NRCS	120	204	29	175	04/28/2012
01N03E35BBA1	343923	904549	USGS	120	202	15.91	186	04/02/2012
02N01E21BAA1	344633	910005	NRCS	140	185	37.5	148	04/28/2012
02N01E23BAA2	344632	905820	USGS	137	202	53.60	148	04/02/2012
02N01W12BAA1	344828	910330	USGS	95	185	46.84	138	04/02/2012
02N01W34DDC1	344410	910520	NRCS	140	180	57	123	04/28/2012
02N02E08ADC1	344807	905339	USGS	120	201	46.35	155	04/02/2012
02N02E36DDC1	344355	905020	NRCS	140	205	36	169	04/19/2012
02N03E08AAD1	344811	904838	USGS	100	211	43.50	168	04/02/2012
02N03E09DDD1	344723	904707	NRCS	120	220	49.6	170	04/28/2012
02N03E29CAD1	344500	904846	NRCS	140	220	47	173	04/28/2012
02N04E03ABD1	344855	903954	NRCS	140	192	20	172	04/19/2012
02N04E15DAC1	344637	903950	USGS	60	192	17.14	175	04/02/2012
03N01E03CBC1	345359	905947	USGS	140	205	69.05	136	04/02/2012
03N01E15CCB1	345206	905947	USGS	152.3	205	66.48	139	04/02/2012
03N01E16CBA1	345222	910040	USGS	110	202	67.96	134	04/02/2012
03N01E32BCC1	344951	910150	NRCS	140	200	69.5	131	04/19/2012
03N02E12CDC1	345239	905053	NRCS	140	210	45	165	04/19/2012
03N02E13BBA1	345237	905107	USGS	65	212	50.22	162	04/02/2012
03N02E21CBC1	345111	905428	NRCS	140	209	56.5	153	04/28/2012
03N02E29DAD1	345014	905430	USGS	135	205	46.51	158	04/02/2012
03N03E05CDD1	345327	904837	NRCS	110	204	40	164	04/19/2012
03N03E18DAB1	345206	904919	NRCS	140	196	27	169	04/28/2012
03N03E32CAB1	344933	904926	USGS	116	204	48.99	155	04/02/2012
03N04E07CBB1	345245	904312	NRCS	140	200	16	184	04/28/2012
03N05E14DDA1	345148	903203	USGS	120	193	11.57	181	04/02/2012
03N05E26ADC1	345020	903215	NRCS	140	185	4.5	181	04/19/2012

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Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—
Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Lincoln County								
07S06W03CCA2	340828	914114	NRCS	110	190	16	174	03/28/2012
07S07W36CBD1	340411	914529	NRCS	123	183	42	141	03/27/2012
08S04W06ABD1	340341	913116	NRCS	95	171	12	159	03/28/2012
08S04W08BBB2	340254	913101	USGS	65.2	171	20.13	151	03/13/2012
08S04W29ABC1	340021	913044	NRCS	100	176	32	144	03/28/2012
08S04W31CBA1	335901	913150	USGS	99	161.9	35.75	126	03/13/2012
08S05W12AAD1	340246	913214	NRCS	83	165	32	133	03/28/2012
08S05W21DCD1	340027	913533	NRCS	120	169	26	143	03/29/2012
08S05W32DCC1	335840	913644	NRCS	100	172	62	110	03/28/2012
08S07W05DDD1	340301	914903	USGS	97	190	31.10	159	03/13/2012
09S05W14ABC1	335553	913439	USGS	98	172.5	41.95	131	03/12/2012
09S05W17BCB1	335552	913820	USGS	97	171	40.96	130	03/12/2012
09S05W19CCC1	335428	913941	NRCS	110	171	40	131	03/26/2012
09S06W04BCD1	335821	914346	USGS	62.6	181	43.21	138	03/12/2012
09S06W04BDD1	335759	914335	NRCS	100	178	45	133	03/26/2012
10S05W05BCB1	335228	913833	USGS	127	172	28.23	144	03/12/2012
10S05W06DCC1	335155	913908	USGS	65	175	29.82	145	03/12/2012
Lonoke County								
01N08W03DDA1	344411	915050	NRCS	--	229	139	90	03/29/2012
01N09W13DAB1	344235	915517	USGS	150	226	84.53	141	03/20/2012
01N10W15CDA1	344236	920415	NRCS	100	240	24	216	03/29/2012
01S06W31ABB1	343459	914131	USGS	120	200	79.94	120	03/20/2012
01S06W32BBB1	343501	914056	NRCS	--	201	80	121	03/29/2012
01S07W12ABA1	343834	914230	USGS	140	207	81.82	125	03/20/2012
01S07W19DDB1	343609	914746	USGS	151.9	206	86.82	119	03/20/2012
01S08W24CDD1	343606	914912	USGS	127	210	83.64	126	03/20/2012
01S09W02DDD1	343857	915624	NRCS	--	230	83	147	03/29/2012
01S09W36CCC1	343435	915619	USGS	95	220	62.94	157	03/19/2012
01S10W01ACB1	343927	920215	USGS	--	236	43.47	193	03/19/2012
01S10W11CAB1	343841	920337	USGS	105.5	235	29.35	206	03/19/2012
02N07W07DAA1	344845	914707	NRCS	--	232	138	94	03/29/2012
02N07W16BAB1	344815	914540	USGS	184	240	144.93	95	03/20/2012
02N08W16ABC1	344806	915114	USGS	170	230	126.87	103	03/20/2012
02N08W23CAB1	344659	915118	NRCS	--	229	135	94	03/29/2012
02N08W27DCC1	344543	915106	ANRC	176.6	230	131.96	98	04/10/2012
02N10W15ACC1	344807	920353	NRCS	135	241	28	213	03/29/2012
02N10W23BCA1	344725	920322	USGS	--	242	11.46	231	03/20/2012

Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—
Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Lonoke County—Continued								
02S07W05CDC1	343326	914715	NRCS	--	205	75	130	03/29/2012
02S07W10CCB1	343246	914525	USGS	--	201	62.69	138	03/19/2012
02S08W06BAA1	343430	915447	USGS	145.5	221	68.55	152	03/19/2012
02S08W13BBB1	343232	914935	USGS	--	200	62.02	138	03/19/2012
02S08W28CDC1	343007	915237	USGS	114.5	211	62.93	148	03/19/2012
02S08W34DBB1	343003	915150	USGS	--	214	68.14	146	03/19/2012
02S09W22AAA1	343153	915728	NRCS	--	226	63	163	03/29/2012
02S09W26DC1	343019	915643	NRCS	100	216	52	164	03/29/2012
02S09W30CDD1	343014	920116	USGS	80	226	38.91	187	03/19/2012
03N07W08BDB1	345407	914638	USGS	125	250	99.69	150	03/22/2012
03N07W15DBC2	345253	914417	USGS	144.5	227	84.79	142	03/20/2012
03N07W29ADA1	345129	914558	USGS	120	234	94.22	140	03/22/2012
03N07W29CDD1	345057	914632	NRCS	157	232	110	122	03/29/2012
03N07W35CDC2	344957	914332	USGS	--	232	121.76	110	03/20/2012
03N08W03BAA1	345519	915054	USGS	162	260	101.10	159	03/22/2012
03N08W03CCC1	345430	915123	USGS	162	260	107.52	152	03/22/2012
03N08W08ABA1	345427	915248	USGS	150	258	98.81	159	03/22/2012
03N08W10ACB1	345415	915053	USGS	150	250	95.33	155	03/22/2012
03N08W10ADD1	345401	915023	USGS	165	250	97.14	153	03/22/2012
03N08W11ACA1	345413	914934	USGS	144	256	104.72	151	03/22/2012
03N08W21BCC1	345220	915220	USGS	155	247	110.17	137	03/20/2012
03N08W26CDC1	345100	915007	NRCS	150	235	114	121	03/29/2012
03N08W29BBB1	345147	915333	USGS	152.2	249	113.58	135	03/22/2012
03N08W29BCC1	345125	915333	USGS	150	250	124.16	126	03/22/2012
03N08W32ABB1	345057	915257	USGS	154	250	120.78	129	04/19/2012
04N08W15BCB2	345833	915121	USGS	104	225	34.54	190	03/20/2012
04N08W16DCC1	345757	915154	USGS	155	225	47.80	177	03/22/2012
04N08W28CAC1	345620	915216	USGS	140.5	235	56.79	178	03/22/2012
04N08W28CCC1	345615	915225	USGS	137	240	62.58	177	03/22/2012
04N08W33ABD1	345559	915141	USGS	138	258	90.43	168	03/22/2012
04N08W33ACD1	345547	915141	USGS	152	256	94.18	162	03/22/2012
04N08W33ADB1	345553	915125	USGS	173	257	106.31	151	03/22/2012
04N08W33ADD1	345546	915126	USGS	180	265	103.06	162	03/22/2012
04N08W36DBB1	345541	914914	USGS	130	259	95.06	164	03/22/2012
Mississippi County								
10N08E22ABA2	352851	901312	USGS	100	224	26.42	198	04/12/2012
10N09E08ACC1	352949	900926	USGS	110	230	15.04	215	04/12/2012

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Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Mississippi County—Continued								
11N09E34BBB1	353218	900715	USGS	94	235	16.99	218	04/12/2012
12N08E08BCB1	354047	901559	USGS	120	225	9.64	215	04/12/2012
13N09E30CCD1	354248	901029	USGS	--	230	12.83	217	04/12/2012
14N08E12DAB1	355104	901052	USGS	--	235	6.12	229	04/12/2012
14N10E18ABC1	355022	900345	USGS	101	236	12.96	223	04/12/2012
15N08E08DBC2	355605	901526	USGS	120	236	11.24	225	04/12/2012
16N10E28BBD1	355906	900156	USGS	120	238	12.78	225	04/12/2012
16N11E23ADA1	355947	895231	USGS	--	255	13.57	241	04/12/2012
Monroe County								
01N01W15DBC1	344139	910542	USGS	126.5	185	52.30	133	03/29/2012
01N02W12CBC1	344242	911032	USGS	110	182	42.76	139	03/29/2012
01N03W23BAC1	344124	911743	NRCS	100	170	9.5	161	04/24/2012
01N03W24BBB1	344135	911651	USGS	125	185	26.08	159	03/29/2012
01N04W33BBB2	343960	912649	USGS	--	218	104.94	113	03/29/2012
01S01W13CDD1	343611	910341	USGS	135	178	21.33	157	03/29/2012
01S01W16DB	343615	910632	NRCS	100	175	19	156	04/24/2012
01S01W18DCD1	343618	910849	USGS	110	178	23.96	154	03/29/2012
01S02W20BBB1	343613	911456	USGS	100	170	9.68	160	03/29/2012
01S03W20BBA1	343538	912118	USGS	140	210	70.47	140	03/29/2012
01S04W01BAB1	343906	912317	USGS	160	210	74.73	135	03/29/2012
02N01W19ADD1	344624	910814	NRCS	80	188	55	133	04/24/2012
02N01W19BBA1	344645	910912	USGS	75	191	56.34	135	03/29/2012
02N03W35BCA1	344455	911745	NRCS	100	188	27	161	04/24/2012
02S01W01BCD1	343305	910408	NRCS	100	176	17	159	04/24/2012
02S02W11DAC1	343209	911101	USGS	110	164	6.80	157	03/28/2012
03N01W06DBA1	345411	910822	USGS	120	191	45.81	145	03/29/2012
03N01W20ABA1	345201	910723	USGS	--	189	50.06	139	03/29/2012
03N02W31ADC1	344958	911447	USGS	95	190	38.27	152	03/29/2012
03N03W36AAA1	345027	911547	USGS	120	176	18.98	157	03/29/2012
04N02W01BCC1	345929	911004	NRCS	100	175	39.5	136	04/24/2012
04N02W05BBB1	345957	911311	NRCS	100	188	15	173	04/24/2012
04N02W27CDD3	345540	911150	USGS	181	200	45.61	154	03/29/2012
04N02W28DDD3	345535	911221	USGS	137	192	32.87	159	03/29/2012
04N02W30BBB1	345628	911525	USGS	119	185.16	12.76	172	03/29/2012
Phillips County								
01S01E20DDB1	343529	910058	NRCS	114	185	27	158	03/12/2012
01S02E09CBB1	343719	905434	USGS	110	185	13.19	172	03/28/2012

Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—
Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Phillips County—Continued								
01S02E32BCC1	343350	905526	NRCS	120	200	50.8	149	03/12/2012
01S03E02ADD1	343814	904511	NRCS	120	200	19	181	03/13/2012
01S03E10ABB1	343741	904634	NRCS	120	205	22	183	03/13/2012
01S04E05DCD1	343802	904151	USGS	120	230	47.70	182	03/28/2012
02S01E28CCB1	342916	910058	USGS	108	174	17.37	157	03/28/2012
02S02E29DDD1	342901	905444	NRCS	125	180	27	153	03/13/2012
02S02E33ACC1	342824	905412	NRCS	120	177	25	152	03/13/2012
02S03E15ACD1	343110	904621	USGS	112	174	13.22	161	04/25/2012
02S03E34BCD1	342828	904653	NRCS	120	165	19	146	03/15/2012
02S04E27AAC1	342932	904001	USGS	175	179	7.77	171	03/28/2012
03S03E04DAA1	342735	904710	USGS	36	171	19.53	151	03/28/2012
03S04E02CAA1	342732	903918	USGS	120	176	10.90	165	03/28/2012
04S01E01AAD1	342238	905700	NRCS	120	156	14	142	03/13/2012
04S01E14CDD1	342014	905837	NRCS	120	155	13	142	03/13/2012
04S01E23CCA1	341931	905853	USGS		156	13.11	143	03/28/2012
04S01E29CDC1	341844	910148	NRCS	120	150	8.5	142	03/13/2012
05S02E18BDA1	341535	905628	USGS	130	156	15.32	141	03/28/2012
Poinsett County								
10N01E02AAA	353205	905654	NRCS	140	235	103	132	03/20/2012
10N01E14CC1	352910	905814	USGS	150	231	98.84	132	04/26/2012
10N01E16CCB1	352922	910005	USGS	120	225	80.99	144	04/26/2012
10N01E32CBB1	352657	910053	NRCS	120	222	82	140	03/20/2012
10N01E33ACB1	352746	905931	NRCS	153	220	99	121	03/20/2012
10N02E13BCC1	352949	905026	USGS	167	237	109.33	128	04/26/2012
10N02E15CAA1	352940	905209	NRCS	160	237	112	125	03/20/2012
10N02E20BAB1	352906	905418	NRCS	155	237	111	126	03/20/2012
10N02E34BBB1	352726	905231	USGS	155.9	236	104.57	131	05/01/2012
10N03E13BCB1	352958	904352	NRCS	155	275	144	131	03/20/2012
10N03E14DAB1	352947	904405	USGS	--	263	121.34	142	05/01/2012
10N03E19BCB1	352905	904907	NRCS	--	239	110	129	03/20/2012
10N03E26BBD1	352816	904449	NRCS	140	257	120	137	03/20/2012
10N03E35CDD1	352656	904436	USGS	--	275	127.54	147	05/01/2012
10N04E35BBA1	352745	903831	NRCS	100	212	15	197	03/19/2012
10N05E15BDD1	352937	903253	USGS	--	207	12.84	194	04/12/2012
10N07E28CBB1	352733	902128	NRCS	105	217	30	187	03/20/2012
11N01E17DDC1	353437	910015	NRCS	100	232	88	144	03/20/2012
11N01E17DDD1	353437	910013	USGS	100	230	83.30	147	04/26/2012

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Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Poinsett County—Continued								
11N01E26AA1	353340	905653	USGS	140	236	100.92	135	04/26/2012
11N01E34AAA	353256	905759	NRCS	100	229	94	135	03/20/2012
11N02E26AAB1	353350	905034	USGS	158	241	125.01	116	04/26/2012
11N02E30BBB1	353352	905540	NRCS	140	239	108	131	03/20/2012
11N02E34CBA1	353238	905222	NRCS	130	240	112	128	03/20/2012
11N03E10DDA1	353546	904457	USGS	145	243	109.35	134	05/01/2012
11N03E17AAB1	353535	904714	NRCS	--	242	129	113	03/20/2012
11N03E18BAB1	353538	904852	USGS	157	243	113.19	130	05/01/2012
11N04E13DDA1	353450	903631	NRCS	112	211	15.5	196	03/19/2012
11N04E36ABA1	353251	903654	NRCS	100	211	17	194	03/19/2012
11N05E26BDB1	353318	903213	NRCS	--	213	13.5	200	03/20/2012
11N06E34BBC1	353224	902646	ANRC	115.2	211	12.36	199	03/14/2012
11N07E18CAB1	353435	902320	USGS	100	217	15.99	201	04/12/2012
11N07E28CBB1	353252	902120	NRCS	--	217	23.5	194	03/20/2012
12N01E07CDA1	354054	910141	USGS	120	236	53.91	182	05/01/2012
12N01E22DAB1	353922	905809	NRCS	115	235	81	154	03/20/2012
12N02E25DCC1	353820	904944	NRCS	145	245	123	122	03/20/2012
12N02E26DAD1	353831	905024	ANRC	135.1	245	117.50	128	08/03/2012
12N02E34CCC1	353724	905230	NRCS	180	245	122	123	03/20/2012
12N03E01CBD1	354154	904329	NRCS	190	250	102	148	03/20/2012
12N03E04DAD1	354158	904600	USGS	120	247	112.40	135	04/10/2012
12N03E35AD1	353745	904353	NRCS	150	246	106	140	03/20/2012
12N03E36ACB1	353749	904319	USGS	120	250	104.22	146	04/10/2012
12N04E08CDA	354053	904112	NRCS	100	250	94.5	156	03/20/2012
12N05E16ABA1	354039	903333	NRCS	140	221	14	207	03/20/2012
12N05E34ABA1	353805	903230	USGS	100	215	9.40	206	04/12/2012
12N07E04BAA1	354202	902060	USGS	60	223	7.16	216	04/12/2012
12N07E10CBB1	354042	902022	NRCS	100	220	10	210	03/20/2012
12N07E25CCD1	353740	901802	USGS	107.2	226	17.11	209	04/12/2012
Prairie County								
01N06W05CCB1	344353	914049	USGS	155	220	118.61	101	03/26/2012
01N06W26CDD1	344015	913708	USGS	105	218	102.55	115	03/26/2012
01N06W29DDD1	344018	913951	USGS	155	235	119.01	116	03/26/2012
01S04W28BDB1	343523	912630	USGS	112	205	98.09	107	03/26/2012
01S05W14BBC1	343722	913109	USGS	118	211	108.64	102	03/26/2012
01S05W31DDA1	343417	913432	USGS	120	206	94.10	112	03/26/2012
01S06W12BAB1	343826	913613	USGS	139.5	228	118.82	109	03/26/2012

Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—
Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Prairie County—Continued								
02N04W02BCB1	344916	912419	USGS	140	188	15.67	172	03/27/2012
02N04W32CCB1	344436	912738	USGS	--	221	83.36	138	03/26/2012
02N05W13AAB1	344805	912854	USGS	130	223	54.94	168	03/26/2012
02N05W13AAB2	344805	912853	USGS	165	221	76.64	144	03/26/2012
02N05W24BCA3	344659	912937	ANRC	130	225	90.19	135	04/10/2012
02N05W29DDB2	344545	913309	USGS	135	228	121.52	106	03/26/2012
02N06W17ABB1	344809	913959	USGS	180	235	127.03	108	03/26/2012
02N06W22BCC1 near Hazen	344653	913827	USGS	126	234	114.68	119	04/19/2012
02N06W24CAA1	344651	913551	USGS	135.5	233	118.31	115	03/26/2012
02S06W14BBB1	343213	913729	USGS	105	201	77.59	123	03/26/2012
03N04W03AAC1	345439	912424	USGS	106	187	9.29	178	03/27/2012
03N05W03BDD2	345444	913115	USGS	110	207	63.02	144	03/27/2012
03N06W01BCB1	345455	913601	USGS	115	216	85.13	131	03/27/2012
04N04W07ADC1	345850	912733	USGS	110	195	20.24	175	03/27/2012
04N05W07CDC1	345843	913441	USGS	--	212	79.42	133	03/27/2012
04N05W31DDC1	345514	913406	USGS	104	206	79.40	127	03/27/2012
04N06W05CCC1	345934	914018	USGS	100	206	61.81	144	03/27/2012
04N07W03DCB1	345942	914412	USGS	100	255	88.59	166	03/27/2012
04N07W20DDB1	345709	914607	USGS	160	255	102.87	152	03/22/2012
04N07W28BBA1	345701	914545	USGS	110	258	97.90	160	03/27/2012
Pulaski County								
01S10W29CC1	343538	920708	USGS	100	239	13.26	226	03/19/2012
02S10W14DC1	343205	920334	USGS	60	225	23.80	201	03/19/2012
02S10W16CCA1	343217	920549	USGS		230.76	23.35	207	03/19/2012
Randolph County								
18N01E11CCC1	361233	905712	NRCS	120	263	13	250	03/14/2012
18N01E16ABA1	361229	905847	NRCS	100	261	13	248	03/14/2012
18N01E21CD1	361054	905852	NRCS	110	262	15.5	247	03/14/2012
18N01E34AAC1	360943	905729	USGS	--	266	16.16	250	04/11/2012
18N02E02CBC1	361344	905035	NRCS	120	278	30.2	248	03/14/2012
18N02E17CBB1	361204	905356	NRCS	--	265	14.8	250	03/14/2012
18N02E22DCD1	361046	905105	USGS	110	273	40.53	232	04/11/2012
18N02E27BA1	361044	905120	NRCS	110	271	40	231	03/14/2012
19N02E09DCA1	361757	905157	USGS	--	267	11.24	256	04/11/2012
19N02E20DAA1	361622	905253	NRCS	100	266	10	256	03/14/2012
19N02E22DAB1	361622	905049	NRCS	90	266	3.5	263	03/14/2012

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Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Randolph County—Continued								
20N02E01ADD1	362424	904811	USGS	65	280	10.85	269	04/11/2012
20N02E01DDB1	362416	904836	NRCS	120	280	11.5	269	03/14/2012
20N02E28DAD1	362049	905142	NRCS	110	267	6.8	260	03/14/2012
20N03E07DAA1	362323	904708	NRCS	100	280	14.5	266	03/14/2012
20N03E28BA1	362114	904538	USGS	--	276	10.64	265	04/11/2012
20N03E30DDA1	362030	904717	NRCS	110	266	12	254	03/14/2012
St. Francis County								
04N01W17CBC1	345735	910801	USGS	127.7	208	62.00	146	04/04/2012
04N01W28CDD1	345535	910634	USGS	--	208	73.83	134	04/04/2012
04N02E19BBB1	345701	905633	USGS	72.2	209	63.23	146	04/03/2012
04N03E21DAD1	345623	904655	USGS	--	236	62.51	173	04/03/2012
05N01E15BCB1	350303	905942	USGS	94.1	209	70.12	139	04/04/2012
05N01E27BBA1	350136	905929	USGS	--	209	72.10	137	04/04/2012
05N02E20ADC1	350157	905437	USGS	79	211	58.55	152	04/03/2012
05N03E20AAA2	350214	904801	USGS	153.45	250	91.88	158	04/03/2012
05N05E19DCA1	350128	903630	USGS	110	203	30.57	172	04/03/2012
05N06E34CAB1	350026	902657	USGS	110	200	24.99	175	04/03/2012
06N01E33ACA2	350552	905942	USGS	--	211	71.48	140	04/04/2012
06N02E13DCA1	350813	905003	USGS	--	231	78.90	152	04/03/2012
06N02E15BDD1	350842	905247	USGS	75	214.64	63.95	151	04/03/2012
06N02E24AAA1	350755	905002	USGS	147	232	76.69	155	04/03/2012
06N05E22ACC1	350723	903252	USGS	--	200	40.16	160	04/03/2012
06N06E20ABB2	350747	902841	USGS	150	200	37.51	162	04/03/2012
White County								
05N07W09AAA1	350447	914441	USGS	29.5	205	11.13	194	03/30/2012
05N07W10CCC1	350400	914436	USGS	80	203	8.28	195	03/30/2012
06N06W04BAA1	351047	913910	USGS	70	220	16.37	204	03/30/2012
06N06W18BBC1	350851	914152	USGS	--	210	10.56	199	03/30/2012
06N06W18BCA1	350835	914150	NRCS	--	210	13.5	197	04/25/2012
06N06W34AAB1	350624	913754	USGS	--	213	60.50	153	03/30/2012
06N07W17DCC1	350822	914635	USGS	90	217	10.30	207	03/30/2012
06N08W13ABA1	350908	914824	USGS	60	228	6.88	221	03/30/2012
06N08W26DDB1	350640	914931	USGS	89	230	10.59	219	03/30/2012
07N05W01AAA1	351553	912858	USGS	--	205	12.81	192	03/30/2012
07N05W32BAB1	351137	913406	USGS	80	213.7	24.58	189	03/30/2012
08N04W06CCB1	352028	912847	USGS	74	214	13.32	201	03/30/2012
08N05W32CBC1	351616	913417	USGS	--	199	0.49	199	03/30/2012

Appendix 1. Water levels measured in wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, 2012.—
Continued

[USGS, U.S. Geological Survey; NRCS, Natural Resources Conservation Service, ANRC, Arkansas Natural Resources Commission; --, no data; NGVD 29, National Geodetic Vertical Datum of 1929; Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Source of data	Depth of well (feet)	Land-surface datum altitude (feet above NGVD 29)	Depth to water (feet below land-surface datum)	Water-level altitude (feet above NGVD 29)	Date of measurement
Woodruff County								
04N03W03AB1	350021	911820	USGS	100	185	11.36	174	04/04/2012
05N01W13CDC1	350244	910331	NRCS	135	210	79	131	04/10/2012
05N01W31CCC1	350106	910900	NRCS	140	210	62	148	04/10/2012
05N02W20DCB1	350208	911356	USGS	--	192	12.88	179	04/04/2012
05N03W25DDB1	350133	911531	NRCS	120	190	11.7	178	04/10/2012
05N04W12DBA1	350427	912211	USGS	92	186	4.35	182	04/04/2012
06N01W06BAB1	351048	910835	USGS	--	202	33.21	169	04/05/2012
06N01W11AAB1	350944	910354	USGS	150	215	64.92	150	04/04/2012
06N01W27BCC1	350641	910544	USGS	120	202	54.67	147	04/04/2012
06N01W28DAD1	350629	910549	USGS	135	201	55.58	145	04/04/2012
06N02W19AAA1	350802	911419	NRCS	130	225	47.5	178	04/10/2012
06N03W15BAB1	350903	911807	USGS	111	188.79	4.54	184	04/04/2012
06N03W31BCB1	350623	912144	USGS	--	185	2.73	182	04/04/2012
06N04W22BDA1	350807	912428	NRCS	120	186	2.0	184	04/10/2012
07N01W04ABB1	351555	910607	USGS	120	226	61.44	165	04/04/2012
07N03W19AAA1	351335	912025	USGS	100	202.59	8.49	194	04/05/2012
07N03W31BBA1	351152	912103	NRCS	120	195	8.0	187	04/10/2012
08N01W06DDD1	352028	910747	USGS	--	218	43.49	175	04/05/2012
08N02W27DDB1	351711	911107	NRCS	100	214	26.0	188	04/10/2012
08N02W31DDD1	351611	911411	USGS	40	194.55	4.63	190	04/04/2012
08N03W04BBB1	352128	911919	USGS	110.2	221	13.58	207	04/05/2012
08N03W31AAD1	351655	912028	USGS	110	212	18.82	193	04/05/2012
09N03W28ABB1	352310	911845	NRCS	120	220	15.0	205	04/10/2012
09N03W29AAD1	352258	911921	USGS	--	220	17.93	202	04/05/2012
09N03W32ACA1	352205	911936	NRCS	120	217	15.0	202	04/10/2012

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Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Arkansas County							
02S04W11DBB1	343233	912415	3/24/2008	100.74	3/15/2012	100.08	0.7
02S05W15AAB1	343213	913127	3/24/2008	107.38	3/15/2012	123.23	-15.9
03S02W27ABB1	342448	911251	3/25/2008	65.92	3/14/2012	62.76	3.2
03S03W05CCD1	342737	912132	3/24/2008	99.78	3/14/2012	99.78	0.0
03S03W18CCC1	342553	912251	3/18/2008	100.21	3/15/2012	100.58	-0.4
03S03W27BBC1	342455	911944	3/24/2008	93.04	3/15/2012	93.09	0.0
03S04W02BBB1	342831	912454	3/24/2008	93.22	3/15/2012	93.35	-0.1
03S04W03DCA16	342753	912515	5/12/2008	101.14	4/24/2012	101.29	-0.2
03S04W03DCA6	342753	912517	3/24/2008	100.63	3/15/2012	100.41	0.2
03S04W03DDA1	342750	912460	3/24/2008	100.94	3/15/2012	105.19	-4.3
03S05W03CCC1	342752	913227	3/20/2008	104.42	3/15/2012	103.88	0.5
03S05W13CBA2	342630	913007	3/13/2008	107.12	3/15/2012	106.98	0.1
03S06W35ADD1	342411	913652	3/21/2008	54.81	3/15/2012	59.93	-5.1
04S01W04ACD2	342233	910733	3/25/2008	4.05	3/14/2012	8.24	-4.2
04S01W31DCB1	341753	910949	3/25/2008	52.42	3/14/2012	50.04	2.4
04S02W29CCC1	341846	911539	3/25/2008	83.92	3/14/2012	85.2	-1.3
04S03W17ADD1	342102	912058	3/24/2008	109.98	3/15/2012	111.77	-1.8
04S03W32BCB1	341820	912202	3/20/2008	123.19	3/15/2012	118.85	4.3
04S04W02ABB1	342313	912424	3/24/2008	109.89	3/15/2012	110.06	-0.2
04S04W35ABC1	341835	912437	4/7/2008	106	3/6/2012	91.2	14.8
04S06W15DBB1	342122	913827	3/21/2008	34.88	3/15/2012	34.42	0.5
05S01W16BAB1	341552	910729	3/25/2008	51.37	3/14/2012	45.9	5.5
05S02W16ABD1	341552	911358	3/20/2008	86.13	3/14/2012	80.31	5.8
05S03W09CBA1	341624	912046	3/12/2008	113.09	3/15/2012	114.71	-1.6
05S04W07CCC1	341555	912932	3/20/2008	75.05	3/15/2012	73.88	1.2
05S04W32BBA1	341316	912822	3/20/2008	58.75	3/15/2012	56.62	2.1
05S06W02DDD1	341724	913651	3/21/2008	21.8	3/15/2012	21.98	-0.2
05S06W07DDC1	341642	914130	3/21/2008	3.83	3/15/2012	-3.2	7.0
06S02W23DCD1	340853	911206	3/20/2008	70.61	3/14/2012	74.2	-3.6
06S03W10BBA1	341136	911954	3/20/2008	82.25	3/14/2012	79.36	2.9
06S03W27AAA1	340858	911913	3/20/2008	68.55	3/14/2012	68.28	0.3
06S03W32ADD1	340740	912115	3/12/2008	57.35	3/14/2012	56.82	0.5
07S02W04BBB1	340707	911452	3/20/2008	50.5	3/14/2012	49.26	1.2
07S02W17BBA1	340530	911539	3/20/2008	54.05	3/14/2012	48.89	5.2
07S03W18CCD1	340435	912316	3/20/2008	44.17	3/14/2012	41.34	2.8
07S03W32BBC1	340240	912216	3/20/2008	26.45	3/14/2012	24.22	2.2
08S02W08ACA1	340041	911506	3/20/2008	42.67	3/14/2012	40.66	2.0
08S03WT2299	340147	912203	3/20/2008	22.09	3/14/2012	20.53	1.6

Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Ashley County							
15S04W23DBD1	332247	912852	3/11/2008	33.42	3/8/2012	34.22	-0.8
15S04W26DCC1	332232	912902	3/11/2008	32.17	3/8/2012	32.72	-0.5
15S07W21CBA1	332316	915001	3/10/2008	4.52	3/8/2012	7.54	-3.0
16S06W08CAA1	331941	914438	3/10/2008	78.92	3/8/2012	77.33	1.6
16S06W25DDD1	331640	913958	3/12/2008	78.47	3/7/2012	79.66	-1.2
16S06W27BAB1	331729	914240	3/10/2008	84.07	3/8/2012	85.87	-1.8
17S04W03ABB1	331528	913010	3/11/2008	30.77	3/7/2012	35.26	-4.5
17S04W15DDC1	331252	912954	3/11/2008	27.7	3/7/2012	31.83	-4.1
17S04W21ABA1	331252	913108	3/11/2008	22.97	3/7/2012	28.17	-5.2
17S05W01AAD1	331459	913402	4/15/2008	18	3/28/2012	19	-1.0
17S06W35CAC1	331049	914136	3/10/2008	72.41	3/7/2012	72.42	0.0
18S05W11CCD1	330841	913538	4/15/2008	27	3/16/2012	21	6.0
18S05W22DDA1	330712	913555	4/15/2008	22	3/16/2012	23	-1.0
18S08W01AAB1	331015	915225	3/10/2008	84.34	3/7/2012	85.22	-0.9
18S08W28DDD2	330625	915528	5/13/2008	85.11	5/8/2012	85.03	0.1
19S04W06BAB2	330504	913329	3/11/2008	23.92	3/7/2012	29.47	-5.5
19S04W14BBB1	330310	912913	4/15/2008	31	3/28/2012	32.2	-1.2
19S05W08ACA1	330405	913815	4/15/2008	18	3/28/2012	22	-4.0
19S05W16ABB1	330323	913718	4/15/2008	28	3/16/2012	27	1.0
19S05W22DCD1	330139	913615	4/15/2008	26	3/28/2012	28.4	-2.4
19S06W07BCC1	330404	914608	3/10/2008	32.46	3/7/2012	31.56	0.9
Chicot County							
13S03W27AAA1	333253	912310	3/24/2008	48	3/16/2012	49.3	-1.3
13S03W34BAA1	333110	912539	3/11/2008	40.74	3/8/2012	45.26	-4.5
13S03W35BAC1	333154	912246	3/11/2008	41.29	3/8/2012	44.4	-3.1
14S02W09BDD1	332859	911729	3/26/2008	30	3/16/2012	40.6	-10.6
14S02W18BBDD1	332859	912038	3/24/2008	34	3/22/2012	32.8	1.2
14S03W07BBD1	333011	912620	3/11/2008	27.62	3/8/2012	30.9	-3.3
14S03W32CDB2	332613	912551	3/11/2008	35.76	3/8/2012	40.14	-4.4
15S02W20DDC1	332227	911920	3/11/2008	28.12	3/8/2012	31.75	-3.6
16S03W15DAD1	331818	912334	4/30/2008	32.82	3/1/2012	33.94	-1.1
17S01W06BCC1	331501	911505	3/11/2008	21.57	3/8/2012	23.21	-1.6
17S02W10AAA1	331429	911712	3/11/2008	27.36	3/8/2012	26.86	0.5
17S03W18CBC1	331257	912736	3/26/2008	35	3/27/2012	35.6	-0.6
17S03W28DBA1	331127	912441	3/11/2008	24.74	3/8/2012	25.63	-0.9
18S01W33BAD1	330543	911245	3/26/2008	14	3/22/2012	10	4.0
19S03W14ABB1	330304	912251	3/11/2008	23.99	3/8/2012	24.22	-0.2

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Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Clay County							
18N08E03DAB1	361323	901153	4/9/2008	4.29	4/11/2012	7.27	-3.0
18N08E11BAA1	361253	901117	4/2/2008	4	4/3/2012	7.6	-3.6
19N03E24AAA1	361655	904157	4/9/2008	20.96	4/11/2012	20.75	0.2
19N04E19AAA1	361654	904050	4/9/2008	31.56	4/11/2012	31.27	0.3
19N04E19BAA1	361649	904125	4/6/2008	23.2	4/2/2012	23.1	0.1
19N05E15BBD1	361716	903152	4/2/2008	39	4/2/2012	37.3	1.7
19N06E18DBC1	361642	902815	4/2/2008	38.9	4/3/2012	41.1	-2.2
19N07E25BCB1	361519	901700	4/2/2008	13.1	4/3/2012	16.6	-3.5
19N08E08DCA1	361729	901402	4/2/2008	4	4/3/2012	4.9	-0.9
19N09E19CDC1	361539	900908	4/2/2008	4.5	4/3/2012	6.9	-2.4
20N03E25BAA1	362112	904225	4/6/2008	23	4/2/2012	8.8	14.2
20N04E03ADA1	362425	903725	4/8/2008	16	4/2/2012	13.9	2.1
20N05E22CAD1	362118	903132	4/2/2008	29.5	4/2/2012	29	0.5
20N05E30CAC1	362003	903454	4/6/2008	17.4	4/2/2012	18.5	-1.1
20N05E34DBA1	361939	903117	4/9/2008	31.78	4/11/2012	31.69	0.1
20N06E09BBA1	362327	902620	3/26/2008	22.5	4/2/2012	22.2	0.3
20N06E28CCD1	362005	902630	4/2/2008	30.8	4/3/2012	36.9	-6.1
20N08E22BDC1	362111	901220	4/2/2008	6.5	4/3/2012	8.1	-1.6
20N08E24DDA1	362057	900934	4/9/2008	6.16	4/11/2012	9.43	-3.3
20N09E09ABC1	362306	900642	4/2/2008	3	4/3/2012	5.4	-2.4
20N09E33DDC1	361904	900628	4/2/2008	5	4/3/2012	6.4	-1.4
21N03E15CBC1	362738	904453	4/28/2008	5	4/2/2012	10.8	-5.8
21N03E36CDD1	362450	904214	4/8/2008	11.1	4/2/2012	10.5	0.6
21N04E09DBC1	362828	903853	4/8/2008	10	4/2/2012	12	-2.0
21N05E17ABB1	362755	903329	4/9/2008	23.92	4/11/2012	24.36	-0.4
21N05E22BAB1	362704	903132	4/8/2008	5.8	4/2/2012	2.1	3.7
21N06E11BBB1	362839	902421	4/2/2008	15.2	4/3/2012	14.8	0.4
21N06E28BB1	362605	902608	4/9/2008	19.38	4/11/2012	19.9	-0.5
21N07E01DDC1	362835	901607	4/2/2008	33.2	4/3/2012	25.2	8.0
21N08E03CDB1	362848	901217	4/2/2008	20.5	4/3/2012	20.4	0.1
21N08E18CCC1	362651	901550	4/9/2008	40.71	4/11/2012	43.03	-2.3
21N09E31BDA1	362447	900851	4/2/2008	1	4/3/2012	5.2	-4.2
Craighead County							
13N01E23CAB1	354430	905736	3/17/2008	70.1	4/4/2012	72.2	-2.1
13N01E23DAA1	354435	905652	4/10/2008	71.08	4/10/2012	74.07	-3.0
13N03E28CDB1	354322	904652	3/12/2008	116.9	3/28/2012	117.5	-0.6
13N03E29AAA1	354403	904713	4/10/2008	105.76	4/10/2012	111.31	-5.5
13N04E12ABB1	354635	903656	4/10/2008	24.51	4/9/2012	25.61	-1.1
13N04E15DBA1	354521	903857	3/12/2008	26.6	3/20/2012	25.7	0.9

Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Craighead County—Continued							
13N04E26BCC1	354340	903829	3/12/2008	26.6	3/20/2012	27.5	-0.9
13N05E02CCC1	354648	903202	3/12/2008	13.5	3/20/2012	15	-1.5
13N05E24BAC1	354451	903045	3/12/2008	8.8	3/20/2012	10	-1.2
13N06E21AAA1	354450	902701	3/12/2008	8.5	3/20/2012	9	-0.5
13N07E02CAB1	354642	901901	3/12/2008	10.5	3/20/2012	10	0.5
13N07E05ABB1	354716	902158	3/12/2008	4.4	3/20/2012	7.3	-2.9
13N07E20BBA1	354440	902216	4/10/2008	1.95	4/10/2012	4.92	-3.0
13N07E35BCD1	354233	901837	3/12/2008	12.9	3/20/2012	14	-1.1
14N01E03ACB1	355246	905816	3/17/2008	51.5	4/4/2012	55.5	-4.0
14N01E10BAB1	355204	905828	3/17/2008	54	4/4/2012	59.4	-5.4
14N01E31DCA1	354817	910121	3/17/2008	61.9	4/4/2012	66.5	-4.6
14N02E18BDD1	355041	905419	4/10/2008	53.57	4/10/2012	60.4	-6.8
14N02E22AAA1	355007	905129	3/17/2008	78	3/28/2012	79.5	-1.5
14N02E27AAA1	354916	905125	4/9/2008	80.46	5/2/2012	84.64	-4.2
14N05E25ABB1	354921	903025	4/10/2008	18.58	4/10/2012	19.61	-1.0
14N06E06BAA1	355234	902934	3/12/2008	21.5	3/20/2012	21	0.5
14N06E27AAB1	354911	902559	4/10/2008	-0.25	4/10/2012	2.81	-3.1
14N07E14DDC1	354956	901831	3/12/2008	13.1	3/20/2012	14.5	-1.4
14N07E26DBB1	354834	901843	4/10/2008	2.68	4/10/2012	7.05	-4.4
15N02E12DCB1	355626	904930	3/17/2008	36.5	4/4/2012	37.7	-1.2
15N05E22BAB1	355513	903241	3/12/2008	31.8	3/20/2012	36.2	-4.4
15N06E04BAD1	355744	902706	3/12/2008	17.4	3/20/2012	17.5	-0.1
15N06E20DDD1	355426	902739	4/10/2008	9.37	4/10/2012	9.73	-0.4
15N07E35DCB1	355241	901831	3/12/2008	13.9	3/20/2012	14.5	-0.6
Crittenden County							
04N07E21AAD1	345644	902121	4/3/2008	10.1	4/9/2012	9.87	0.2
05N07E28CBA1	350121	902140	4/3/2008	17.08	4/9/2012	16.06	1.0
05N07E34BAB1	350059	902030	4/3/2008	16.27	4/9/2012	14.36	1.9
05N08E11CCD2	350345	901308	4/3/2008	25.27	4/9/2012	24.91	0.4
07N07E05DAD1	351504	902129	4/3/2008	31.39	4/9/2012	30.98	0.4
07N07E31CCC1	351042	902359	4/3/2008	36.48	4/9/2012	36.53	-0.1
07N09E05CDD1	351453	900934	4/3/2008	14.83	4/9/2012	9.46	5.4
08N07E13CCC2	351828	901812	4/3/2008	31.43	4/9/2012	31.13	0.3
08N07E14DAA2	351854	901833	4/3/2008	31.82	4/9/2012	32.62	-0.8
08N07E35BBC1	351630	901933	4/7/2008	32.58	3/14/2012	32.56	0.0
09N07E10DDA1	352448	901925	4/3/2008	29.29	4/9/2012	28.84	0.4
09N07E31BAB1	352160	902327	4/3/2008	34.06	4/9/2012	33.2	0.9

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Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Cross County							
06N02E11BDB1	350934	905132	4/14/2008	69.5	4/2/2012	67.5	2.0
06N05E05AAA1	351042	903432	4/7/2008	41	4/2/2012	40.5	0.5
07N01E05CDA1	351518	910049	4/4/2008	76.38	5/1/2012	80.07	-3.7
07N01E05DCA1	351514	910033	4/8/2008	77.5	4/2/2012	78.5	-1.0
07N01E06CAA1	351530	910154	4/8/2008	75	4/2/2012	76.6	-1.6
07N01E11AAA1	351501	905705	4/2/2008	78.62	5/1/2012	80.28	-1.7
07N02E02CDD1	351508	905113	4/7/2008	82.62	3/14/2012	84.14	-1.5
07N02E10ABB1	351504	905217	4/8/2008	91	4/2/2012	92	-1.0
07N02E29CCC1	351142	905152	4/7/2008	74.5	4/2/2012	74	0.5
07N02E29DDC1	351138	905409	4/2/2008	74.14	5/1/2012	74.65	-0.5
07N03E05AAD1	351558	904737	4/15/2008	106	4/2/2012	105	1.0
07N03E32DCC1	351045	904810	4/2/2008	97.8	5/1/2012	98.36	-0.6
07N04E07AAA1	351510	904207	4/8/2008	48	4/2/2012	41	7.0
07N04E27BDA1	351220	903926	4/7/2008	24.5	4/2/2012	26.5	-2.0
07N05E02AAB1	351600	903103	4/8/2008	43	4/2/2012	42.5	0.5
07N05E16ACA1	351358	903352	4/8/2008	31.5	4/2/2012	35	-3.5
07N05E19CCC1	351238	903645	4/3/2008	39.34	5/1/2012	35.96	3.4
07N05E25ABA1	351229	903045	4/3/2008	38.94	5/1/2012	38.28	0.7
08N01E02CDD1	352023	905736	4/8/2008	89	4/3/2012	93	-4.0
08N01E16DBB1	351855	905933	4/8/2008	87	4/3/2012	90.5	-3.5
08N01E17CAD1	351852	910046	4/8/2008	76	4/3/2012	78	-2.0
08N02E12DCC1	351938	905002	4/14/2008	92	4/3/2012	98	-6.0
08N02E17AAA1	351923	905354	4/8/2008	90	4/2/2012	94	-4.0
08N05E17CAA1	351904	903508	4/8/2008	32	4/2/2012	32	0.0
08N05E32ADD1	351632	903440	4/3/2008	31.47	5/1/2012	27.23	4.2
09N01E04ACD1	352608	905914	4/8/2008	90	4/3/2012	93.5	-3.5
09N01E33BBA2	352203	910001	4/4/2008	83.67	5/1/2012	85.66	-2.0
09N01E36AAB1	352155	905605	4/8/2008	91.5	4/3/2012	95	-3.5
09N02E20AAA1	352402	905342	4/8/2008	94	4/3/2012	99	-5.0
09N02E30CBB1	352243	905551	4/8/2008	90	4/3/2012	95	-5.0
09N02E32BBB1	352213	905444	4/8/2008	100	4/3/2012	94	6.0
09N03E03ACA1	352630	904529	4/14/2008	108	4/3/2012	109	-1.0
09N03E17DDC1	352409	904726	4/4/2008	107.77	5/1/2012	109.94	-2.2
09N05E32BCB1	352151	903525	4/9/2008	30	4/2/2012	30	0.0
09N05E32BDB1	352151	903512	4/3/2008	32.17	5/1/2012	28.99	3.2
Desha County							
07S01E19ABA1	340428	910303	3/25/2008	22.5	3/13/2012	14	8.5
08S03W33ABD1	335803	912338	3/13/2008	6.93	3/13/2012	6.57	0.4
09S01W08BDA1	335608	911234	4/1/2008	30	4/3/2012	23.4	6.6

Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Desha County—Continued							
09S01W15CBB1	335501	911055	4/1/2008	39	4/3/2012	38.6	0.4
09S02W26DDC1	335257	911530	5/13/2008	31.68	4/24/2012	32.31	-0.6
09S03W05BAC1	335704	912506	4/1/2008	36	3/27/2012	48.6	-12.6
09S03W13BAB1	335500	911922	4/1/2008	35	4/3/2012	36.5	-1.5
09S03W17DCB1	335448	912457	3/13/2008	33.68	3/13/2012	37.38	-3.7
09S04W06BCA1	335756	913243	3/13/2008	36.43	3/13/2012	37.66	-1.2
09S04W06CBB1	335629	913257	3/12/2008	39	3/29/2012	44	-5.0
10S01W23CDA1	335305	911032	4/1/2008	31	4/3/2012	23	8.0
10S02W11ADD1	335045	911517	4/1/2008	31	4/3/2012	35	-4.0
10S02W20ADA1	334916	911825	3/12/2008	40.85	3/13/2012	42.16	-1.3
10S03W26CAA1	334806	912145	3/12/2008	47.43	3/13/2012	48.71	-1.3
10S04W03BAB1	335209	912948	3/13/2008	36.86	3/13/2012	39.55	-2.7
10S04W11DDA1	335031	912802	3/13/2008	33.33	3/13/2012	35.52	-2.2
11S02W15ADD1	334446	911635	4/1/2008	36	4/3/2012	35.9	0.1
11S03W16CBA1	334439	912433	4/1/2008	36	4/3/2012	36	0.0
11S03W31BBA1	334228	912651	3/12/2008	37.27	3/12/2012	35.95	1.3
12S01W33BAA1	333718	911205	3/13/2008	25.21	3/12/2012	7.39	17.8
13S02W17ADA1	333421	911858	4/1/2008	46	3/27/2012	47.2	-1.2
13S02W27CAC1	333224	911735	3/12/2008	32.43	3/12/2012	33.92	-1.5
13S03W11CAB1	333503	912241	4/1/2008	52	4/3/2012	56.4	-4.4
Drew County							
11S04W35CDD1	334144	912842	3/12/2008	29.73	3/12/2012	30.11	-0.4
11S05W08CCC1	334546	913837	3/12/2008	37.47	3/12/2012	38.52	-1.1
12S04W03ABB1	334134	912946	3/12/2008	26.02	3/12/2012	27.2	-1.2
12S04W25DBB1	333739	912738	3/17/2008	36	4/9/2012	37	-1.0
13S04W09ACD1	333512	913034	3/17/2008	20	4/9/2012	30	-10.0
13S05W29ADA1	333248	913747	3/12/2008	46.85	3/12/2012	41.6	5.3
13S06W21DAA1	333324	914258	3/17/2008	72	3/27/2012	75	-3.0
14S04W03ADD1	333050	912929	3/17/2008	28	3/27/2012	33	-5.0
14S04W05CBC1	333042	913226	3/17/2008	20	3/27/2012	17	3.0
Greene County							
16N03E03BA1	360316	904516	4/9/2008	33.17	5/2/2012	36.38	-3.2
16N03E05BBB1	360316	904750	4/17/2008	32.6	4/2/2012	35.9	-3.3
16N03E16DDD1	360049	904547	4/17/2008	28.1	4/2/2012	37	-8.9
16N06E09ABB1	360215	902651	4/7/2008	40.2	4/3/2012	37.8	2.4
16N06E21BAA1	360031	902705	4/7/2008	27.6	4/3/2012	35	-7.4
17N03E02DCC1	360806	904352	4/17/2008	30.8	4/2/2012	45.6	-14.8
17N04E07AD1	360718	904122	4/17/2008	38.1	4/2/2012	43.3	-5.2
17N04E28DAA1	360431	903917	4/8/2008	87.26	3/14/2012	89.79	-2.5
17N06E15ABC1	360631	902546	4/17/2008	30.9	4/3/2012	36.1	-5.2

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Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Greene County—Continued							
17N07E01BBA1	360832	901724	4/7/2008	5.8	4/3/2012	5.1	0.7
17N07E18ABB1	360638	902235	4/9/2008	7.85	5/2/2012	15.36	-7.5
18N03E24ACA1	361119	904216	4/17/2008	35.1	4/2/2012	36.5	-1.4
18N04E04AAC1	361356	903854	4/17/2008	31.3	4/2/2012	33.8	-2.5
18N04E21CBD1	361052	903725	4/9/2008	58.57	5/2/2012	58.65	-0.1
18N06E23ABB1	361109	902402	4/17/2008	15.4	4/3/2012	14.9	0.5
18N07E05DAB1	361316	902025	4/7/2008	12.2	4/3/2012	14.1	-1.9
18N07E17BAB1	361203	902105	4/7/2008	8.6	4/3/2012	7	1.6
18N07E20BBA1	361110	902113	4/9/2008	7.23	5/2/2012	10.18	-3.0
19N03E26AD1	361601	904258	4/9/2008	30.28	4/11/2012	29.49	0.8
19N03E33DDD1	361418	904516	4/17/2008	36.5	4/2/2012	40.6	-4.1
Independence County							
12N04W14DD1	353929	912236	4/16/2008	10.54	5/2/2012	22.03	-11.5
12N04W34CBB1	353720	912513	4/16/2008	4.47	5/2/2012	20.83	-16.4
Jackson County							
09N01W22ADD1	352332	910433	4/15/2008	63.04	4/5/2012	62.74	0.3
09N02W32CBB1	352152	911348	4/15/2008	30.39	4/5/2012	28.95	1.4
10N02W29ABB1	352829	911312	4/15/2008	28.47	4/5/2012	26.64	1.8
11N01W26AAD1	353330	910323	4/15/2008	68.29	4/26/2012	70.59	-2.3
11N01W29AAD1	353339	910635	4/15/2008	41.88	4/26/2012	41.4	0.5
12N02W25ABB2	353910	910852	4/16/2008	34.41	4/26/2012	34.21	0.2
13N01W20AAA1	354514	910627	4/16/2008	41.59	4/13/2012	41.6	0.0
14N01W09AAA1	355220	910515	4/16/2008	43.88	4/13/2012	45.35	-1.5
Jefferson County							
03S08W24BBC1	342620	914953	3/18/2008	51.03	3/19/2012	52.61	-1.6
03S09W06DDA1	342840	920037	3/18/2008	37.02	3/19/2012	39.46	-2.4
03S09W14BCD1	342712	915712	3/31/2008	51	4/3/2012	72.8	-21.8
03S09W22AAA1	342640	915728	3/31/2008	43	4/3/2012	42	1.0
03S09W29CBD1	342517	920023	3/18/2008	27.74	3/19/2012	27.08	0.7
03S09W36ACC1	342428	915555	3/31/2008	29	3/29/2012	38.9	-9.9
03S10W35BBC1	342449	920358	3/31/2008	8.5	4/3/2012	11	-2.5
04S07W35DDB1	341836	914347	3/31/2008	28.8	3/29/2012	30.6	-1.8
04S08W13DCB1	342123	914926	3/18/2008	47.99	3/19/2012	47.8	0.2
04S09W02CBD1	342325	915717	3/31/2008	26.6	3/29/2012	34.9	-8.3
05S08W12DAA1	341712	914907	3/18/2008	16.15	3/19/2012	18.05	-1.9
06S05W15BCA1	341023	913245	3/18/2008	18.22	3/13/2012	16.69	1.5
06S06W23AAD1	341007	913712	3/18/2008	19.02	3/13/2012	19.37	-0.4
06S07W14BAA1	341125	914426	3/18/2008	15.25	3/13/2012	15.69	-0.4
07S08W06BAA1	340859	915647	3/18/2008	19.07	3/13/2012	20.62	-1.6

Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Lawrence County							
15N01E09ABD1	355714	905900	3/27/2008	55.25	3/14/2012	58.8	-3.5
15N01E26DDA1	355402	905639	4/10/2008	54.07	5/2/2012	54.76	-0.7
15N01E32BAA1	355352	910027	3/27/2008	53.09	3/14/2012	55.45	-2.4
15N01W35CBB1	355336	910356	4/10/2008	46.68	5/2/2012	49.04	-2.4
16N01E11DAC2	360203	905639	4/10/2008	48.69	5/2/2012	51.61	-2.9
Lee County							
01N01E09CCC1	344215	910054	4/15/2008	35.5	4/19/2012	36	-0.5
01N01E24CBD1	344033	905729	4/15/2008	16.7	4/19/2012	21	-4.3
01N02E11BAB1	344255	905208	4/15/2008	33	4/19/2012	37	-4.0
01N02E22CBA1	344056	905318	4/15/2008	29.5	4/19/2012	30.5	-1.0
01N02E33CBB1	343858	905434	4/15/2008	11	4/19/2012	30.5	-19.5
01N02E33CCB1	343851	905433	4/15/2008	9	4/19/2012	15.5	-6.5
01N03E02BBC1	344339	904601	4/1/2008	53.68	4/2/2012	55.02	-1.3
01N03E35BBA1	343923	904549	4/1/2008	13.85	4/2/2012	15.91	-2.1
02N01E21BAA1	344633	910005	4/15/2008	38.3	4/28/2012	37.5	0.8
02N01E23BAA2	344632	905820	4/1/2008	52.1	4/2/2012	53.6	-1.5
02N01W12BAA1	344828	910330	4/1/2008	45.65	4/2/2012	46.84	-1.2
02N01W34DDC1	344410	910520	4/15/2008	52	4/28/2012	57	-5.0
02N02E08ADC1	344807	905339	4/1/2008	45.92	4/2/2012	46.35	-0.4
02N02E36DDC1	344355	905020	4/15/2008	25.5	4/19/2012	36	-10.5
02N03E08AAD1	344811	904838	4/1/2008	45.73	4/2/2012	43.5	2.2
02N03E09DDD1	344723	904707	4/15/2008	47	4/28/2012	49.6	-2.6
02N03E29CAD1	344500	904846	4/15/2008	43	4/28/2012	47	-4.0
02N04E03ABD1	344855	903954	4/15/2008	26	4/19/2012	20	6.0
02N04E15DAC1	344637	903950	4/1/2008	20.67	4/2/2012	17.14	3.5
03N01E15CCB1	345206	905947	4/1/2008	63.96	4/2/2012	66.48	-2.5
03N01E16CBA1	345222	910040	4/1/2008	65.14	4/2/2012	67.96	-2.8
03N02E12CDC1	345239	905053	4/15/2008	43	4/19/2012	45	-2.0
03N02E13BBA1	345237	905107	4/1/2008	51.87	4/2/2012	50.22	1.6
03N02E21CBC1	345111	905428	4/15/2008	56	4/28/2012	56.5	-0.5
03N02E29DAD1	345014	905430	4/1/2008	44.64	4/2/2012	46.51	-1.9
03N03E05CDD1	345327	904837	4/15/2008	49	4/19/2012	40	9.0
03N03E32CAB1	344933	904926	4/1/2008	51.22	4/2/2012	48.99	2.2
03N04E07CBB1	345245	904312	4/15/2008	30	4/28/2012	16	14.0
03N05E14DDA1	345148	903203	4/1/2008	15.79	4/2/2012	11.57	4.2
Lincoln County							
07S06W03CCA2	340828	914114	3/12/2008	18	3/28/2012	16	2.0
07S07W36CBD1	340411	914529	3/12/2008	41	3/27/2012	42	-1.0
08S04W06ABD1	340341	913116	3/12/2008	16	3/28/2012	12	4.0
08S04W08BBB2	340254	913101	3/13/2008	23.23	3/13/2012	20.13	3.1

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Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Lincoln County—Continued							
08S04W29ABC1	340021	913044	3/12/2008	45	3/28/2012	32	13.0
08S04W31CBA1	335901	913150	3/13/2008	35.11	3/13/2012	35.75	-0.6
08S05W12AAD1	340246	913214	3/12/2008	24	3/28/2012	32	-8.0
08S05W21DCD1	340027	913533	3/12/2008	30	3/29/2012	26	4.0
08S05W32DCC1	335840	913644	3/12/2008	47	3/28/2012	62	-15.0
08S07W05DDD1	340301	914903	3/14/2008	30.23	3/13/2012	31.1	-0.9
09S05W17BCB1	335552	913820	3/13/2008	43.17	3/12/2012	40.96	2.2
09S05W19CCC1	335428	913941	3/12/2008	40	3/26/2012	40	0.0
09S06W04BCD1	335821	914346	3/13/2008	42.58	3/12/2012	43.21	-0.6
09S06W04BDD1	335759	914335	3/12/2008	46	3/26/2012	45	1.0
10S05W06DCC1	335155	913908	3/13/2008	32.37	3/12/2012	29.82	2.5
Lonoke County							
01N08W03DDA1	344411	915050	4/15/2008	137	3/29/2012	139	-2.0
01N09W13DAB1	344235	915517	3/19/2008	88.43	3/20/2012	84.53	3.9
01N10W15CDA1	344236	920414	4/15/2008	31	3/29/2012	24	7.0
01S06W31ABB1	343459	914131	3/19/2008	79.32	3/20/2012	79.94	-0.6
01S06W32BBB1	343501	914056	4/15/2008	78.5	3/29/2012	80	-1.5
01S07W12ABA1	343834	914230	3/19/2008	71.77	3/20/2012	81.82	-10.1
01S07W19DDB1	343609	914746	3/25/2008	84.71	3/20/2012	86.82	-2.1
01S08W24CDD1	343606	914912	3/19/2008	83.34	3/20/2012	83.64	-0.3
01S09W36CCC1	343435	915619	3/18/2008	61.91	3/19/2012	62.94	-1.0
01S10W01ACB1	343927	920215	3/18/2008	44.63	3/19/2012	43.47	1.2
01S10W11CAB1	343841	920337	3/25/2008	31.42	3/19/2012	29.35	2.1
02N07W07DAA1	344845	914707	4/15/2008	134	3/29/2012	138	-4.0
02N07W16BAB1	344815	914540	3/19/2008	135.79	3/20/2012	144.93	-9.1
02N08W16ABC1	344806	915114	3/19/2008	124.87	3/20/2012	126.87	-2.0
02N08W23CAB1	344659	915118	4/15/2008	129	3/29/2012	135	-6.0
02N08W27DCC1	344543	915106	3/25/2008	130.93	4/10/2012	131.96	-1.0
02N10W15ACC1	344807	920352	4/15/2008	32	3/29/2012	28	4.0
02S07W05CDC1	343326	914715	4/15/2008	70	3/29/2012	75	-5.0
02S07W10CCB1	343246	914525	3/19/2008	63.34	3/19/2012	62.69	0.7
02S08W06BAA1	343430	915447	3/25/2008	69.14	3/19/2012	68.55	0.6
02S08W13BBB1	343232	914935	3/19/2008	57.67	3/19/2012	62.02	-4.4
02S08W28CDC1	343007	915237	3/25/2008	61.78	3/19/2012	62.93	-1.1
02S08W34DBB1	343003	915150	3/19/2008	63.76	3/19/2012	68.14	-4.4
02S09W22AAA1	343153	915727	4/15/2008	63	3/29/2012	63	0.0
02S09W26DC1	343019	915643	4/15/2008	53	3/29/2012	52	1.0
02S09W30CDD1	343014	920116	3/18/2008	38.88	3/19/2012	38.91	0.0
03N07W08BDB1	345407	914638	2/7/2008	98.31	3/22/2012	99.69	-1.4
03N07W15DBC2	345253	914417	3/19/2008	83.53	3/20/2012	84.79	-1.3

Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Lonoke County—Continued							
03N07W29ADA1	345129	914558	2/7/2008	92.27	3/22/2012	94.22	-2.0
03N07W29CDD1	345057	914632	4/15/2008	98	3/29/2012	110	-12.0
03N07W35CDC2	344957	914332	3/19/2008	117.23	3/20/2012	121.76	-4.5
03N08W03BAA1	345519	915054	2/7/2008	95.69	3/22/2012	101.1	-5.4
03N08W03CCC1	345430	915123	2/7/2008	105.1	3/22/2012	107.52	-2.4
03N08W08ABA1	345427	915248	2/7/2008	95.51	3/22/2012	98.81	-3.3
03N08W10ACB1	345415	915053	2/7/2008	92.62	3/22/2012	95.33	-2.7
03N08W10ADD1	345401	915023	2/7/2008	95.05	3/22/2012	97.14	-2.1
03N08W11ACA1	345413	914934	2/7/2008	104.23	3/22/2012	104.72	-0.5
03N08W21BCC1	345220	915220	3/19/2008	82.79	3/20/2012	110.17	-27.4
03N08W26CDC1	345100	915007	4/15/2008	111	3/29/2012	114	-3.0
03N08W29BBB1	345147	915333	2/7/2008	113.34	3/22/2012	113.58	-0.2
03N08W29BCC1	345125	915333	2/7/2008	133.08	3/22/2012	124.16	8.9
03N08W32ABB1	345057	915256	2/7/2008	120.61	4/19/2012	120.78	-0.2
04N08W15BCB2	345833	915121	3/19/2008	29.2	3/20/2012	34.54	-5.3
04N08W16DCC1	345757	915154	2/7/2008	47.88	3/22/2012	47.8	0.1
04N08W28CAC1	345620	915216	2/7/2008	55.9	3/22/2012	56.79	-0.9
04N08W28CCC1	345615	915225	2/7/2008	61.43	3/22/2012	62.58	-1.1
04N08W33ABD1	345559	915141	5/1/2008	85.22	3/22/2012	90.43	-5.2
04N08W33ACD1	345547	915141	5/1/2008	79.16	3/22/2012	94.18	-15.0
04N08W33ADB1	345553	915125	5/1/2008	94.55	3/22/2012	106.31	-11.8
04N08W33ADD1	345546	915126	5/1/2008	97	3/22/2012	103.06	-6.1
04N08W36DBB1	345541	914914	2/8/2008	93.08	3/22/2012	95.06	-2.0
Mississippi County							
10N08E22ABA2	352851	901312	4/7/2008	25.53	4/12/2012	26.42	-0.9
10N09E08ACC1	352949	900926	4/7/2008	17.78	4/12/2012	15.04	2.7
11N09E34BBB1	353218	900715	4/7/2008	19.12	4/12/2012	16.99	2.1
12N08E08BCB1	354047	901559	4/7/2008	6.26	4/12/2012	9.64	-3.4
13N09E30CCD1	354248	901029	4/7/2008	7.08	4/12/2012	12.83	-5.8
14N08E12DAB1	355104	901052	4/7/2008	2.75	4/12/2012	6.12	-3.4
14N10E18ABC1	355022	900345	4/7/2008	8.11	4/12/2012	12.96	-4.9
15N08E08DBC2	355605	901526	4/7/2008	10.53	4/12/2012	11.24	-0.7
16N10E28BBD1	355906	900156	4/7/2008	5.33	4/12/2012	12.78	-7.5
16N11E23ADA1	355947	895231	4/7/2008	9.2	4/12/2012	13.57	-4.4
Monroe County							
01N01W15DBC1	344139	910542	3/13/2008	49.76	3/29/2012	52.3	-2.5
01N02W12CBC1	344242	911032	3/27/2008	40.9	3/29/2012	42.76	-1.9
01N03W23BAC1	344124	911743	3/20/2008	14.3	4/24/2012	9.5	4.8
01N03W24BBB1	344135	911651	3/27/2008	28.23	3/29/2012	26.08	2.2

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Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Monroe County—Continued							
01N04W33BBB2	343960	912649	3/27/2008	97.56	3/29/2012	104.94	-7.4
01S01W13CDD1	343611	910341	3/27/2008	22.52	3/29/2012	21.33	1.2
01S01W16DB	343615	910632	3/27/2008	20	4/24/2012	19	1.0
01S01W18DCD1	343618	910849	3/27/2008	24.52	3/29/2012	23.96	0.6
01S02W20BBB1	343613	911456	3/27/2008	12.22	3/29/2012	9.68	2.5
01S03W20BBA1	343538	912118	3/27/2008	75.03	3/29/2012	70.47	4.6
01S04W01BAB1	343906	912317	3/27/2008	76.88	3/29/2012	74.73	2.1
02N01W19ADD1	344624	910814	3/27/2008	54	4/24/2012	55	-1.0
02N01W19BBA1	344645	910912	3/27/2008	54.78	3/29/2012	56.34	-1.6
02N03W35BCA1	344455	911745	3/20/2008	35	4/24/2012	27	8.0
02S01W01BCD1	343305	910408	3/27/2008	22	4/24/2012	17	5.0
02S02W11DAC1	343209	911101	3/27/2008	11.04	3/28/2012	6.8	4.2
03N01W20ABA1	345201	910723	3/27/2008	48.61	3/29/2012	50.06	-1.5
03N02W31ADC1	344958	911447	3/27/2008	39.15	3/29/2012	38.27	0.9
03N03W36AAA1	345027	911547	3/27/2008	23.06	3/29/2012	18.98	4.1
04N02W01BCC1	345929	911004	3/20/2008	39	4/24/2012	39.5	-0.5
04N02W05BBB1	345957	911311	3/20/2008	16	4/24/2012	15	1.0
04N02W27CDD3	345540	911150	3/27/2008	45.68	3/29/2012	45.61	0.1
04N02W28DDD3	345535	911221	3/27/2008	32.81	3/29/2012	32.87	-0.1
04N02W30BBB1	345628	911525	3/27/2008	13.8	3/29/2012	12.76	1.0
Phillips County							
01S01E20DDB1	343529	910058	4/14/2008	27	3/12/2012	27	0.0
01S02E09CBB1	343719	905434	4/1/2008	15.44	3/28/2012	13.19	2.3
01S03E02ADD1	343814	904511	3/24/2008	17	3/13/2012	19	-2.0
01S03E10ABB1	343741	904634	3/24/2008	19	3/13/2012	22	-3.0
01S04E05DCD1	343802	904151	4/1/2008	50.23	3/28/2012	47.7	2.5
02S01E28CCB1	342916	910058	3/31/2008	18.63	3/28/2012	17.37	1.3
02S02E29DDD1	342901	905444	4/14/2008	24	3/13/2012	27	-3.0
02S02E33ACC1	342824	905412	4/14/2008	24	3/13/2012	25	-1.0
02S03E15ACD1	343110	904621	5/12/2008	8.59	4/25/2012	13.22	-4.6
02S03E34BCD1	342828	904653	3/25/2008	20.4	3/15/2012	19	1.4
02S04E27AAC1	342932	904001	3/31/2008	9.74	3/28/2012	7.77	2.0
03S03E04DAA1	342735	904710	3/31/2008	20.37	3/28/2012	19.53	0.8
03S04E02CAA1	342732	903918	3/31/2008	17.48	3/28/2012	10.9	6.6
04S01E01AAD1	342238	905700	3/25/2008	18	3/13/2012	14	4.0
04S01E14CDD1	342014	905837	3/25/2008	16	3/13/2012	13	3.0
04S01E23CCA1	341931	905853	3/31/2008	14.14	3/28/2012	13.11	1.0
04S01E29CDC1	341844	910148	3/25/2008	7	3/13/2012	8.5	-1.5
05S02E18BDA1	341535	905628	3/31/2008	23.53	3/28/2012	15.32	8.2

Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Poinsett County							
10N01E02AAA	353205	905654	4/7/2008	101	3/20/2012	103	-2.0
10N01E14CC1	352910	905813	4/8/2008	94.91	4/26/2012	98.84	-3.9
10N01E16CCB1	352922	910005	4/8/2008	77.67	4/26/2012	80.99	-3.3
10N01E32CBB1	352657	910053	3/26/2008	76.5	3/20/2012	82	-5.5
10N01E33ACB1	352746	905931	3/26/2008	81	3/20/2012	99	-18.0
10N02E13BCC1	352949	905026	4/8/2008	105.24	4/26/2012	109.33	-4.1
10N02E15CAA1	352940	905209	3/26/2008	108	3/20/2012	112	-4.0
10N02E20BAB1	352906	905418	3/26/2008	106	3/20/2012	111	-5.0
10N02E34BBB1	352726	905231	4/8/2008	101.48	5/1/2012	104.57	-3.1
10N03E13BCB1	352958	904352	3/26/2008	140	3/20/2012	144	-4.0
10N03E14DAB1	352947	904405	4/8/2008	119.6	5/1/2012	121.34	-1.7
10N03E19BCB1	352905	904907	3/26/2008	101	3/20/2012	110	-9.0
10N03E26BBD1	352816	904449	4/7/2008	115	3/20/2012	120	-5.0
10N03E35CDD1	352656	904436	4/8/2008	125.48	5/1/2012	127.54	-2.1
10N04E35BBA1	352745	903831	3/24/2008	19.5	3/19/2012	15	4.5
10N05E15BDD1	352937	903253	4/8/2008	12.71	4/12/2012	12.84	-0.1
10N07E28CBB1	352733	902128	3/24/2008	31	3/20/2012	30	1.0
11N01E17DDC1	353437	910015	4/7/2008	81	3/20/2012	88	-7.0
11N01E17DDD1	353437	910013	4/8/2008	80.89	4/26/2012	83.3	-2.4
11N01E26AA1	353340	905653	4/8/2008	96.63	4/26/2012	100.92	-4.3
11N01E34AAA	353256	905759	4/7/2008	90.5	3/20/2012	94	-3.5
11N02E26AAB1	353350	905034	4/8/2008	110.11	4/26/2012	125.01	-14.9
11N02E30BBB1	353352	905540	4/7/2008	105	3/20/2012	108	-3.0
11N02E34CBA1	353238	905222	4/7/2008	110	3/20/2012	112	-2.0
11N03E10DDA1	353546	904457	4/8/2008	106.11	5/1/2012	109.35	-3.2
11N03E17AAB1	353535	904714	4/7/2008	107	3/20/2012	129	-22.0
11N03E18BAB1	353538	904852	4/8/2008	106.53	5/1/2012	113.19	-6.7
11N04E13DDA1	353450	903631	3/26/2008	18	3/19/2012	15.5	2.5
11N04E36ABA1	353251	903654	3/24/2008	16.5	3/19/2012	17	-0.5
11N05E26BDB1	353318	903213	3/24/2008	11	3/20/2012	13.5	-2.5
11N06E34BBC1	353224	902646	4/9/2008	7.78	3/14/2012	12.36	-4.6
11N07E18CAB1	353435	902320	4/8/2008	14.04	4/12/2012	15.99	-2.0
11N07E28CBB1	353252	902120	3/24/2008	25	3/20/2012	23.5	1.5
12N01E07CDA1	354054	910141	4/8/2008	55.14	5/1/2012	53.91	1.2
12N01E22DAB1	353922	905809	4/7/2008	76.5	3/20/2012	81	-4.5
12N02E25DCC1	353820	904944	4/7/2008	115	3/20/2012	123	-8.0
12N02E34CCC1	353724	905230	4/7/2008	115.5	3/20/2012	122	-6.5
12N03E01CBD1	354154	904329	3/26/2008	96	3/20/2012	102	-6.0
12N03E04DAD1	354158	904600	4/8/2008	106.12	4/10/2012	112.4	-6.3

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Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Poinsett County—Continued							
12N03E35AD1	353745	904353	4/7/2008	106	3/20/2012	106	0.0
12N03E36ACB1	353749	904319	4/8/2008	99.86	4/10/2012	104.22	-4.4
12N04E08CDA	354053	904112	3/26/2008	95	3/20/2012	94.5	0.5
12N05E16ABA1	354039	903333	3/26/2008	9.5	3/20/2012	14	-4.5
12N05E34ABA1	353805	903230	4/8/2008	7.13	4/12/2012	9.4	-2.3
12N07E04BAA1	354202	902060	4/8/2008	2.42	4/12/2012	7.16	-4.7
12N07E10CBB1	354042	902022	3/24/2008	10	3/20/2012	10	0.0
12N07E25CCD1	353740	901802	4/9/2008	15.5	4/12/2012	17.11	-1.6
Prairie County							
01N06W05CCB1	344353	914049	3/26/2008	119.27	3/26/2012	118.61	0.7
01N06W29DDD1	344018	913951	3/26/2008	118.13	3/26/2012	119.01	-0.9
01S04W28BDB1	343523	912630	3/25/2008	98	3/26/2012	98.09	-0.1
01S05W14BBC1	343722	913109	3/25/2008	109.68	3/26/2012	108.64	1.0
01S05W31DDA1	343417	913432	3/26/2008	105.57	3/26/2012	94.1	11.5
01S06W12BAB1	343826	913613	3/26/2008	119.44	3/26/2012	118.82	0.6
02N04W02BCB1	344916	912419	3/25/2008	19.88	3/27/2012	15.67	4.2
02N04W32CCB1	344436	912738	3/25/2008	84.84	3/26/2012	83.36	1.5
02N05W24BCA3	344659	912937	3/26/2008	90.15	4/10/2012	90.19	0.0
02N05W29DDB2	344545	913309	3/26/2008	119.78	3/26/2012	121.52	-1.7
02N06W17ABB1	344809	913959	3/26/2008	125.82	3/26/2012	127.03	-1.2
02N06W22BCC1	344653	913827	3/27/2008	115.43	4/19/2012	114.68	0.8
02N06W24CAA1	344651	913551	3/27/2008	118.35	3/26/2012	118.31	0.0
02S06W14BBB1	343213	913729	3/26/2008	75.76	3/26/2012	77.59	-1.8
03N04W03AAC1	345439	912424	3/25/2008	26.91	3/27/2012	9.29	17.6
03N05W03BDD2	345444	913115	3/26/2008	65.25	3/27/2012	63.02	2.2
03N06W01BCB1	345455	913601	3/26/2008	80.72	3/27/2012	85.13	-4.4
04N04W07ADC1	345850	912733	3/25/2008	23.66	3/27/2012	20.24	3.4
04N05W07CDC1	345843	913441	3/25/2008	79.34	3/27/2012	79.42	-0.1
04N05W31DDC1	345514	913406	3/26/2008	76.25	3/27/2012	79.4	-3.2
04N06W05CCC1	345934	914018	3/25/2008	80.49	3/27/2012	61.81	18.7
04N07W03DCB1	345942	914412	3/25/2008	88.73	3/27/2012	88.59	0.1
04N07W20DDB1	345709	914607	2/7/2008	103.11	3/22/2012	102.87	0.2
04N07W28BBA1	345701	914545	3/25/2008	97.67	3/27/2012	97.9	-0.2
Pulaski County							
01S10W29CC1	343538	920708	3/18/2008	14.87	3/19/2012	13.26	1.6
02S10W14DC1	343205	920334	3/18/2008	23.5	3/19/2012	23.8	-0.3
02S10W16CCA1	343217	920549	3/18/2008	25.33	3/19/2012	23.35	2.0

Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Randolph County							
18N01E34AAC1	360943	905729	4/10/2008	15.9	4/11/2012	16.16	-0.3
18N02E17CBB1	361204	905356	4/8/2008	19	3/14/2012	14.8	4.2
18N02E22DCD1	361046	905105	4/10/2008	39.12	4/11/2012	40.53	-1.4
19N02E09DCA1	361757	905157	4/10/2008	-0.5	4/11/2012	11.24	-11.7
20N02E01ADD1	362424	904811	4/10/2008	2.66	4/11/2012	10.85	-8.2
20N03E28BA1	362114	904538	4/10/2008	9.43	4/11/2012	10.64	-1.2
St. Francis County							
04N01W17CBC1	345735	910801	3/18/2008	60.28	4/4/2012	62	-1.7
04N01W28CDD1	345535	910634	4/2/2008	72.51	4/4/2012	73.83	-1.3
04N02E19BBB1	345701	905633	4/2/2008	61.77	4/3/2012	63.23	-1.5
04N03E21DAD1	345623	904655	4/2/2008	60.37	4/3/2012	62.51	-2.1
05N01E15BCB1	350303	905942	4/2/2008	69.66	4/4/2012	70.12	-0.5
05N01E27BBA1	350136	905929	4/2/2008	69.07	4/4/2012	72.1	-3.0
05N02E20ADC1	350157	905437	4/2/2008	56.07	4/3/2012	58.55	-2.5
05N03E20AAA2	350214	904801	4/2/2008	106.09	4/3/2012	91.88	14.2
05N05E19DCA1	350128	903630	4/2/2008	32.66	4/3/2012	30.57	2.1
05N06E34CAB1	350026	902657	4/2/2008	28.38	4/3/2012	24.99	3.4
06N01E33ACA2	350552	905942	4/2/2008	69.41	4/4/2012	71.48	-2.1
06N02E13DCA1	350813	905003	4/2/2008	75.8	4/3/2012	78.9	-3.1
06N02E15BDD1	350842	905247	4/2/2008	62.23	4/3/2012	63.95	-1.7
06N02E24AAA1	350755	905002	4/2/2008	72.94	4/3/2012	76.69	-3.8
06N05E22ACC1	350723	903252	4/2/2008	42.82	4/3/2012	40.16	2.7
06N06E20ABB2	350747	902841	4/2/2008	37.3	4/3/2012	37.51	-0.2
White County							
05N07W09AAA1	350447	914441	4/16/2008	12.62	3/30/2012	11.13	1.5
05N07W10CCC1	350400	914436	4/16/2008	7.79	3/30/2012	8.28	-0.5
06N06W04BAA1	351047	913910	4/16/2008	28.9	3/30/2012	16.37	12.5
06N06W18BCA1	350835	914150	3/27/2008	13.8	4/25/2012	13.5	0.3
06N06W34AAB1	350624	913754	4/16/2008	60.78	3/30/2012	60.5	0.3
06N07W17DCC1	350822	914635	4/16/2008	13.42	3/30/2012	10.3	3.1
06N08W13ABA1	350908	914824	4/16/2008	6.6	3/30/2012	6.88	-0.3
06N08W26DDB1	350640	914931	4/16/2008	13.23	3/30/2012	10.59	2.6
07N05W01AAA1	351553	912858	4/16/2008	11.11	3/30/2012	12.81	-1.7
07N05W32BAB1	351137	913406	4/16/2008	33.17	3/30/2012	24.58	8.6
08N04W06CCB1	352028	912847	4/16/2008	12.81	3/30/2012	13.32	-0.5
08N05W32CBC1	351616	913417	4/16/2008	3.46	3/30/2012	0.49	3.0
Woodruff County							
04N03W03AB1	350021	911820	4/11/2008	9.63	4/4/2012	11.36	-1.7
05N01W13CDC1	350244	910331	4/17/2008	76.6	4/10/2012	79	-2.4

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Appendix 2. Difference in water levels measured from 2008 to 2012 in the Mississippi River Valley alluvial aquifer in eastern Arkansas.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83)]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	2008 Water-level date	2008 Depth to water (feet below land-surface datum)	2012 Water-level date	2012 Depth to water (feet below land-surface datum)	Water-level difference 2008 to 2012 (feet)
Woodruff County—Continued							
05N01W31CCC1	350106	910900	4/17/2008	61.2	4/10/2012	62	-0.8
05N02W20DCB1	350208	911356	4/11/2008	11.87	4/4/2012	12.88	-1.0
05N03W25DDB1	350133	911531	4/17/2008	10.6	4/10/2012	11.7	-1.1
05N04W12DBA1	350427	912211	4/15/2008	2.94	4/4/2012	4.35	-1.4
06N01W06BAB1	351048	910835	4/11/2008	36.73	4/5/2012	33.21	3.5
06N01W11AAB1	350944	910354	3/27/2008	63.72	4/4/2012	64.92	-1.2
06N02W19AAA1	350802	911419	4/17/2008	45.9	4/10/2012	47.5	-1.6
06N03W31BCB1	350623	912144	4/15/2008	1.5	4/4/2012	2.73	-1.2
06N04W22BDA1	350807	912428	4/17/2008	-1	4/10/2012	2	-3.0
07N03W19AAA1	351335	912025	4/15/2008	8.39	4/5/2012	8.49	-0.1
07N03W31BBA1	351152	912103	4/17/2008	7.7	4/10/2012	8	-0.3
08N01W06DDD1	352028	910747	4/11/2008	46.14	4/5/2012	43.49	2.6
08N02W27DDB1	351711	911107	4/17/2008	27.5	4/10/2012	26	1.5
08N02W31DDD1	351611	911411	4/11/2008	1.66	4/4/2012	4.63	-3.0
08N03W04BBB1	352128	911919	3/27/2008	17.62	4/5/2012	13.58	4.0
08N03W31AAD1	351655	912028	4/15/2008	22.78	4/5/2012	18.82	4.0
09N03W28ABB1	352310	911845	4/17/2008	17.6	4/10/2012	15	2.6
09N03W29AAD1	352258	911921	4/15/2008	18.9	4/5/2012	17.93	1.0
09N03W32ACA1	352205	911936	4/17/2008	16.9	4/10/2012	15	1.9

Appendix 3. Specific conductance, temperature, pH, and chloride data from wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, summer 2012.

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83); $\mu\text{S}/\text{cm}$ at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; --, no data]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 °C)	Temperature (degrees Celsius)	pH (hydrogen ion activity)	Chloride dissolved (mg/L)
Arkansas County							
02S04W11DBB1	343232.89	912415.2	7/2/2012	732	21.8	7.3	41.0
02S04W14CD1	343100	912445	7/2/2012	198	--	7.9	11.7
02S04W15ADA1	343149.9	912451.7	7/3/2012	904	19.1	7.1	29.1
02S04W15BB1	343201	912553	7/3/2012	862	19.8	7.2	38.1
04S01W08CCB1	342142	910916	7/3/2012	448	20.4	7.6	24.7
04S02W11AAA1	342208.6	911123.2	7/3/2012	520	20.4	7.5	18.9
04S03W17ADD1	342101.87	912058.1	7/3/2012	858	20.6	7.3	69.0
04S05W03BDB1	342309.1	913215.1	7/3/2012	952	20.6	7.1	--
Ashley County							
15S04W34DAB1	332112	912945	6/27/2012	575	20.7	6.9	27.9
16S04W11ABA1	331949	912850.7	6/27/2012	554	20.4	7.0	25.5
18S04W16BA1	330832	913128	6/27/2012	546	19.8	6.7	16.0
Chicot County							
13S03W35BAC1	333154.05	912245.5	6/26/2012	521	20.6	7.2	20.3
14S03W30ABA1	332745.8	912641	6/26/2012	318	20.7	7.0	--
15S03W06CA1	332533	912700	6/26/2012	556	21.1	7.0	--
17S01W06BCC1	331501.18	911505.2	6/26/2012	809	21.2	7.4	15.5
18S02W01BAA1	331011	911540	6/26/2012	465	21.1	7.2	36.4
19S01W17BCC1	330250.36	911406.2	6/26/2012	532	21.3	7.2	5.05
Clay County							
19N05E09DDD1	361733.8	903205	7/19/2012	436	18.6	7.5	4.52
19N05E34ACC1	361941.3	903128.8	7/19/2012	418	18.6	7.7	--
19N08E02ABB1	361858.57	901103.7	7/19/2012	338	19.0	8.0	14.9
19N08E02ABB1	361858.57	901103.7	7/19/2012	474	19.5	7.5	--
20N05E02BAD1	362417	903022	7/19/2012	309	18.6	7.6	5.48
20N09E19BC1	362121	900910	7/19/2012	326	18.4	7.9	--
21N07E19DDD1	362600.8	902114.5	7/19/2012	438	19.7	7.8	11.0
Craighead County							
13N01E01CC1	354705	905636	7/17/2012	608	20.5	7.4	--
13N01E03AAA1	354739	905753	7/17/2012	723	20.0	7.2	--
13N01E11AA1	354637	905650	7/17/2012	634	19.5	7.3	19.3
13N01E23DAA1	354435.4	905651.6	7/17/2012	656	20.8	7.4	--
13N03E21CC2	354406	904708	7/17/2012	732	19.8	7.3	--
13N03E25DCD1	354309.2	904335.1	7/17/2012	802	21.5	7.6	--
13N03E29DDC1	354311.1	904726.1	7/17/2012	682	19.4	7.5	19.3
13N03E31BB1	354306	904919	7/17/2012	541	20.3	7.4	11.6
13N03E34AB1	354310	904527	7/17/2012	589	19.3	7.8	--

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Appendix 3. Specific conductance, temperature, pH, and chloride data from wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, summer 2012.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83); $\mu\text{S}/\text{cm}$ at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; --, no data]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 °C)	Temperature (degrees Celsius)	pH (hydrogen ion activity)	Chloride dissolved (mg/L)
Craighead County—Continued							
14N05E24DCC2	354923	903026.8	7/12/2012	572	20.4	7.7	--
15N06E18CCC1	355517.7	902941	7/17/2012	535	18.8	7.5	--
15N06E18DC1	355520	902911	7/17/2012	510	19.6	7.7	--
15N06E33ACB1	355314.5	902707.5	7/17/2012	319	19.5	7.9	--
16N07E32ADD1	355812.92	902138.2	7/17/2012	691	19.5	7.0	15.9
Crittenden County							
05N07E30DDA1	350114.9	902307.7	7/12/2012	517	18.1	7.3	--
06N07E07DB1	350917	902317	7/12/2012	433	18.6	7.5	--
06N07E11BB1	350943.37	901940.2	7/12/2012	404	19.6	7.5	4.00
06N07E18BBA1	350852.56	902343.4	7/12/2012	422	19.2	7.5	3.39
07N07E34CDA1	351049	902016	7/12/2012	391	18.6	7.5	4.59
08N07E01CCB1	352024.5	901824.2	7/12/2012	423	19.3	7.4	6.10
08N07E14DAA1	351852	901830	7/12/2012	406	19.1	7.5	--
Cross County							
07N01E09AD1	351435	905905	7/11/2012	774	19.9	7.3	118
07N01E10BAB1	351505.1	905847.7	7/11/2012	864	20.2	7.4	157
07N01E11BB1	351503	905800	7/11/2012	814	19.9	7.1	92.5
07N05E28DDD1	351137.3	903336	7/11/2012	526	19.2	7.2	5.28
08N02E10DCD1	351932	905201.5	7/11/2012	588	19.6	7.5	26.0
Desha County							
10S03W25BDA1	334823.8	912059.6	6/27/2012	827	21.2	6.9	101
10S03W26CAA1	334806	912144.5	6/27/2012	770	20.0	6.8	--
13S02W27CAC1	333223.99	911734.7	6/27/2012	673	20.8	7.1	69.7
13S03W10DAA1	333505.64	912301.8	6/27/2012	809	20.6	7.0	74.5
Drew County							
11S04W07BDA1	334554.6	913255.6	6/28/2012	276	21.7	6.7	12.1
11S04W36CB1	334201	912754	6/27/2012	232	19.5	6.7	--
12S06W12ACB1	334039.3	914020.3	6/28/2012	91	21.3	6.2	--
12S06W12CD1	334004	914022	6/28/2012	103	20.9	6.4	15.2
13S04W33ABA1	333205.8	913041.8	6/28/2012	490	20.6	6.6	--
14S04W27AA1	332734	912925	6/27/2012	650	20.5	7.0	67.1
14S04W27DC1	332705	912940	6/27/2012	354	19.6	7.0	11.0
Greene County							
12N08E31AAA1	360406.5	904126.5	7/18/2012	301	19.6	7.7	7.45
16N06E03CCC1	360224.07	902625.9	7/18/2012	389	19.9	7.7	--
16N06E28ABB1	355938.31	902657	7/18/2012	534	19.8	7.5	19.6
17N04E30CDC1	360409.09	904217.5	7/18/2012	595	20.0	7.8	13.1

Appendix 3. Specific conductance, temperature, pH, and chloride data from wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, summer 2012.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83); $\mu\text{S}/\text{cm}$ at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; --, no data]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 °C)	Temperature (degrees Celsius)	pH (hydrogen ion activity)	Chloride dissolved (mg/L)
Greene County—Continued							
17N06E03DCC1	360734.9	902546.3	7/18/2012	130	19.3	7.5	4.17
18N07E18DCD1	361111.1	902137.5	7/18/2012	165	19.0	7.3	--
Jefferson County							
03S07W03DB1	342832	914442	7/2/2012	599	20.5	7.0	--
03S07W14DDB1	342632.4	914336.8	7/2/2012	750	20.6	6.9	--
03S07W16AAA1	342714	914538	7/2/2012	723	21.1	6.9	46.0
03S09W27DD2	342500	915737	7/2/2012	480	19.6	6.7	--
04S07W07ABA1	342251	914755	7/2/2012	648	20.6	7.1	--
04S08W02DD1	342308	914958.5	7/2/2012	714	19.9	6.9	35.0
05S06W31CAA1	341329.94	914206.1	6/29/2012	476	21.1	7.1	--
06S06W23AAD1	341006.74	913712.2	6/29/2012	713	20.5	6.8	32.7
07S08W06BAA1	340858.53	915647.2	6/29/2012	331	20.0	6.5	--
Lawrence County							
17N01E03AC1	360839	905739	7/19/2012	416	19.9	8.1	11.6
Lee County							
01N03E02BBC1	344339.29	904601.1	7/10/2012	458	19.9	7.4	7.94
01N03E23CCC1	344025.26	904603.6	7/10/2012	678	20.2	7.1	12.1
02N02E24ABA1	344627	905038	7/10/2012	464	19.9	7.4	6.99
03N02W35CAA1	344932.9	905156.7	7/10/2012	651	20.2	7.3	19.0
03N05W17DDA1	345146.4	903517.3	7/10/2012	340	19.6	7.3	--
Lincoln County							
08S04W08BBB2	340253.92	913100.7	6/28/2012	609	21.3	7.2	--
08S04W19CC1	340021	913204.5	6/28/2012	944	21.1	6.8	--
08S05W24CDB1	340031	913246	6/28/2012	911	20.5	7.0	--
09S05W01ADA1	335757.8	913258.6	6/28/2012	905	20.2	7.4	182
09S06W04BCD1	335821.38	914345.8	6/28/2012	638	20.8	7.1	--
09S06W09AAC1	335657.7	914308.2	6/28/2012	527	20.2	7.0	33.0
09S07W01DC1	335714	914637	6/28/2012	518	20.8	6.7	--
10S05W06DCC1	335155.3	913907.9	6/28/2012	278	20.4	6.9	--
Lonoke County							
01N07W29BBB1	344114	914720	7/9/2012	448	20.9	7.1	11.9
01N09W13DAB1	344235.17	915517	7/9/2012	818	20.5	7.0	--
02N07W09CD3	344816	914530	7/9/2012	384	21.8	7.0	15.2
02N08W23DCA1	344646.3	914945.9	7/9/2012	316	20.6	7.0	12.4
02N10W26DDA1	344604.8	920232	7/9/2012	498	19.2	7.0	17.8

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Appendix 3. Specific conductance, temperature, pH, and chloride data from wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, summer 2012.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83); $\mu\text{S}/\text{cm}$ at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; --, no data]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 °C)	Temperature (degrees Celsius)	pH (hydrogen ion activity)	Chloride dissolved (mg/L)
Mississippi County							
11N09E04BDA1	353627.7	900802	7/18/2012	551	19.5	7.6	9.28
11N09E04CD1	353555	900809	7/18/2012	480	19.7	8.0	7.74
11N09E09BAD1	353537.8	900801.9	7/18/2012	451	19.9	7.8	6.06
12N08E33AB2	353732	901447	7/18/2012	404	21.5	8.2	4.57
12N09E34CDC1	353642	900708	7/18/2012	528	19.5	7.5	--
14N10E04CDC1	355127.9	900150.1	7/18/2012	470	19.6	7.4	6.83
14N10E07DAC1	355050	900326.4	7/18/2012	360	20.0	7.4	5.53
Monroe County							
01N02W12CBC1	344242.3	911031.9	7/5/2012	587	20.8	7.5	11.8
01S04W01BAB1	343905.86	912316.7	7/5/2012	568	19.4	7.3	15.8
02N01W19BBA1	344645.21	910912.4	7/5/2012	984	21.2	7.6	--
02N02W06AAD1	344920	911442	7/6/2012	562	20.8	7.2	36.5
02S02W11DAC1	343208.97	911100.5	7/5/2012	438	20.3	7.5	8.19
03N02W26AAB1	345103	911033	7/5/2012	917	20.4	7.5	143
Phillips County							
01S01E29DA1	343436	910059	7/5/2012	624	21.0	7.5	--
02S01E26CAB1	342924.4	905839.4	7/5/2012	669	20.3	7.3	12.5
02S01E28CCB1	342916.37	910058.1	7/5/2012	424	20.4	7.4	20.4
04S01E12DAD1	342116.6	905701.2	7/5/2012	556	20.8	7.3	12.7
04S02E20DD1	341918	905443	7/5/2012	664	20.7	7.5	9.65
04S02E30BBC1	341902.84	905702	7/5/2012	416	19.8	7.3	4.13
Poinsett County							
10N02E13BCC1	352948.52	905026.2	7/16/2012	953	19.2	6.9	171
11N02E25ACA1	353343.3	904941.6	7/16/2012	587	19.7	7.3	7.29
11N02E30BAB1	353350	905522	7/16/2012	612	20.6	7.5	11.2
Prairie County							
01N05W20DCB1	344118.18	913348.7	7/9/2012	564	20.4	7.5	11.0
01N06W26CDC1	344013.9	913724.8	7/9/2012	576	21.0	7.4	20.5
01N06W30ADC1	344050.6	914111.4	7/9/2012	758	20.1	7.2	45.5
01S06W13CCC1	343648.6	913638.6	7/9/2012	726	22.4	7.0	--
02N05W31AA1	344537	913406	7/9/2012	776	20.4	7.4	32.8
04N04W01BAA1	350026.3	912238.2	7/12/2012	422	20.4	7.6	41.4
Pulaski County							
01S10W26DAC1	343553	920304.1	7/9/2012	483	19.4	6.8	18.3
01S10W29CC1	343537.78	920707.6	6/25/2012	770	20.8	6.9	11.1
02S10W15CDD1	343204	920430	6/25/2012	819	19.8	6.9	--

Appendix 3. Specific conductance, temperature, pH, and chloride data from wells completed in the Mississippi River Valley alluvial aquifer in eastern Arkansas, summer 2012.—Continued

[Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83); $\mu\text{S}/\text{cm}$ at 25 °C, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; --, no data]

Station name	Latitude (degrees, minutes, seconds)	Longitude (degrees, minutes, seconds)	Date	Specific conductance ($\mu\text{S}/\text{cm}$ at 25 °C)	Temperature (degrees Celsius)	pH (hydrogen ion activity)	Chloride dissolved (mg/L)
Randolph County							
18N01E15DBD1	361153.6	905729.5	7/19/2012	306	20.9	7.4	14.5
18N01E27DBA1	361018.2	905732.9	7/19/2012	500	19.5	7.9	20.1
18N01E36BAB1	360954.4	905548.3	7/19/2012	429	19.8	7.8	--
19N02E09CDA1	361752.5	905217.6	7/19/2012	261	--	8.3	3.34
St. Francis County							
04N01W34CCA1	345456.2	910549	7/10/2012	675	21.2	7.5	42.2
05N04E17BD1	350249	904157	7/11/2012	491	20.2	7.3	5.30
05N06E28DC1	350105	902749	7/11/2012	486	19.7	7.2	--
05N06E36AAA1	350101.5	902409	7/12/2012	568	19.8	7.2	11.3
06N06E13ABA1	350848.4	902416.7	7/12/2012	429	20.4	7.5	4.50
White County							
06N06W26DC2	350627	913657	7/13/2012	532	21.0	7.0	29.8
Woodruff County							
05N02W35DBB1	350032.6	911040.1	7/12/2012	381	21.5	7.6	10.6
05N04W02AD1	350545	912259	7/13/2012	309	19.8	6.4	--
06N03W05CBB1	351034	912034.5	7/13/2012	150	19.4	6.9	6.51
06N04W22DCB1	350745	912423	7/13/2012	404	18.9	6.8	7.09
07N01W27CD1	351136	910511	7/12/2012	472	19.9	7.5	15.2
07N02W12BB1	351507	910941	7/12/2012	635	20.2	7.4	--

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