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Withdrawals, Water Levels, and Specific Conductance in the Chicot Aquifer System in Southwestern Louisiana, 2000-03

Scientific Investigations Report 2004-5212

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

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Conversion Factors, Datums, and Abbreviated Water-Quality Units

Multiply	By	To obtain
Length		
inch (in.)	25.4	millimeter (mm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
Area		
acre	0.004047	square kilometer (km^2)
square mile (mi^2)	2.590	square kilometer (km^2)
Volume		
gallon (gal)	3.785	liter (L)
Flow rate		
foot per year (ft/yr)	0.3048	meter per year (m/yr)
million gallons per day (Mgal/d)	3,875	cubic meter per day (m^3/d)

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

°F = (1.8 x °C) + 32

Vertical coordinate information in this report is referenced to the National Geodetic Vertical Datum of 1929 (NGVD 29)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

Horizontal coordinate information in this report is referenced to the North American Datum of 1927 (NAD 27).

Specific conductance is given in microsiemens per centimeter at 25 degrees Celsius (µS/cm at 25°C).

Concentrations of chloride in water are given in milligrams per liter (mg/L).

Withdrawals, Water Levels, and Specific Conductance in the Chicot Aquifer System in Southwestern Louisiana, 2000-03

By John K. Lovelace, Jared W. Fontenot, and C. Paul Frederick

Abstract

The Chicot aquifer system is the principal source of fresh ground-water supplies in southwestern Louisiana. Much of the area is rural and rice cultivation is the primary agricultural activity. About 540 million gallons per day were withdrawn from the aquifer system in southwestern Louisiana in 2000. Potentiometric-surface maps of the aquifer system were created for June 2002 and January 2003 to determine where water-level declines occur due to seasonal ground-water withdrawals. During June 2002, water levels in the aquifer system were more than 40 feet below the National Geodetic Vertical Datum of 1929 (NGVD 29) in parts of Acadia, Calcasieu, Evangeline, and Jefferson Davis Parishes, in an area that generally coincides with rice-farming areas. During January 2003, water levels were more than 30 feet below NGVD 29 in these areas.

From June 2002 to January 2003, water levels generally recovered between 5 and 20 feet in the Chicot aquifer system in most of Acadia and Jefferson Davis Parishes, southeastern Calcasieu Parish, and southern Evangeline Parish, in an area that generally coincides with rice-farming areas. These water-level changes are representative of the areal extent and magnitude of typical seasonal water-level fluctuations that occur in the aquifer system in response to seasonal ground-water withdrawals for rice irrigation.

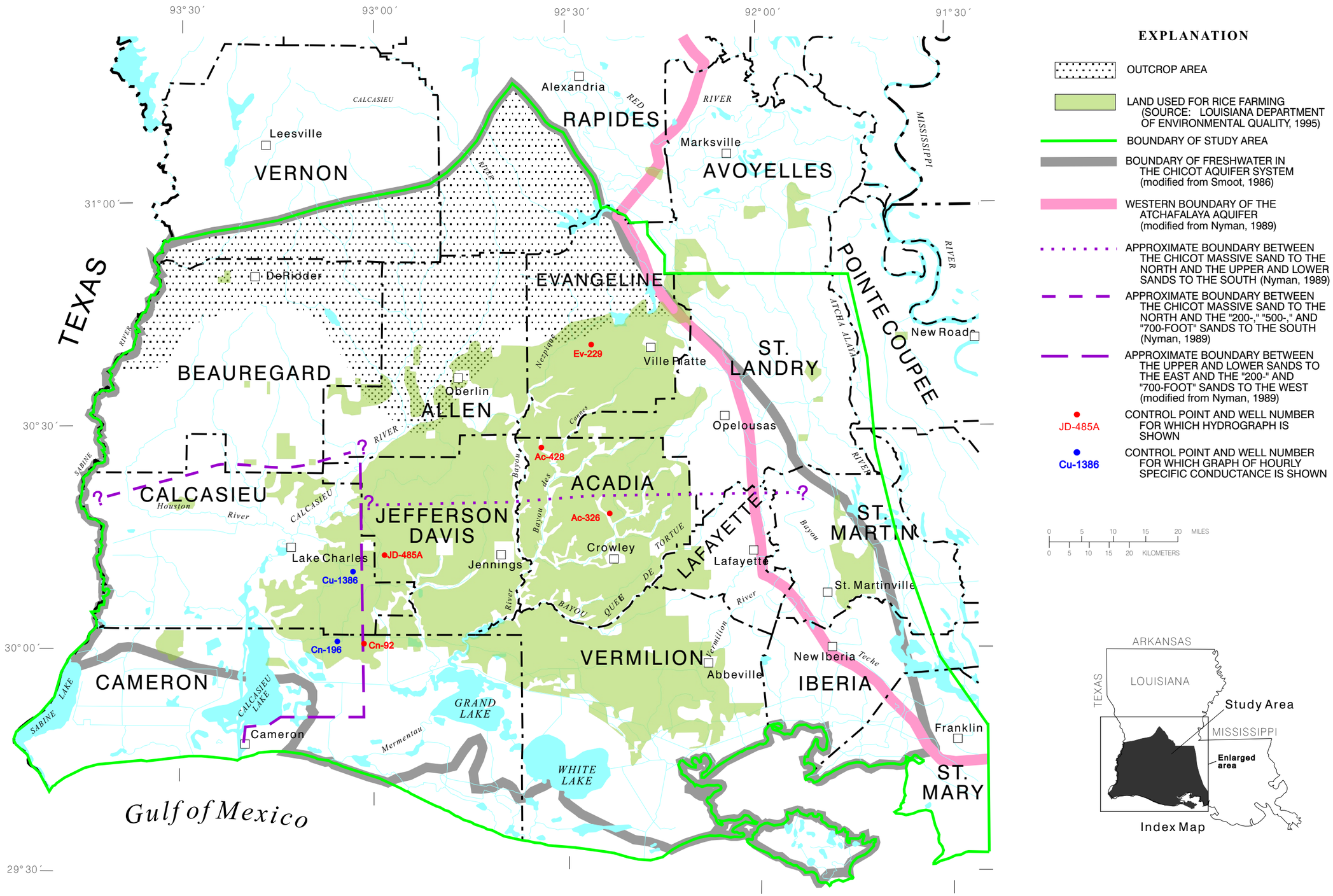
The presence of saltwater has been documented in the Chicot aquifer system beneath coastal parishes and in some areas where the aquifer system merges with the stratigraphically adjacent Atchafalaya aquifer. Data collected during the period 1943 to 2003 from 1,355 wells screened in the massive, upper, and "200-foot" sands of the Chicot aquifer system and the Atchafalaya aquifer were used to delineate areas having similar specific conductance values and determine areas where wells are affected by saltwater. Near the outcrop area, specific conductance values in the Chicot aquifer system generally are less than 150 µS/cm (microsiemens per centimeter at 25 degrees Celsius). Specific conductance values increase south and east of the outcrop area. Specific conductance values generally range from 151 to 500 µS/cm in rice-farming areas of northwestern Acadia Parish, southeastern Allen Parish, western Evangeline Parish, and northern and central Jefferson Davis Parish. Specific conductance values generally range from 501 to 1,000 µS/cm in most of the remaining rice-farming areas. Specific conductance values often exceed 1,000 µS/cm in an area along the border between Calcasieu and Jefferson Davis Parishes near Iowa, Louisiana, parts of northeastern Cameron Parish, an area of northwestern and central St. Landry Parish; parts of Vermilion Parish, and several areas along the eastern boundary of the study area where the Chicot aquifer system merges with the Atchafalaya aquifer. The maximum specific conductance value, 12,100 µS/cm, is from a well in Cameron Parish.

During 2000-03, specific conductance was measured in 521 water samples from 166 wells screened in the Chicot aquifer system or the Atchafalaya aquifer. Specific conductance values exceeded 1,000 µS/cm in water samples from wells in Calcasieu, Cameron, Jefferson Davis, St. Landry, St. Martin, St. Mary, and Vermilion Parishes. Specific conductance values exceeded 2,000 µS/cm in only two wells—an irrigation well located about 2 miles south of Iowa and a USGS observation well used to monitor saltwater encroachment in east-central Vermilion Parish. Specific conductance values increased steadily at one well, from 1,090 µS/cm in April 2000 to 2,860 µS/cm in April 2003. Nearby wells did not show similar increases.

Specific conductance was measured hourly during pumping at two irrigation wells between 2000 and 2003. Specific conductance values were greater than 1,000 µS/cm in both wells, indicating the presence of saltwater near the wells. Specific conductance values generally fluctuated about 150 µS/cm at both wells, but no long-term trends in the specific conductance were evident in either well.

Introduction

The Chicot aquifer system underlies an area of about 9,000 mi^2 in southwestern Louisiana (fig. 1) and is the principal source of fresh ground-water supplies in the region. Much of the area is rural, and rice cultivation is the primary agricultural activity. Withdrawals from the aquifer system, primarily for



EXPLANATION

- OUTCROP AREA
- LAND USED FOR RICE FARMING (SOURCE: LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY, 1995)
- BOUNDARY OF STUDY AREA
- BOUNDARY OF FRESHWATER IN THE CHICOT AQUIFER SYSTEM (modified from Smoot, 1986)
- WESTERN BOUNDARY OF THE ATCHAFALAYA AQUIFER (modified from Nyman, 1989)
- APPROXIMATE BOUNDARY BETWEEN THE CHICOT MASSIVE SAND TO THE NORTH AND THE UPPER AND LOWER SANDS TO THE SOUTH (Nyman, 1989)
- APPROXIMATE BOUNDARY BETWEEN THE CHICOT MASSIVE SAND TO THE NORTH AND THE "200-," "500-," AND "700-FOOT" SANDS TO THE SOUTH (Nyman, 1989)
- APPROXIMATE BOUNDARY BETWEEN THE UPPER AND LOWER SANDS TO THE EAST AND THE "200-" AND "700-FOOT" SANDS TO THE WEST (modified from Nyman, 1989)
- JD-485A — CONTROL POINT AND WELL NUMBER FOR WHICH HYDROGRAPH IS SHOWN
- Cu-1386 — CONTROL POINT AND WELL NUMBER FOR WHICH GRAPH OF HOURLY SPECIFIC CONDUCTANCE IS SHOWN

0 5 10 15 20 MILES
0 5 10 15 20 KILOMETERS

Map credit: Modified from Official Map of Louisiana, Louisiana Department of Transportation and Development, 1986

Figure 1. Location of the study area in southwestern Louisiana.

rice irrigation, have caused water levels to decline as much as 100 ft beneath some rice-farming areas of southwestern Louisiana since the early 1900's, creating an elongated cone of depression in the water-level surface over much of the region (Zack, 1971, p. 7-9 and pl. 2). In 1999, about 610,000 acres of rice were planted in southwestern Louisiana (fig. 1) (Louisiana Cooperative Extension Service, 2000). The water withdrawal rate from the aquifer system for rice irrigation in 2000, which was estimated based on 1999 acreage, was about 540 Mgal/d (Sargent, 2002, p. 17 and 92). Figure 2 shows water withdrawal rates for rice irrigation in southwestern Louisiana from 1960 to 2000.

From 1990 to 2000, water levels at several observation wells screened in the Chicot aquifer system and located in rice-farming areas declined at an average rate of 1 to 2 ft/yr (Tomaszewski and others, 2002, p. 11). Water levels in some areas of the aquifer system also fluctuate seasonally, primarily in response to ground-water withdrawals for rice irrigation (Nyman and others, 1990, p. 17), and wells in these areas could be affected seasonally.

The presence of saltwater[1] has been documented in the Chicot aquifer system beneath coastal parishes, in some areas where the aquifer system merges with the stratigraphically adjacent Atchafalaya aquifer, and in isolated bodies of saltwater near Lake Charles, Iowa, and south of Abbeville, Louisiana (Nyman, 1984). Seasonal pumping for rice irrigation has altered flow directions in the Chicot aquifer system and can induce lateral or upward movement of saltwater (Nyman, 1984, p. 1). Some irrigation wells screened in the aquifer system may be affected by saltwater encroachment, especially during periods of increased pumping in response to drought conditions.

Some farmers and residents of southwestern Louisiana are concerned that water levels in the Chicot aquifer system may decline below pump intakes in their wells, leaving them without water, or that their wells will be affected by saltwater encroachment. Current (2000-03) information is needed to (1) determine the location, duration, and magnitude of seasonal water-level declines; (2) delineate areas where wells are affected by saltwater; and (3) determine whether specific conductance, an indicator of saltwater, is increasing in water from wells in these areas. In response to this need, the U.S. Geological Survey (USGS), in cooperation with the Louisiana State University Agricultural Center, Louisiana Cooperative Extensive Service (LCES), and the Louisiana Rice Research Board, established a study in 2000 to monitor water levels and specific conductance in wells screened in the Chicot aquifer system over a 3-year period. Results of this study were reported periodically; potentiometric-surface maps and data for June 2000 and January 2001 were published in Lovelace and others (2001; 2002). This is the third and final report.

Purpose and Scope

This report describes water withdrawals, water levels, and specific conductance in the Chicot aquifer system in southwestern Louisiana during 2000-03. Trends in water levels and specific conductance also are discussed. Maps illustrate the potentiometric surface of the massive, upper, and "200-foot" sands of the aquifer system during June 2002 and January 2003. Water-level data from 141 wells used to construct the potentiometric surfaces are presented in a table. A map, based on data collected during 1943-2003, shows areas having similar specific conductance values in the massive, upper, and "200-foot" sands of the aquifer system. Specific conductance data collected during 2000-03 from 166 wells in southwestern Louisiana, are presented in a table. Graphs of water level and specific conductance data from selected wells also are presented. All data presented are on file at the USGS office in Baton Rouge, Louisiana, and stored in the USGS National Water Information System data base.

Data presented in this report establish baseline conditions that could enable current (2003) and future farmers, agricultural agents, and water-resources managers to determine the effects of ground-water withdrawals on water levels and water quality in the Chicot aquifer system. Results of this study may help improve understanding of conditions in similar coastal settings in other areas of the United States.

Description of Study Area

The study area includes all or parts of 15 parishes in southwestern Louisiana: Acadia, Allen, Beauregard, Calcasieu, Cameron, Evangeline, Lafayette, Iberia, Jefferson Davis, Rapides, St. Landry, St. Martin, St. Mary, Vermilion, and Vernon Parishes (fig. 1). The climate is generally warm, humid, and temperate. The average annual temperature is about 20°C and the average annual precipitation is 55 in. (National Oceanic and Atmospheric Administration, 1995, p. 7, 9).

Data Collection and Methods

Water levels were measured using steel or electrical tapes marked with 0.01-ft gradations. Wells in which water levels were measured were not being pumped at the time the measurements were made. In addition, water levels were measured hourly at five wells located in rice-farming areas during 2000-03 using pressure transducers and data recorders.

Water samples for analysis of specific conductance and chloride concentration were collected from wells at a spigot or other discharge outlet. Many of the water samples were col-

[1]For the purposes of this report, saltwater is defined as water containing greater than 250 mg/L of chloride. Concentrations of chloride greater than 250 mg/L exceed the Secondary Maximum Contaminant Level (SMCL) for drinking water (U.S. Environmental Protection Agency, 1992). SMCL's are established for contaminants that can adversely affect the aesthetic quality of drinking water. At high concentrations or values, health implications as well as aesthetic degradation also may exist. SMCL's are not federally enforceable, but are intended as guidelines for the states.

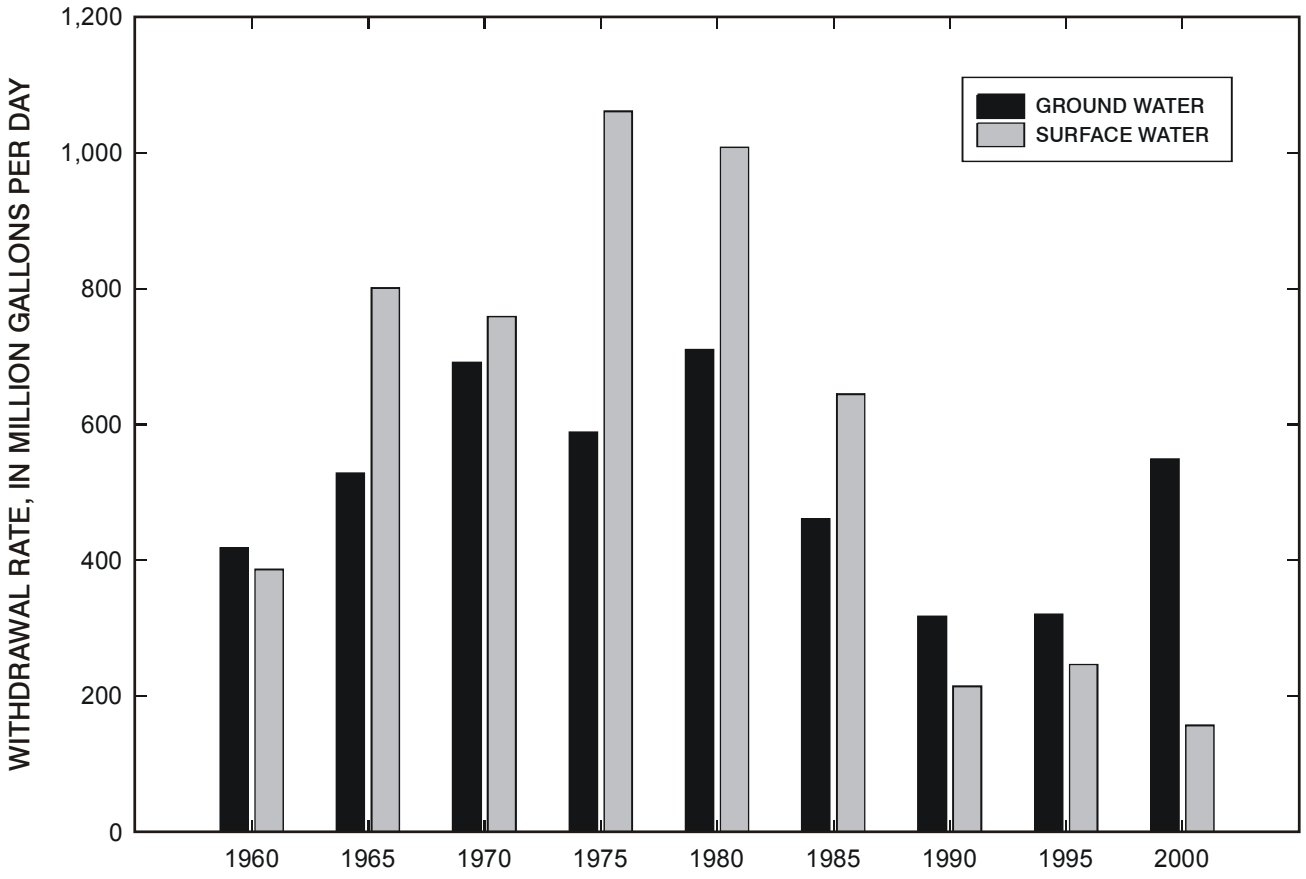


Figure 2. Water withdrawal rates for rice irrigation in southwestern Louisiana, 1960-2000 (Snider and Forbes, 1961; Bieber and Forbes, 1966; Dial, 1970; Cardwell and Walter, 1979; Walter, 1982; Lurry, 1987; Lovelace, 1991; Lovelace and Johnson, 1996; Sargent, 2002).

lected by well owners, farmers, or LCES agents; bottles and instructions on how to sample were supplied by the USGS. These samples were sent to the USGS office in Baton Rouge where they were analyzed for specific conductance using a hand-held or bench-top conductivity meter. To accurately identify and verify locations of wells sampled by well owners, farmers, or LCES agents, all wells were visited and many were resampled by USGS personnel. To increase the areal coverage of sampled wells, additional wells in the study area were sampled by USGS personnel. Samples collected by USGS personnel were analyzed for specific conductance using a hand-held meter in the field. Sample collection and measurements of specific conductance made in the field or at the USGS office in Baton Rouge were in accordance with methods described in U.S. Geological Survey (1997-present). Samples collected by USGS personnel for analysis of chloride concentrations were sent to a USGS laboratory in Ocala, Florida, where they were analyzed for dissolved chloride and specific conductance using laboratory methods described in Fishman and Friedman (1989).

Specific conductance and temperature were measured hourly during 2000-03 at two irrigation wells using a conductance meter and data recorder. The probe to the conductance meter was placed in a custom-made receptacle through which water flowed while the well pump was running. When the pump stopped, the receptacle drained. The periods during which the pump was not running were evident from temperature fluctuations, and data collected during these periods were discarded. Temperature data are not presented in this report.

State well-registration records currently (2003) list about 3,200 active irrigation wells that are screened in the Chicot aquifer system. Less than 100 of these wells are screened in the deeper sands, which include the lower sand and the “500-foot” and “700-foot” sands of the Lake Charles area (Z. “Bo” Bolourchi, Louisiana Department of Transportation and Development, written commun., 2003). Therefore, for the purposes of this report, references to the Chicot aquifer system in following sections refer to the Chicot massive sand, upper sand, and “200-foot” sand of the Lake Charles area unless otherwise indicated.

Previous Investigations

Since the early 1900's, many studies have focused on the occurrence and use of ground water, declining water levels, and saltwater encroachment in the Chicot aquifer system in southwestern Louisiana. Harris (1904) presented information about the underground waters of southwestern Louisiana and included a section on their use for water supplies and rice irrigation. Stanley and Maher (1944) reported on declining water levels in Acadia and Jefferson Davis Parishes due to ground-water withdrawals for rice irrigation. Jones (1950a) discussed water quality and the occurrence of saltwater in the Chicot aquifer system and presented a map showing the maximum depth of occurrence of fresh ground water throughout southwestern Louisiana. Jones and others (1954) presented the first comprehensive report on the geology and ground-water resources of southwestern Louisiana, presented maps of the Chicot aquifer system and the base of freshwater, and discussed the presence of saltwater and possibilities of saltwater encroachment in basal sands and coastal areas of the aquifer system. Harder (1960) presented a detailed report on the geology and ground-water resources of Calcasieu Parish, including a discussion of the occurrence and mobility of saltwater in the "200-foot" sand.

Fader (1957) updated the base-of-freshwater map by Jones and others (1954) and suggested five possible reasons for the presence of saltwater in the Chicot aquifer system: (1) incomplete flushing of the aquifer by freshwater, (2) lateral movement through formations, (3) downward seepage from surface sources, (4) vertical movement through underlying or overlying materials, and (5) upward movement along faults or around salt domes. Whitman and Kilburn (1963) discussed the occurrence and inland movement of saltwater in coastal areas of the upper sand due to increased ground-water withdrawals. Harder and others (1967) presented maps of the freshwater-saltwater interface in the upper sand and discussed the rate of encroachment.

Zack (1971) summarized the results of 10 years of monitoring chloride concentrations in water from 30 wells of a network established to monitor saltwater intrusion in the Chicot aquifer system. Nyman (1984) summarized chloride and specific conductance data collected by the USGS from wells in the Chicot aquifer system since 1937, focusing on data from the network. Nyman (1989) presented maps showing the range of various water-quality constituents and properties, including specific conductance, in the Chicot aquifer system. Lovelace (1999) updated the study by Nyman (1984) with chloride data collected during 1995-96. Potentiometric-surface maps of water levels in the Chicot aquifer system were published in many of these reports. Most recently, Tomaszewski and others (2002) determined trends in ground-water levels in monitor wells screened in the Chicot aquifer system for the approximate period 1990-2000.

Acknowledgments

The authors gratefully acknowledge the assistance of rice farmers who collected water samples from their wells and sent them to the USGS for analysis. The authors also gratefully acknowledge the assistance and cooperation of public-water suppliers and private well owners who allowed water levels to be measured in their wells. The authors especially want to thank Eddie Eskew, Keith Fontenot, Howard Cormier, Ron Levy, Jerry Whatley, and Gary Wicke, County Agents of the Louisiana Cooperative Extension Service, who initiated contacts with many of the land owners and farmers, assisted in sample collection, and were instrumental in developing the study. Thanks also to Z. "Bo" Bolourchi, Chief, Public Works and Water Resources Division, Louisiana Department of Transportation and Development, for providing well information that was used during this study.

Hydrogeology

The Chicot aquifer system underlies most of southwestern Louisiana and parts of eastern Texas. The system is composed of deposits of silt, sand, and gravel separated by units of clay and sandy clay. The system dips and thickens toward the south and southeast. The sand units grade southward from coarse sand and gravel to finer sediments and become increasingly subdivided by clay units. Eastward, toward the Atchafalaya River area, the Chicot aquifer system is overlain by and hydraulically connected to the Atchafalaya aquifer (Nyman, 1984, p. 4).

The Chicot aquifer system has been divided into three subregions in Louisiana based on the occurrence of major clay units. In the northern part of the study area, which includes the outcrop area, the aquifer system is undifferentiated, mainly consisting of a single massive sand. The approximate southern boundary of the massive sand is shown in figure 1. South of the massive sand, from eastern parts of Calcasieu and Cameron Parishes to the Atchafalaya River, the Chicot aquifer system includes an upper and lower sand unit (Whitman and Kilburn, 1963, p. 10). In most of Calcasieu Parish and central and western Cameron Parish, the aquifer system is subdivided into the "200-," "500-," and "700-foot" sands, named after their depths of occurrence in the Lake Charles area (Jones, 1950b, p. 2). The "200-foot" sand is stratigraphically equivalent to, and continuous with, the upper sand. Figure 3 shows a partial hydrogeologic column of aquifers and aquifer systems in southwestern Louisiana.

Recharge to the Chicot aquifer system is from infiltration of rainfall, vertical leakage, and lateral flow. Recharge from rainfall occurs in areas where the system crops out in northern Allen, Beauregard, and Evangeline Parishes and in southern

System	Series	Aquifer system	Aquifer		
			Outcrop area	Lake Charles area	East of Lake Charles
Quaternary	Pleistocene	Chicot aquifer system	Chicot aquifer, undifferentiated (massive sand)	"200-foot" sand of Lake Charles area	Chicot aquifer, upper sand unit
				"500-foot" sand of Lake Charles area "700-foot" sand of Lake Charles area	Chicot aquifer, lower sand unit

Figure 3. Partial hydrogeologic column of aquifers in southwestern Louisiana (modified from Lovelace and Lovelace, 1995, p. 10).

Rapides and Vernon Parishes (fig. 1). In these areas, precipitation infiltrates sandy soil and moves slowly downdip toward points of discharge. Recharge from vertical leakage occurs through overlying and underlying confining units. Recharge by lateral movement of water occurs from the Atchafalaya aquifer (Nyman and others, 1990, p. 14). A computer simulation of the aquifer system indicated that, under 1981 conditions, more than 90 percent of the water entering the Chicot aquifer system was discharged as pumpage, and 65 percent of the water pumped from the rice-farming area was supplied by recharge from the surface (Nyman and others, 1990, p. 33).

Withdrawals and Water Levels

During most of 1999 and 2000, southwestern Louisiana experienced below-average precipitation compared to the 30-year period 1971-2000 (fig. 4) and moderate to severe drought conditions (Louisiana Office of State Climatology, 1999-2003). Consequently, ground-water withdrawals for rice irrigation increased substantially during this period (fig. 2) (Sargent, 2002, p. 127). In addition, many coastal streams and canals normally used for irrigation supplies were inundated by saltwater from the Gulf of Mexico because of the lack of freshwater flushing that normally occurs after precipitation (Louisiana State University Agricultural Center, 2000). A comparison of data in water-use reports for 1990, 1995, and 2000, indicates that surface-water withdrawal rates for rice irrigation decreased and ground-water withdrawal rates for rice irrigation increased in Cameron and Vermilion Parishes in 2000 (Lovelace, 1991; Lovelace and Johnson, 1996; Sargent, 2002), presumably to offset the loss of surface-water supplies.

The total water requirement for rice cultivation during the growing season, which typically extends from February through June, is between 36 and 42 in. During an average year, about half of this water is supplied by precipitation and half is supplied by irrigation (Covay and others, 1992). Zack (1971) showed that the amount of ground water withdrawn in southwestern Louisiana in any particular year is inversely proportional to the total precipitation during the rice-growing season. Seasonal water withdrawals for rice irrigation typically begin in February and end in June. Consequently, water levels in the Chicot aquifer system typically decline from February through June in the rice-farming areas and potentiometric-surface maps for June generally show the lowest annual water levels (Lovelace and others, 2002). After June, water levels typically begin to recover (rise) and potentiometric-surface maps for January generally show the highest annual water levels (Lovelace and others, 2001).

To determine the magnitude and areal extent of water-level declines caused by seasonal ground-water withdrawals for rice irrigation, water-level data from 141 wells screened in the massive, upper, and "200-foot" sands (table 1) were collected. These data were used to construct potentiometric-surface maps of the Chicot aquifer system for June 2002 and January 2003.

During June 2002, the highest water level measured in the Chicot aquifer system, more than 160 ft above NGVD 29, was measured in the outcrop area in northern Beauregard Parish (fig. 5). Water levels were more than 40 ft below NGVD 29 in parts of Acadia, Calcasieu, Evangeline, Jefferson Davis, and adjacent parishes, in an area that generally coincides with rice-farming areas. The lowest water level, 80 ft below NGVD 29, was measured at well Ev-751 in southern Evangeline Parish. A comparison of the shapes and locations of the -50-ft, -60-ft, and -70-ft contours on the potentiometric-surface maps for June 2000 (Lovelace and others, 2001, fig. 3) and June 2002 (fig. 5) indicates that water levels in the Chicot aquifer system responded similarly to water withdrawals for rice irrigation during the 2000 and 2002 rice-growing seasons.

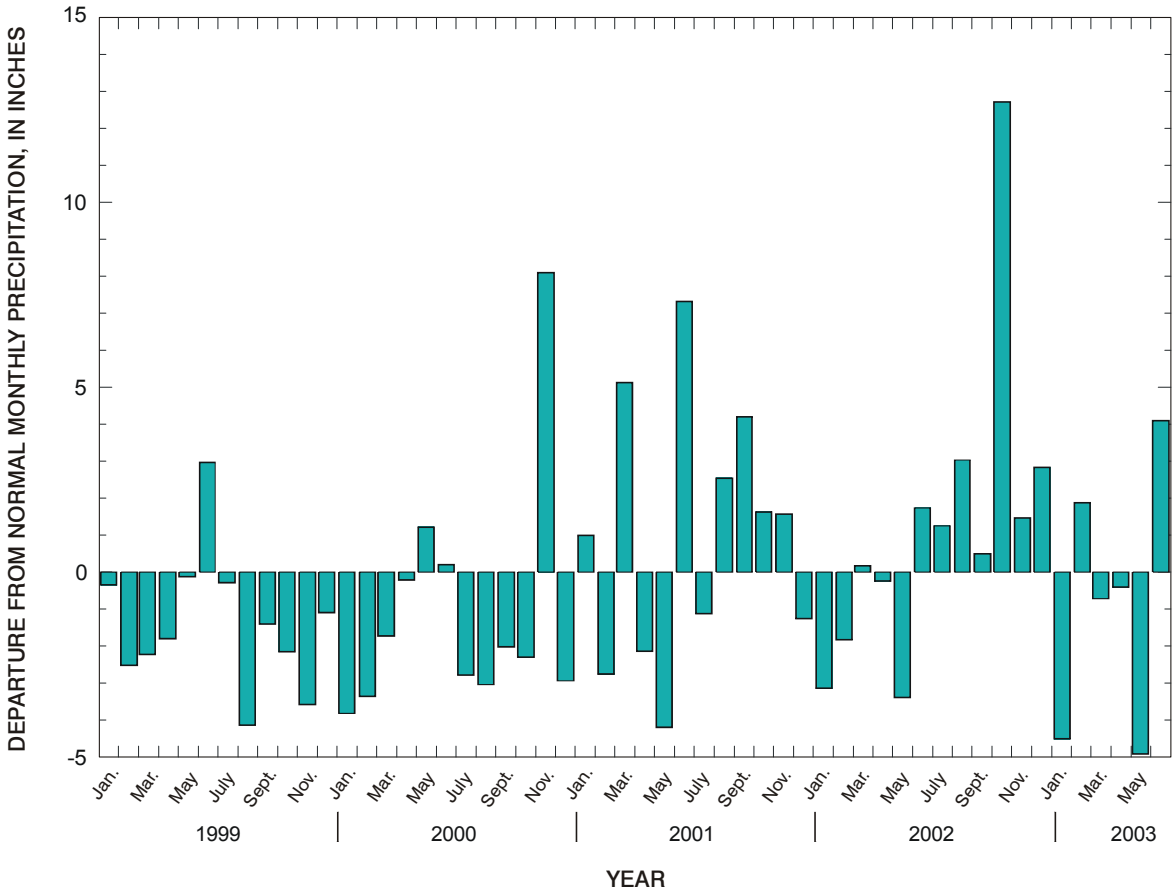
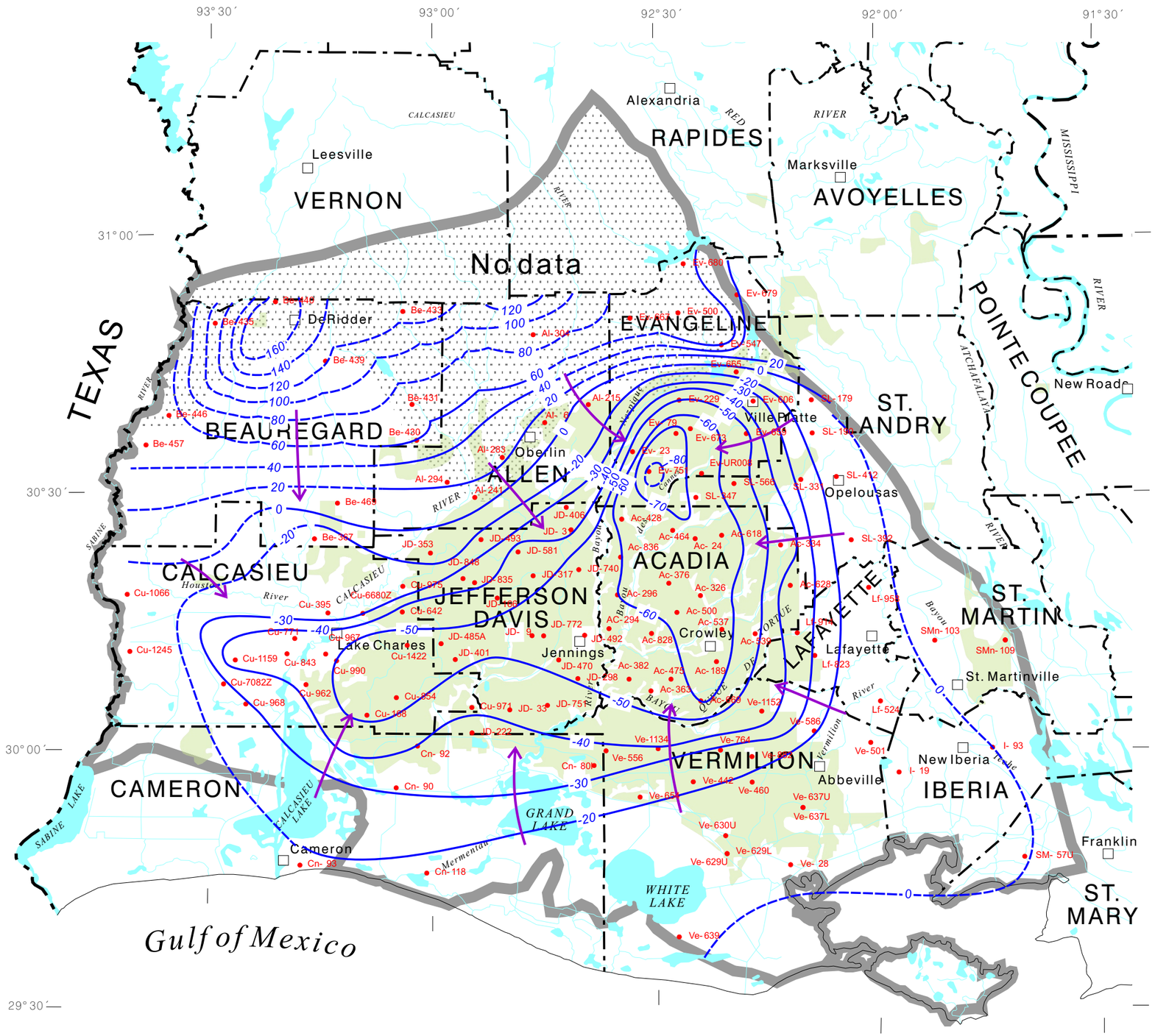


Figure 4. Departure from normal monthly precipitation (1971-2000) in southwestern Louisiana, January 1999 through June 2003 (Louisiana Office of State Climatology, 1999-2003).

During January 2003, the highest water levels, more than 160 ft above NGVD 29, were measured in the outcrop area of the Chicot aquifer system in northern Beauregard Parish (fig. 6). Water levels were more than 30 ft below NGVD 29 in parts of Acadia, Calcasieu, Evangeline, Jefferson Davis, and adjacent parishes, in an area that generally coincides with rice-farming areas (fig. 6). The lowest water levels, more than 60 ft below NGVD 29, were measured in wells Ac-929 in northern Acadia Parish and Ev-79 in southern Evangeline Parish. The similarities between the shapes and locations of the -40-ft and -50-ft contours on the potentiometric-surface maps for January 2001 (Lovelace and others, 2002, fig. 1) and January 2003 (fig. 6) indicate that water levels in the Chicot aquifer system recovered to similar levels after the 2000 and 2002 rice-growing seasons.

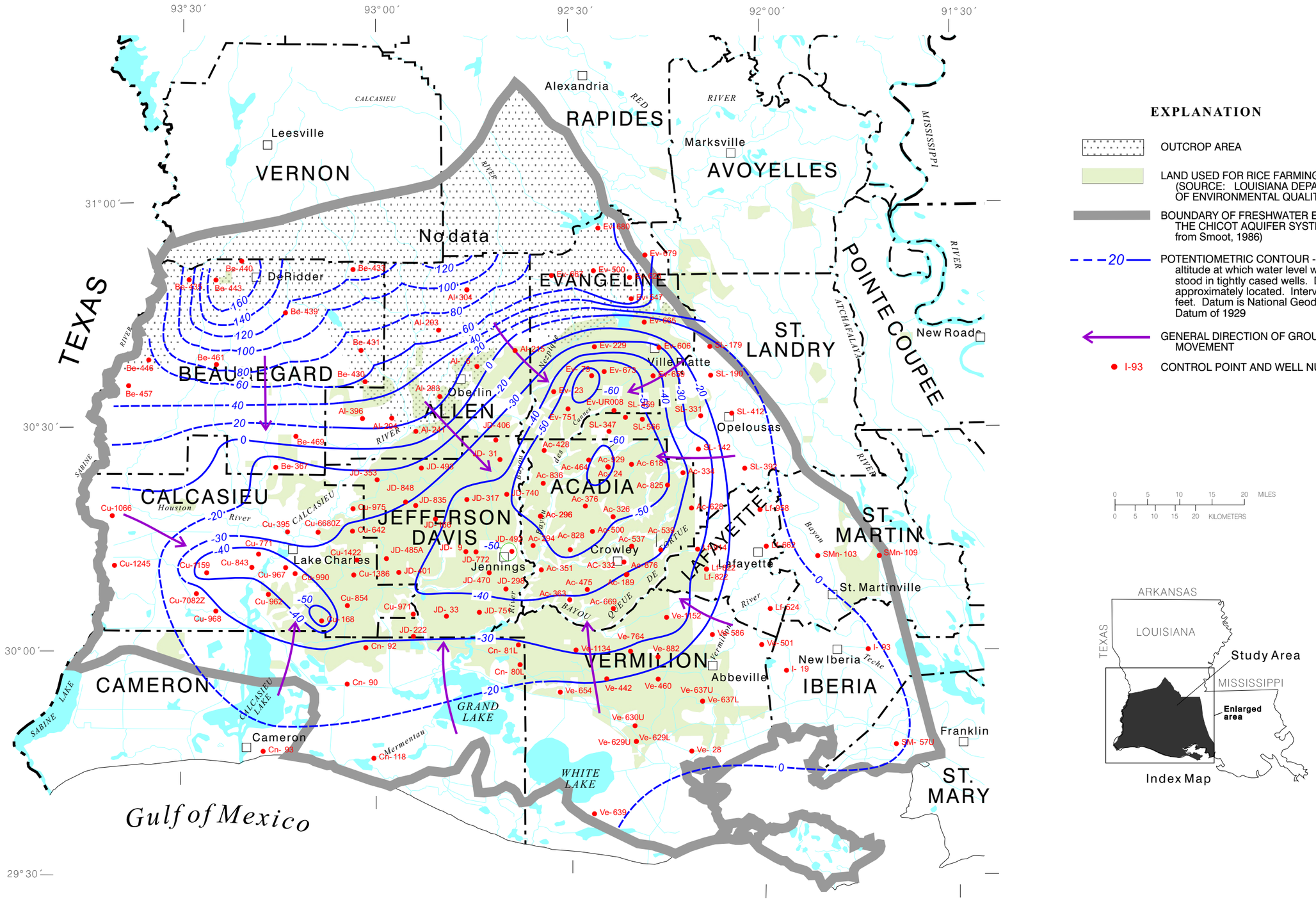
From June 2002 to January 2003, water levels recovered throughout most of the Chicot aquifer system in the study area in response to reduced withdrawals after the rice-growing season (fig. 7). Throughout much of the aquifer system, water levels recovered less than 5 ft. However, in most of Acadia and Jefferson Davis Parishes, southern Evangeline Parish, and southeastern Calcasieu Parish, in an area that generally coincides with rice-farming areas, water levels generally recovered between 5 and 20 ft. The magnitude of the water-level increase and the shape of the area over which water levels recovered more than 5 ft are generally consistent with the water-level recovery that occurred between June 2000 and January 2001 (Lovelace and others, 2002, fig. 4). The water-level changes shown in figure 7 and the previous water-level-change map are typical of the magnitude and areal extent of seasonal water-level fluctuations that occur in the Chicot aquifer system in response to seasonal ground-water withdrawals for rice irrigation.

To determine the duration of seasonal water-level declines due to ground-water withdrawals for rice irrigation, water levels in the Chicot aquifer system were measured hourly at five wells in the rice-farming areas during 2000-03 (fig. 8). The water levels at these wells typically declined between 10 and 25 ft, beginning in February or March and continuing through May or June. After June, water levels began to recover and generally continued to rise until seasonal ground-water withdrawals began the following year. Slight water-level declines, which often occurred during October, probably were due to withdrawals for



Map credit: Modified from Official Map of Louisiana, Louisiana Department of Transportation and Development, 1986

Figure 5. Potentiometric surface of the massive, upper, and "200-foot" sands of the Chicot aquifer system in southwestern Louisiana, June 2002.



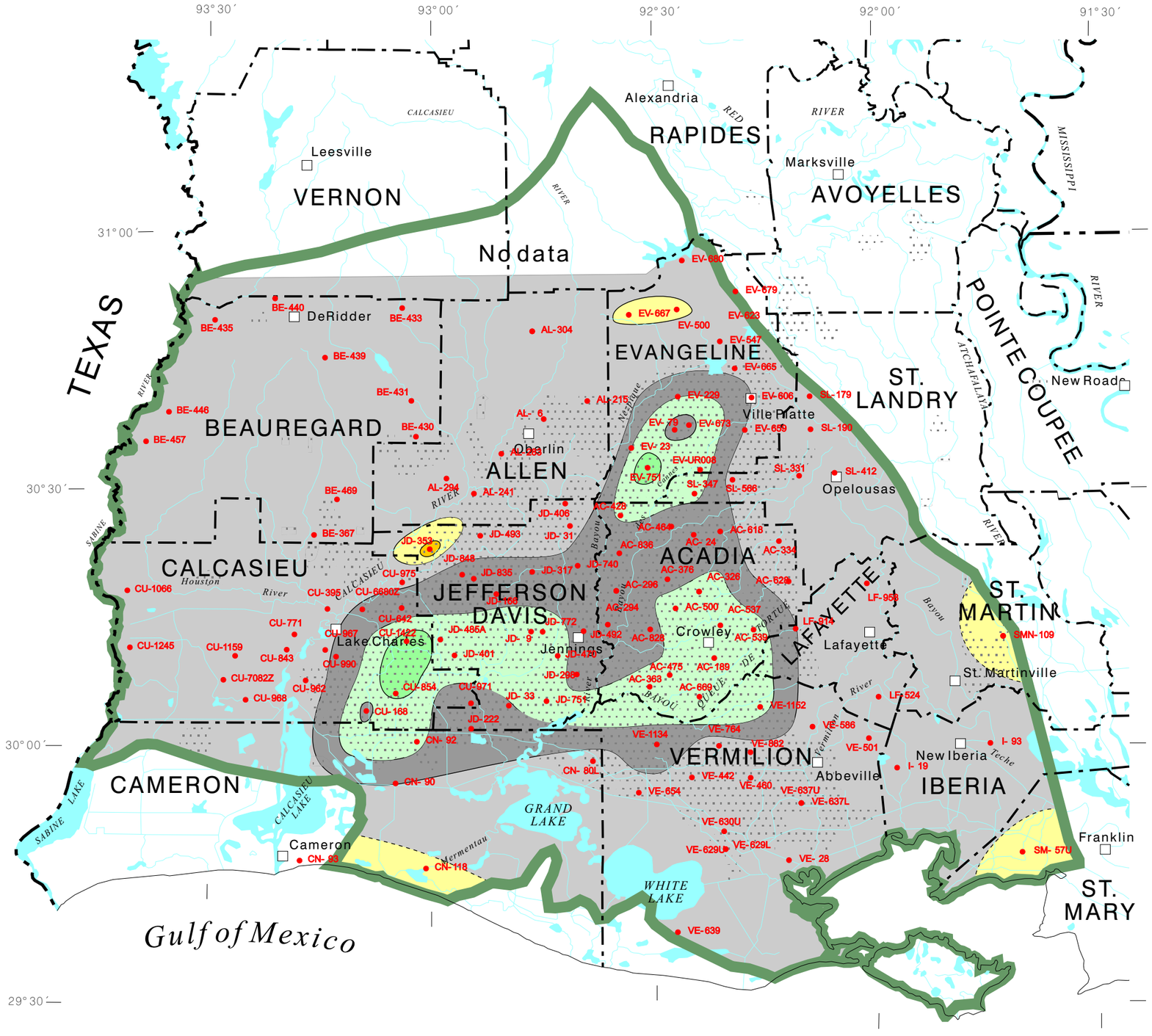
Map credit: Modified from Official Map of Louisiana, Louisiana Department of Transportation and Development, 1986

EXPLANATION

- OUTCROP AREA
- LAND USED FOR RICE FARMING (SOURCE: LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY)
- BOUNDARY OF FRESHWATER EXTENT OF THE CHICOT AQUIFER SYSTEM (modified from Smoot, 1986)
- 20 — POTENTIOMETRIC CONTOUR -- Shows altitude at which water level would have stood in tightly cased wells. Dashed where approximately located. Interval 10 and 20 feet. Datum is National Geodetic Vertical Datum of 1929
- GENERAL DIRECTION OF GROUND-WATER MOVEMENT
- I-93 CONTROL POINT AND WELL NUMBER

0 5 10 15 20 MILES
0 5 10 15 20 KILOMETERS

Figure 6. Potentiometric surface of the massive, upper, and "200-foot" sands of the Chicot aquifer system in southwestern Louisiana, January 2003.



Map credit: Modified from Official Map of Louisiana, Louisiana Department of Transportation and Development, 1986

Figure 7. Water-level change in the massive, upper, and "200-foot" sands of the Chicot aquifer system in southwestern Louisiana, June 2002 to January 2003.

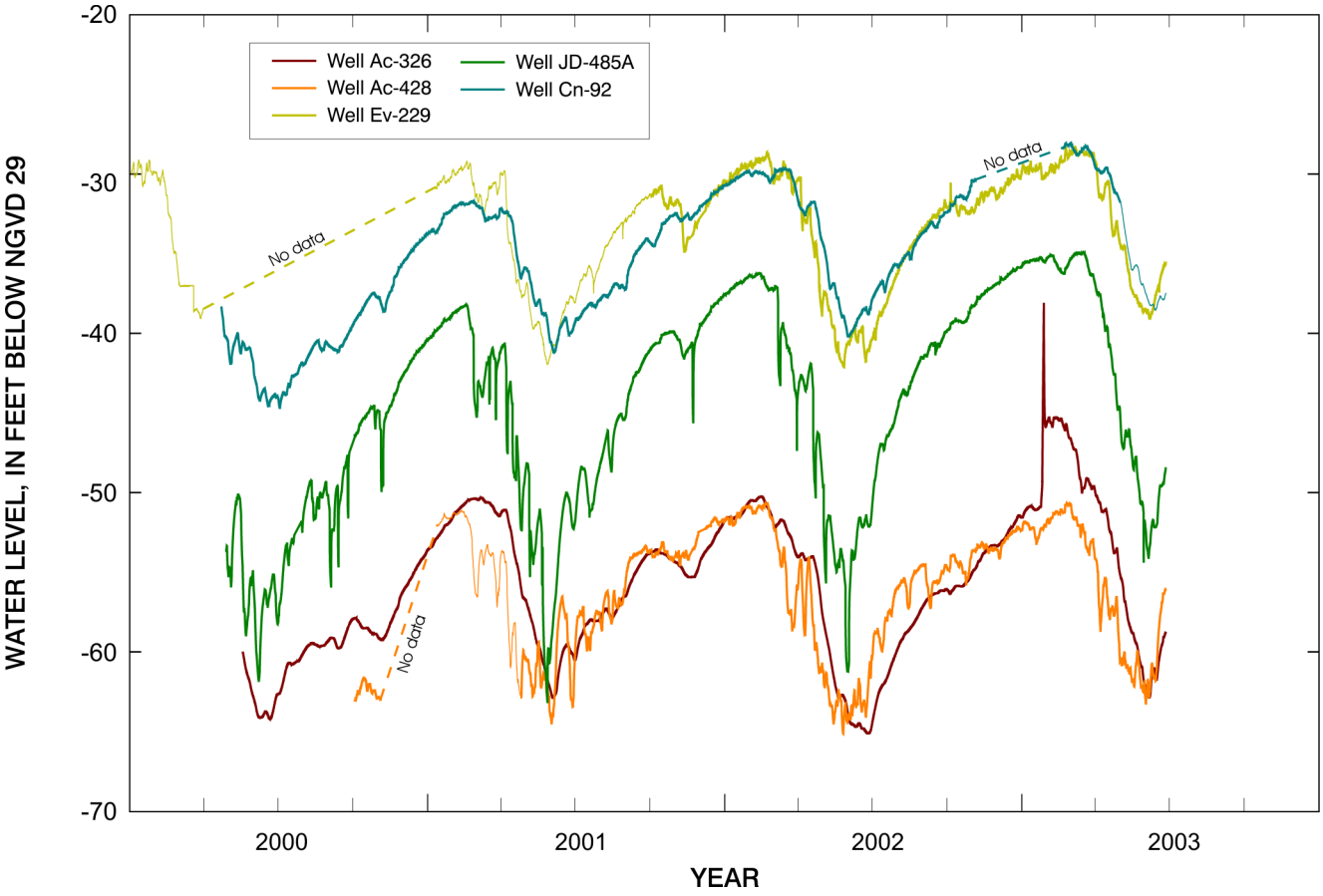


Figure 8. Hourly water levels at selected wells screened in the Chicot aquifer system in southwestern Louisiana, 2000-03 (see fig. 1 for well locations).

other purposes. The largest fluctuation of water levels, about 25 ft, was noted at well JD-485A. Water levels at this well probably are influenced by nearby active irrigation wells. Water levels fluctuated only about 10 ft annually at wells Ev-229 and Cn-92, which are located near the edge of the rice-farming area (fig. 1).

Specific Conductance

Specific conductance, as used in this report, is the primary indicator of saltwater (chloride concentration greater than 250 mg/L). This chloride concentration correlates to a specific conductance value of about 1,300 µS/cm in water from the Chicot aquifer system (fig. 9).

When used for irrigation, saltwater can inhibit rice growth and reduce grain yields (Grattan and others, 2002). Hill [n.d.] developed guidelines for using saltwater on rice in Louisiana and a table of commonly accepted tolerance of rice to selected saltwater concentrations (table 2). Hill indicates that water with a specific conductance value greater than about 2,000 µS/cm can adversely affect rice during early stages of development. Hill also indicates that continued use of irrigation water with a specific conductance value greater than about 1,000 µS/cm can cause a buildup of salt in the soil that could damage both crop and soil.

Concentrations of salt, as sodium chloride, commonly referred to as "total salts," in parts per million and grains per gallon (table 2), are used by many farmers and agricultural agents in Louisiana. The concentration of total salts, in parts per million, is approximately equivalent to the concentration of total dissolved solids and is calculated by multiplying the specific conductance value, in microsiemens per centimeter, by 0.64 (E.R. Funderburg, Louisiana State University Agricultural Center, written commun., 2000). The concentration of total salts, in grains per gallon, can be calculated by dividing the specific conductance value by 26.56 or by dividing the concentration of total salts, in parts per million, by 17.14.

Data collected during the period 1943 to 2003 from 1,355 wells screened in the massive, upper, and "200-foot" sands of the Chicot aquifer system and the Atchafalaya aquifer were used to delineate areas having similar specific conductance values and determine areas where wells are affected by saltwater (fig. 10). Areas having similar specific conductance

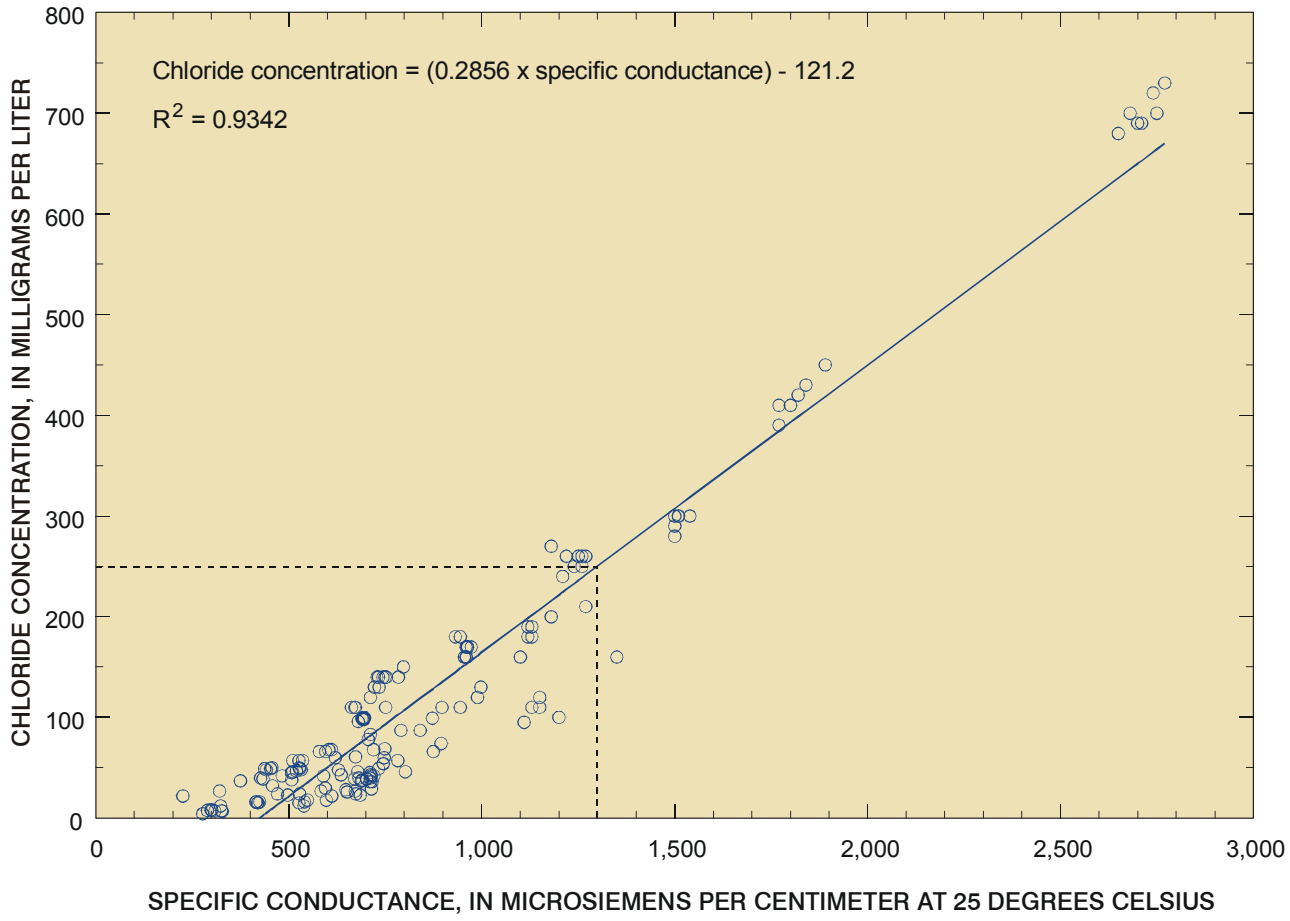
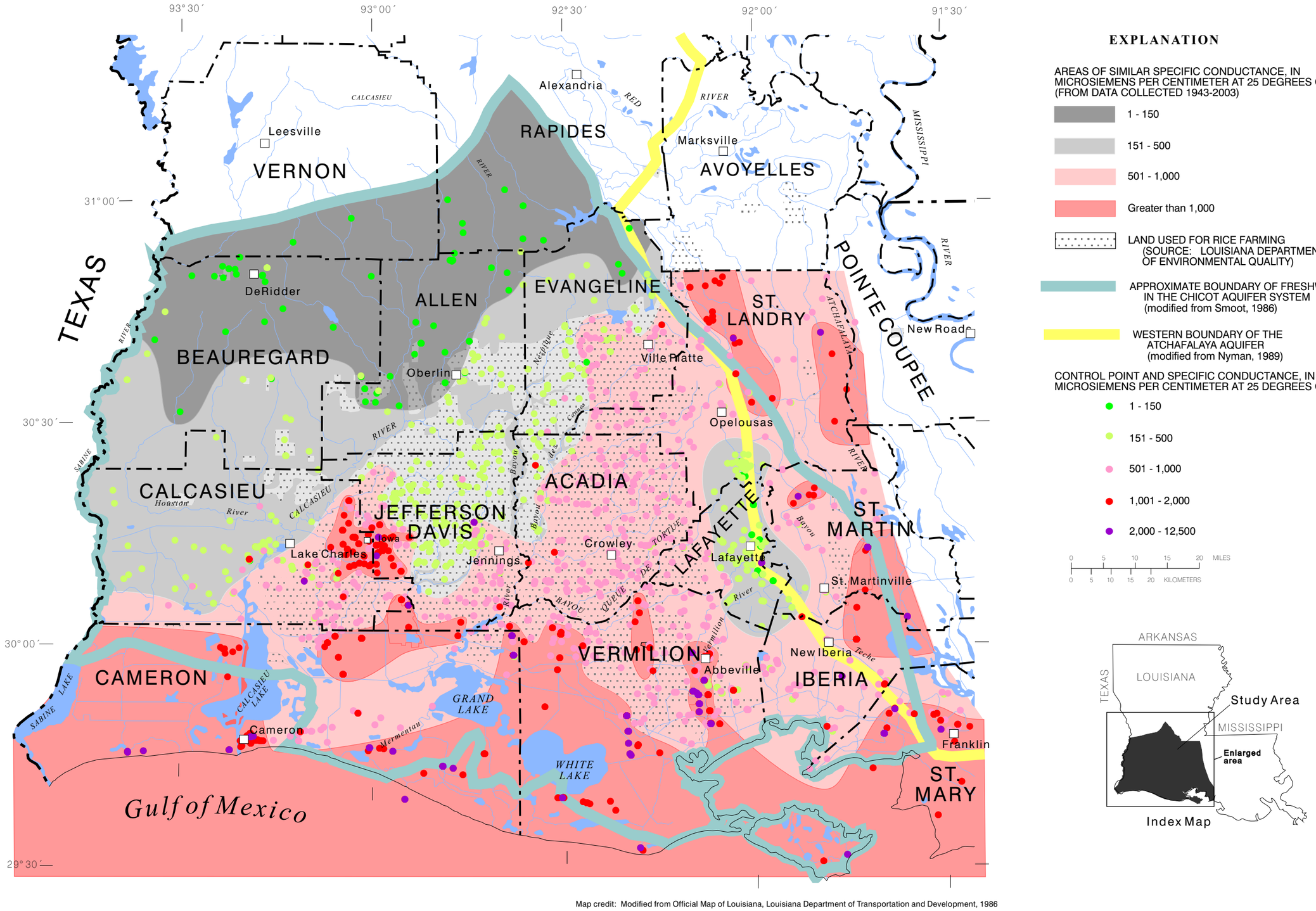


Figure 9. The relation between specific conductance values and chloride concentrations in the Chicot aquifer system in southwestern Louisiana.

Table 2. Commonly accepted tolerance of rice to selected saltwater concentrations (modified from Hill, [n.d]).

Specific conductance, in microsiemens per centimeter at 25 degrees Celsius	Salt, as sodium chloride, in parts per million	Salt, as sodium chloride, in grains per gallon	Stage of growth
938	600	35	Tolerable at all stages, not harmful.
2,031	1,300	75	Rarely harmful and only to seedlings after the soil is dry enough to crack. Tolerable from tillering on to heading.
2,656	1,700	100	Harmful before tillering. Tolerable from jointing to heading.
5,312	3,400	200	Harmful before booting. Tolerable from booting to heading.
7,969	5,100	300	Harmful to all stages of growth. This concentration stops growth and can only be used at the heading stage when the soil is saturated with freshwater.



Map credit: Modified from Official Map of Louisiana, Louisiana Department of Transportation and Development, 1986

EXPLANATION

AREAS OF SIMILAR SPECIFIC CONDUCTANCE, IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS (FROM DATA COLLECTED 1943-2003)

- 1 - 150
- 151 - 500
- 501 - 1,000
- Greater than 1,000
- LAND USED FOR RICE FARMING (SOURCE: LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY)
- APPROXIMATE BOUNDARY OF FRESHWATER IN THE CHICOT AQUIFER SYSTEM (modified from Smoot, 1986)
- WESTERN BOUNDARY OF THE ATCHAFALAYA AQUIFER (modified from Nyman, 1989)

CONTROL POINT AND SPECIFIC CONDUCTANCE, IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS

- 1 - 150
- 151 - 500
- 501 - 1,000
- 1,001 - 2,000
- 2,000 - 12,500

0 5 10 15 20 MILES
0 5 10 15 20 KILOMETERS

Figure 10. Specific conductance in the massive, upper, and "200-foot" sands of the Chicot aquifer system in southwestern Louisiana.

values were mapped based on the range of specific conductance values for water from the majority of wells sampled within an area. Specific conductance values at some wells are outside of the range shown for a particular area, but also are included in figure 10. For the purposes of this report, the maximum specific conductance value measured from a well was used when multiple measurements had been made for that well. Field specific conductance values were used when available; laboratory specific conductance values were used when field values were unavailable.

In and near the outcrop area (fig. 1), specific conductance values generally are less than 150 µS/cm (fig. 10). Specific conductance values increase south and east from the outcrop area. Specific conductance values generally range from 151 to 500 µS/cm in rice-farming areas of northwestern Acadia Parish, southeastern Allen Parish, western Evangeline Parish, and northern and central Jefferson Davis Parish. Specific conductance values generally range from 501 to 1,000 µS/cm in most of the remaining rice-farming areas. Specific conductance values often exceed 1,000 µS/cm in an area along the border between Calcasieu and Jefferson Davis Parishes near Iowa; parts of northeastern Cameron Parish; an area of northwestern and central St. Landry Parish; parts of Vermilion Parish; and several areas along the eastern boundary of the study area where the Chicot aquifer system merges with the Atchafalaya aquifer. The maximum specific conductance value, 12,100 µS/cm, is from a well in Cameron Parish.

Fresh ground water is available throughout much of Louisiana, but is underlain by saltwater at some depth. The maximum depth of freshwater in an area is called the base of freshwater. In much of southwestern Louisiana, the base of freshwater within the Chicot aquifer system occurs at depths greater than 800 ft below NGVD 29 (Harder and others, 1967, pl. 6). In coastal parishes, the base of freshwater occurs within the Chicot aquifer system at depths less than 400 ft below NGVD 29 in several areas (Harder and others, 1967, pl. 6; Nyman, 1984, pl. 2). Specific conductance in wells sampled in these areas generally exceeds 1,000 µS/cm (fig. 10). In parts of northwestern, central, and eastern St. Landry Parish, where the base of freshwater occurs at depths less than 200 ft below NGVD 29 (Harder and others, 1967, pl. 6; Hosman and others, 1970, pl. 1), specific conductance generally exceeds 1,000 µS/cm.

Where the base of freshwater occurs within an aquifer, two distinct layers may be formed because saltwater is denser than freshwater. Because of the density difference, the contact between the freshwater and saltwater within an aquifer may form a mixing zone or interface. In areas of the Chicot aquifer system where a freshwater-saltwater interface is present (Nyman, 1984), high-capacity wells pumping from the freshwater part of the aquifer can draw saltwater from the lower part of the aquifer. As pumping continues, an increasing proportion of water drawn into the well could come from the lower, more saline part of the aquifer (Nyman, 1984, p. 11). According to Nyman (1984, p. 11), this saltwater coning, also termed "upconing," is the most common cause of wells pumping saltwater in southwestern Louisiana. Some factors affecting the rate of upconing include: (1) the depth from the bottom of the well screen to the base of the aquifer, (2) the pumping rate, (3) the duration of pumping, (4) the vertical permeability of the aquifer, (5) the thickness of the aquifer, and (6) the difference in density between the two waters (Nyman, 1984, p. 11). Decreasing the rate or duration of pumping and screening high-capacity wells as far above the base of freshwater as possible could reduce the potential for upconing saltwater.

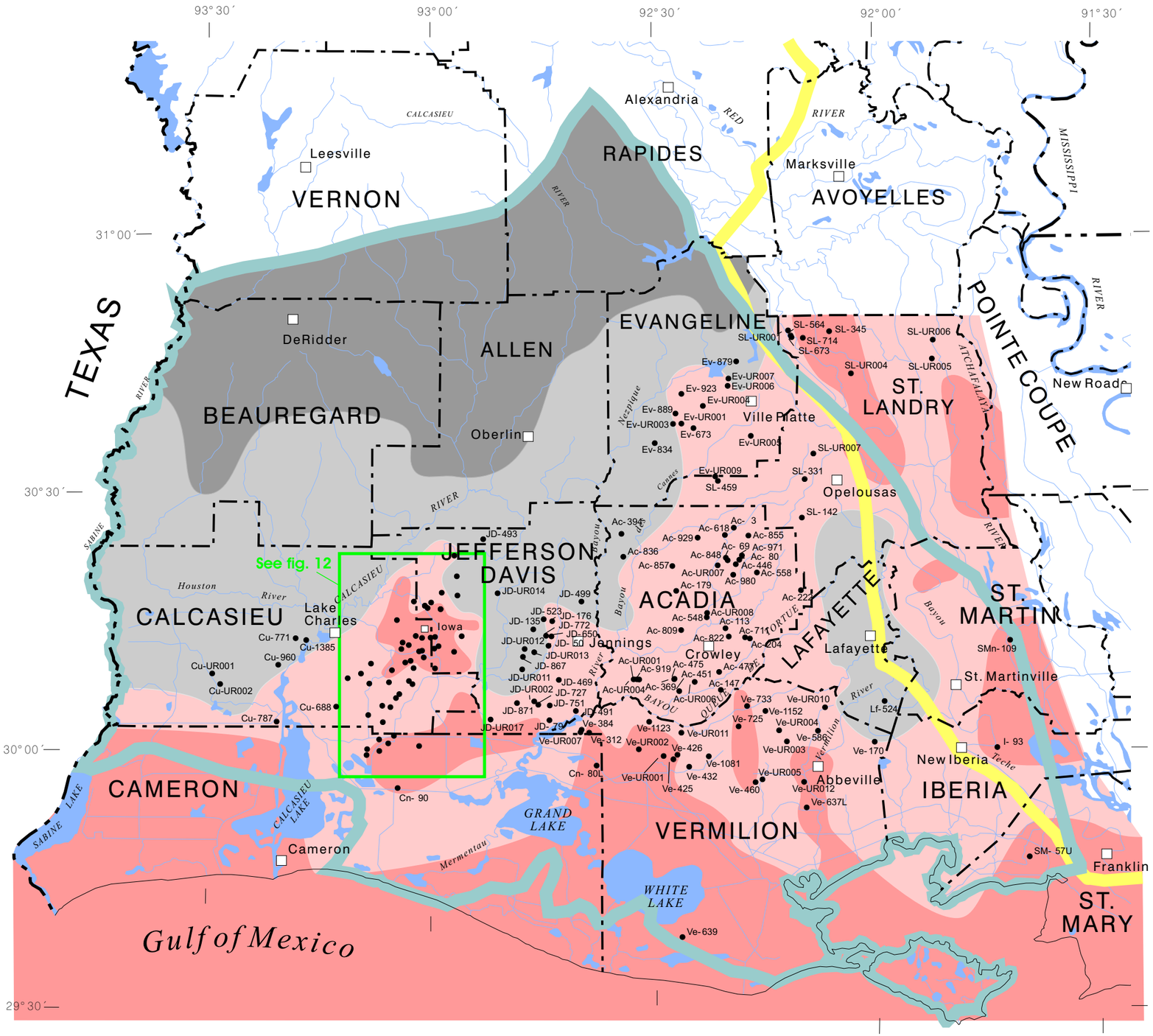
Specific conductance was measured in 521 water samples from 166 wells screened in the Chicot aquifer system or the Atchafalaya aquifer during 2000-03 to determine whether water from wells in areas where saltwater is present is becoming saltier. Most of the sampled wells were used for irrigation. Figures 11 and 12 show the locations of sampled wells; well construction and specific conductance data are included in table 3.

Well records from the Louisiana Department of Transportation and Development indicate that almost 100 percent of the 3,750 registered irrigation wells in the parishes where samples were collected are screened in the Chicot aquifer system or Atchafalaya aquifer (Z. "Bo" Bolourchi, Louisiana Department of Transportation and Development, written commun., 2003). Well-depth and screen-depth data were unavailable for 61 of the sampled wells. Although these wells are assumed to be screened in the Chicot aquifer system or the Atchafalaya aquifer because of their locations and use, the data are considered ancillary and specific conductance at these wells were not compared with specific conductance in wells of known depth.

Specific conductance values exceeded 1,000 µS/cm in water samples from wells in Calcasieu, Cameron, Jefferson Davis, St. Landry, St. Martin, St. Mary, and Vermilion Parishes. Specific conductance values exceeded 2,000 µS/cm in only two wells (table 3)—well Cu-UR003, which is an irrigation well located about 2 mi south of Iowa, and well Ve-637L, which is a USGS observation well used to monitor saltwater encroachment in east-central Vermilion Parish.

Only a few wells used for irrigation were sampled frequently enough throughout the period of the study to determine whether any trends in specific conductance were evident (table 3, fig. 13). For most of these wells, specific conductance values usually varied within a narrow range. However, specific conductance values increased steadily at well Cu-UR003 from 1,090 µS/cm in April 2000 to 2,860 µS/cm in April 2003 (table 3, fig. 13). Nearby wells, such as D-860 (table 3, fig. 13), did not show similar increases.

Specific conductance was measured hourly at two irrigation wells, Cu-1386 (2001-03) and Cn-196 (2000-03) (fig. 14). Specific conductance values were greater than 1,000 µS/cm in both wells, indicating the presence of saltwater near the wells. The data indicate that several short pumping events took place at each well during the rice-growing seasons over the 3-year period of study. Specific conductance values generally fluctu-



Map credit: Modified from Official Map of Louisiana, Louisiana Department of Transportation and Development, 1986

EXPLANATION

AREAS OF SIMILAR SPECIFIC CONDUCTANCE, IN MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS, IN THE MASSIVE, UPPER, AND "200-FOOT" SANDS OF THE CHICOT AQUIFER SYSTEM (FROM DATA COLLECTED 1943-2003)

- 1 - 150
- 151 - 500
- 501 - 1,000
- Greater than 1,000
- APPROXIMATE BOUNDARY OF FRESHWATER IN THE CHICOT AQUIFER SYSTEM (modified from Smoot, 1986)
- WESTERN BOUNDARY OF THE ATCHAFALAYA AQUIFER (modified from Nyman, 1989)
- Ac-809 ● WELL LOCATION AND NUMBER

Figure 11. Location of wells sampled for specific conductance in southwestern Louisiana, 2000-03.

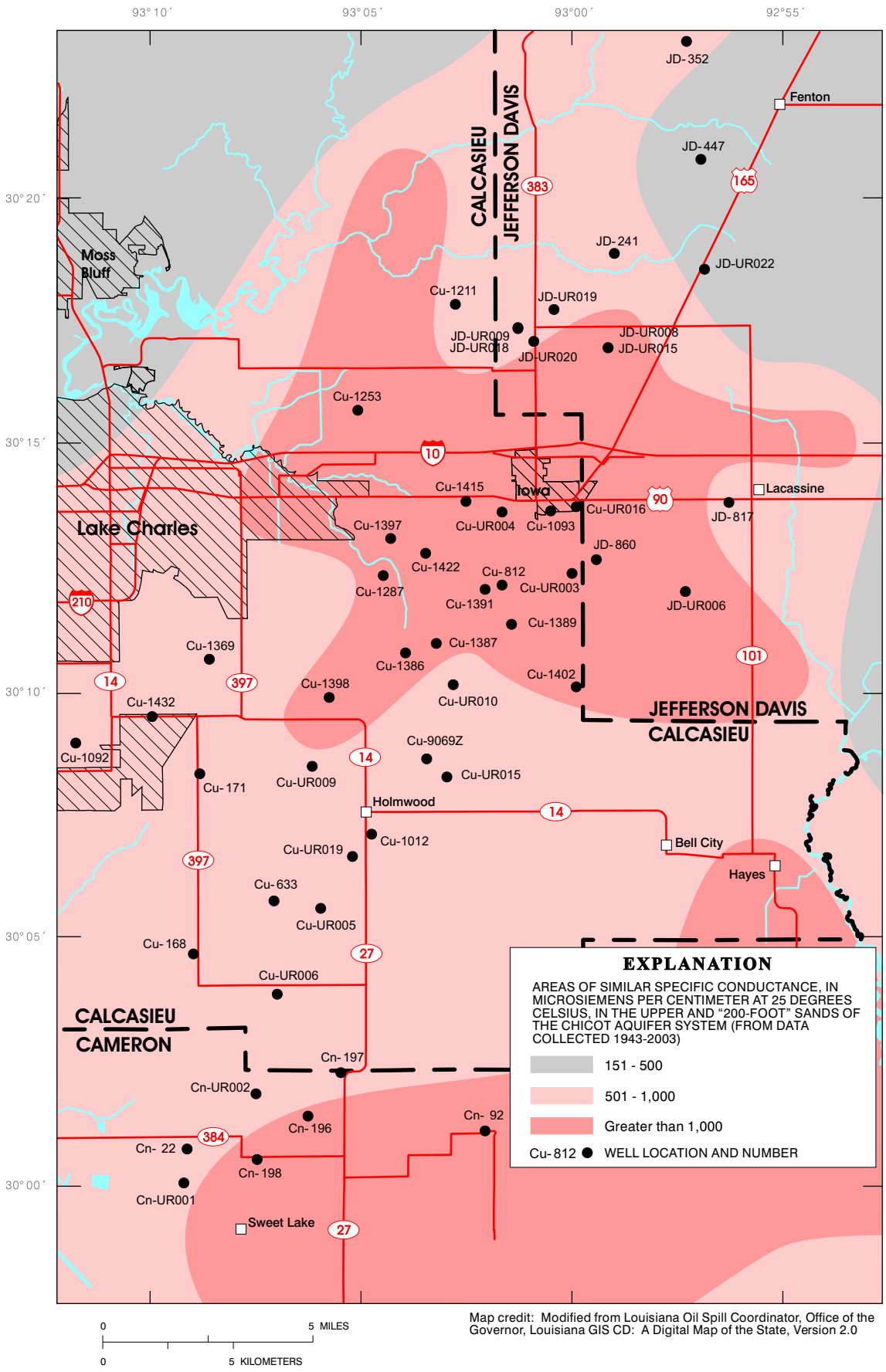


Figure 12. Location of wells sampled for specific conductance near Iowa, Louisiana, 2000-03.

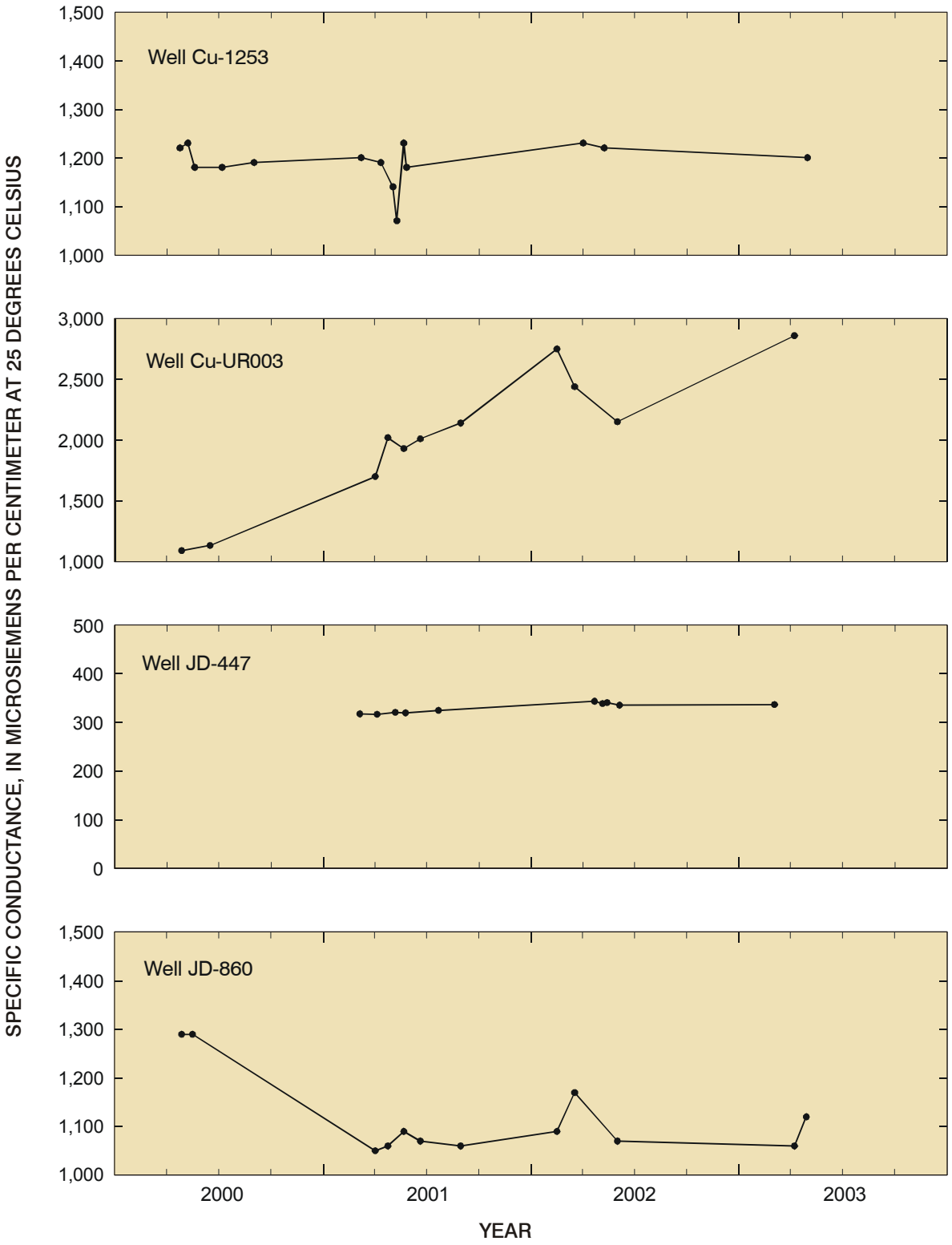


Figure 13. Specific conductance values at selected wells in southwestern Louisiana, 2000-03 (see figs. 11 and 12 for well locations).

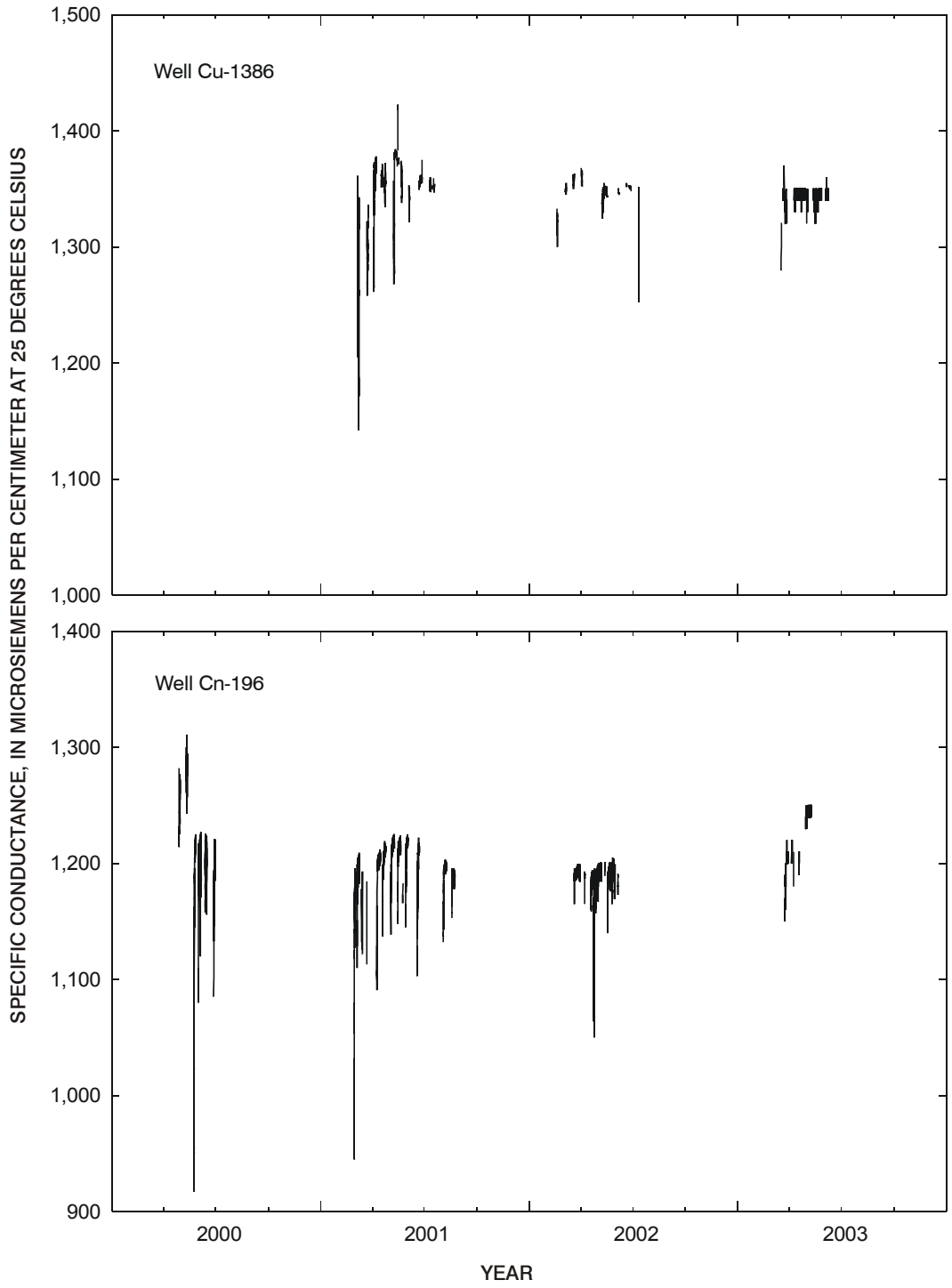


Figure 14. Hourly specific conductance values during pumping at selected wells screened in the Chicot aquifer system in southwestern Louisiana, 2000-03 (see fig. 1 for well locations).

ated about 150 µS/cm at both wells (fig. 14). Specific conductance values often increased 50 µS/cm or more in the wells during the first few hours of a pumping event, then usually stabilized to fluctuations within a range of 10 to 20 µS/cm. No long-term trends in the specific conductance were evident in either well during the periods monitored.

Summary

The Chicot aquifer system is the principal source of fresh ground-water supplies in southwestern Louisiana. Much of the area is rural and rice cultivation is the primary agricultural activity. Withdrawals from the aquifer system, primarily for rice irrigation, have caused water levels to decline as much as 100 feet beneath some rice-farming areas of southwestern Louisiana since the early 1900's, creating an elongated cone of depression in the potentiometric surface over much of the region. About 540 million gallons per day were withdrawn from the Chicot aquifer system in southwestern Louisiana in 2000.

From 1990 to 2000, water levels at several observation wells screened in the Chicot aquifer system and located in rice-farming areas declined at an average rate of 1 to 2 feet per year. Some farmers and residents of southwestern Louisiana are concerned that water levels in the aquifer system may decline below pump intakes in their wells, leaving them without water. Water levels in some areas of the aquifer system also fluctuate seasonally, primarily in response to ground-water withdrawals for rice irrigation, and wells in these areas could be affected seasonally.

To determine the magnitude and areal extent of water-level declines caused by seasonal ground-water withdrawals for rice irrigation, water-level data were collected from 141 wells screened in the massive, upper, and "200-foot" sands of the Chicot aquifer system. These data were used to construct potentiometric-surface maps of the aquifer system for June 2002 and January 2003. During June 2002, water levels in the aquifer system were more than 40 feet below the National Geodetic Vertical Datum of 1929 (NGVD 29) in parts of Acadia, Calcasieu, Evangeline, and Jefferson Davis Parishes, in an area that generally coincides with rice-farming areas. The lowest water level, 80 feet below NGVD 29, was measured in southern Evangeline Parish. During January 2003, water levels were more than 30 feet below NGVD 29 in parts of Acadia, Calcasieu, Evangeline, and Jefferson Davis Parishes, in an area that generally coincides with rice-farming areas. The lowest water levels, more than 60 feet below NGVD 29, were measured in small areas of northern Acadia and southern Evangeline Parishes.

From June 2002 to January 2003, water levels recovered throughout most of the Chicot aquifer system in the study area in response to reduced withdrawals after the rice-growing season. Throughout much of the aquifer system, water levels recovered less than 5 feet. However, in most of Acadia and Jefferson Davis Parishes, southeastern Calcasieu Parish, and southern Evangeline Parish, in an area that generally coincides with rice-farming areas, water levels generally recovered between 5 and 20 feet. These water-level changes are typical of the magnitude and areal extent of seasonal water-level fluctuations that occur in the Chicot aquifer system in response to seasonal ground-water withdrawals for rice irrigation.

To determine the duration of seasonal water-level declines due to ground-water withdrawals for rice irrigation, water-levels in the Chicot aquifer system were measured hourly at five wells in the rice-farming area during 2000-03. Water levels at these wells typically declined between 10 and 25 feet, beginning in February or March and continuing through May or June. After June, water levels began to recover and generally continued to rise until seasonal ground-water withdrawals began the following year.

Saltwater in the Chicot aquifer system is a concern to farmers in southwestern Louisiana. Continued use of irrigation water having a specific conductance value greater than about 1,000 µS/cm (microsiemens per centimeter at 25 degrees Celsius) can cause a buildup of salt in the soil that could damage both crop and soil. The presence of saltwater has been documented in the aquifer system beneath coastal parishes and in some areas where the aquifer system merges with the stratigraphically adjacent Atchafalaya aquifer. Seasonal pumping for rice irrigation has altered flow directions in the Chicot aquifer system and can induce lateral or upward movement of saltwater. Some irrigation wells screened in the aquifer system may be affected by saltwater encroachment, especially during periods of increased pumping in response to drought conditions.

Data collected during the period 1943 to 2003 from 1,355 wells screened in the massive, upper, and "200-foot" sands of the Chicot aquifer system and the Atchafalaya aquifer were used to delineate areas having similar specific conductance values and determine areas where wells are affected by saltwater. Areas having similar specific conductance values were mapped based on the range of specific conductance values for water from the majority of wells sampled within an area.

Near the outcrop area, specific conductance values typically are less than 150 µS/cm. Specific conductance values increase south and east from the outcrop area. Specific conductance values generally range from 151 to 500 µS/cm in rice-farming areas of northwestern Acadia Parish, southeastern Allen Parish, western Evangeline Parish, and northern and central Jefferson Davis Parish. Specific conductance values generally range from 501 to 1,000 µS/cm in most of the remaining rice-farming areas. Specific conductance values often exceed 1,000 µS/cm in an area along the border between Calcasieu and Jefferson Davis Parishes near Iowa, Louisiana; parts of northeastern Cameron Parish; an area of northwestern and central St. Landry Parish; parts of Vermilion Parish; and several areas along the eastern boundary of the study area where the Chicot aquifer system merges with the Atchafalaya aquifer. The maximum specific conductance value, 12,100 µS/cm, is from a well in Cameron Parish.

In areas of the Chicot aquifer system where a freshwater-saltwater interface is present, high-capacity wells pumping from the freshwater portion of the aquifer can draw saltwater from the lower part of the aquifer. Screening high-capacity wells as far above the base of freshwater as possible could reduce the potential for upconing saltwater.

To document specific conductance in wells during 2000-03 and determine whether water from wells in areas where saltwater is present is becoming saltier, specific conductance was measured in 521 water samples from 166 wells screened in the Chicot aquifer system or the Atchafalaya aquifer during 2000-03. Specific conductance values exceeded 1,000 μS/cm in water samples from wells in Calcasieu, Cameron, St. Landry, St. Martin, St. Mary, and Vermilion Parishes. Specific conductance values exceeded 2,000 μS/cm in only two wells—an irrigation well located about 2 miles south of Iowa and a USGS observation well used to monitor saltwater encroachment in east-central Vermilion Parish. Specific conductance values increased steadily at one well, from 1,090 μS/cm in April 2000 to 2,860 μS/cm in April 2003. Nearby wells did not show similar increases.

Specific conductance was measured hourly at two irrigation wells during 2000-03. Specific conductance values were greater than 1,000 μS/cm in both wells, indicating the presence of saltwater near the wells. Specific conductance values generally fluctuated about 150 μS/cm at both wells, but no long-term trends in the specific conductance were evident in either well.

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Tables 1 and 3

Table 1. Water-level data used to construct potentiometric-surface maps for June 2002 and January 2003, and water-level change map, June 2002 to January 2003, in the massive, upper, and "200-foot" sands of the Chicot aquifer system in southwestern Louisiana.

[NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112CHCT, massive sand; 112CHCTU, upper sand; and 11202LC, "200-foot" sand. --, no data]

Well number	Aquifer code	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Water-level data						Water-level changes, June 2002 to January 2003 (feet)
				June 2002			January 2003			
				Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	
Acadia Parish										
Ac-24	112CHCT	41	284	6-05	109.45	-68.45	1-15	102.14	-61.14	7.31
Ac-189	112CHCTU	26	--	6-13	88.84	-63.00	1-14	64.34	-38.50	24.50
Ac-294	112CHCTU	25	260	6-05	78.99	-53.99	1-14	71.78	-46.78	7.21
Ac-296	112CHCTU	31	250	6-05	90.78	-59.78	1-14	82.52	-51.52	8.26
Ac-326	112CHCTU	25.80	202	6-23	90.92	-64.39	1-15	76.91	-51.11	13.28
Ac-332	112CHCTU	20	294	--	--	--	1-14	64.25	-44.25	--
Ac-334	112CHCT	40	300	6-05	87.60	-47.60	1-15	85.57	-45.57	2.03
Ac-351	113CHCTU	12	230	--	--	--	1-14	39.17	-27.17	--
Ac-363	112CHCTU	9	258	6-06	60.44	-51.44	1-14	48.26	-39.26	12.18
Ac-376	112CHCTU	32	250	6-06	96.67	-64.67	1-15	88.98	-56.98	7.69
Ac-382	112CHCTU	11	292	6-13	63.45	-52.45	--	--	--	--
Ac-428	112CHCT	42	203	6-06	105.02	-63.02	1-14	94.48	-52.48	10.54
Ac-464	112CHCTU	40	250	6-05	104.63	-64.63	1-14	99.69	-59.69	4.94
Ac-475	112CHCTU	14	286	6-06	69.43	-55.43	1-14	55.53	-41.53	13.90
Ac-500	112CHCTU	22	248	6-13	86.95	-64.95	1-15	73.90	-51.90	13.05
Ac-537	112CHCTU	25	211	6-04	87.71	-62.71	1-15	68.57	-43.57	19.14
Ac-539	112CHCTU	31	251	6-05	84.57	-53.57	1-14	72.21	-41.21	12.36
Ac-618	112CHCT	40	249	6-05	105.64	-65.64	1-15	97.23	-57.23	8.41
Ac-628	112CHCTU	35	250	6-05	72.81	-37.81	1-15	69.32	-34.32	3.49
Ac-669	112CHCTU	15	176	6-06	75.26	-60.26	1-14	52.02	-37.02	23.24

Table 1. Water-level data used to construct potentiometric-surface maps for June 2002 and January 2003, and water-level change map, June 2002 to January 2003, in the massive, upper, and "200-foot" sands of the Chicot aquifer system in southwestern Louisiana.—Continued

[NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112CHCT, massive sand; 112CHCTU, upper sand; and 11202LC, "200-foot" sand. --, no data]

Well number	Aquifer code	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Water-level data						Water-level changes, June 2002 to January 2003 (feet)
				June 2002			January 2003			
				Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	
Acadia Parish—Continued										
Ac-825	112CHCT	43	266	--	--	--	1-15	93.28	-50.28	--
Ac-828	112CHCTU	21	302	6-06	78.80	-57.80	1-15	72.24	-51.24	6.56
Ac-836	112CHCT	37	275	6-13	96.77	-59.77	1-14	90.06	-53.06	6.71
Ac-876	112CHCTU	21	298	--	--	--	1-15	62.50	-41.50	--
Ac-929	112CHCTU	40	286	--	--	--	1-15	102.76	-62.76	--
Allen Parish										
Al-6	112CHCT	80	--	6-06	68.18	11.82	1-09	66.02	13.98	2.16
Al-215	112CHCT	70	207	6-06	80.73	-10.73	1-09	80.55	-10.55	.18
Al-241	112CHCT	42.97	62	6-06	33.04	9.93	1-08	29.81	13.16	3.23
Al-283	112CHCT	62	93	6-06	39.47	22.53	1-09	37.95	24.05	1.52
Al-293	112CHCT	100	84	--	--	--	1-08	29.26	70.74	--
Al-294	112CHCT	48	142	6-06	24.30	23.70	1-08	22.30	25.70	2.00
Al-304	112CHCT	114	104	6-06	19.22	94.78	1-08	17.45	96.55	1.77
Al-396	112CHCT	57	315	--	--	--	1-08	29.53	27.47	--
Beauregard Parish										
Be-367	112CHCT	45	455	6-04	70.38	-25.38	1-08	70.18	-25.18	.20
Be-430	112CHCT	120	123	6-06	60.68	59.32	1-08	60.70	59.30	-.02
Be-431	112CHCT	70	84	6-06	6.14	63.86	1-08	2.92	67.08	3.22
Be-433	112CHCT	132	82	6-04	7.85	124.15	1-08	5.14	126.86	2.71
Be-435	112CHCT	129	124	6-04	25.30	103.70	1-15	21.64	107.36	3.66

Table 1. Water-level data used to construct potentiometric-surface maps for June 2002 and January 2003, and water-level change map, June 2002 to January 2003, in the massive, upper, and "200-foot" sands of the Chicot aquifer system in southwestern Louisiana.—Continued

[NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112CHCT, massive sand; 112CHCTU, upper sand; and 11202LC, "200-foot" sand. --, no data]

Well number	Aquifer code	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Water-level data						Water-level changes, June 2002 to January 2003 (feet)
				June 2002			January 2003			
				Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	
Beauregard Parish—Continued										
Be-439	112CHCT	169	189	6-04	48.06	120.94	1-08	47.37	121.63	.69
Be-440	112CHCT	212	169	6-04	45.72	166.28	1-15	44.10	167.90	1.62
Be-443	112CHCT	206	164	--	--	--	1-15	36.10	169.90	--
Be-446	112CHCT	83	157	6-04	25.30	57.70	1-07	23.80	59.20	1.50
Be-457	112CHCT	95	155	6-04	48.23	46.77	1-07	43.99	51.01	4.24
Be-461	112CHCT	140	228	--	--	--	1-07	56.90	83.10	--
Be-469	112CHCT	84	380	6-04	71.84	12.16	1-08	69.62	14.38	2.22
Calcasieu Parish										
Cu-168	11202LC	7.81	375	6-05	59.31	-51.50	1-07	57.98	-50.17	1.33
Cu-395	11202LC	12	200	6-04	38.00	-26.00	1-06	36.93	-24.93	1.07
Cu-642	11202LC	19	287	6-06	62.70	-43.70	1-08	55.08	-36.08	7.62
Cu-771	11202LC	17.76	241	6-05	61.02	-43.26	1-06	59.15	-41.39	1.87
Cu-843	11202LC	12	205	6-05	54.01	-42.01	1-07	52.50	-40.50	1.51
Cu-854	11202LC	20	430	6-05	73.37	-53.37	1-07	52.03	-32.03	21.34
Cu-962	11202LC	11	287	6-05	52.48	-41.48	1-06	49.62	-38.62	2.86
Cu-967	11202LC	12	240	6-05	57.08	-45.08	1-06	54.31	-42.31	2.77
Cu-968	11202LC	10	276	6-05	39.53	-29.53	1-07	39.27	-29.27	.26
Cu-971	112CHCTU	5	500	6-07	46.29	-41.29	1-09	41.05	-36.05	5.24
Cu-975	11202LC	20	237	6-06	47.30	-27.30	1-08	42.65	-22.65	4.65

Table 1. Water-level data used to construct potentiometric-surface maps for June 2002 and January 2003, and water-level change map, June 2002 to January 2003, in the massive, upper, and "200-foot" sands of the Chicot aquifer system in southwestern Louisiana.—Continued

[NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112CHCT, massive sand; 112CHCTU, upper sand; and 11202LC, "200-foot" sand. --, no data]

Well number	Aquifer code	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Water-level data						Water-level changes, June 2002 to January 2003 (feet)
				June 2002			January 2003			
				Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	
Calcasieu Parish—Continued										
Cu-990	11202LC	14	183	6-05	64.13	-50.13	1-06	58.74	-44.74	5.39
Cu-1066	11202LC	25	255	6-04	33.65	-8.65	1-07	30.49	-5.49	3.16
Cu-1159	11202LC	13	280	6-05	58.15	-45.15	1-07	57.72	-44.72	.43
Cu-1245	11202LC	11	136	6-04	15.39	-4.39	1-07	12.44	-1.44	2.95
Cu-1386	11202LC	24	325	--	--	--	1-07	59.90	-35.90	--
Cu-1422	11202LC	22	262	6-14	80.69	-58.69	1-07	57.77	-35.77	22.92
Cu-6680Z	11202LC	11	170	6-04	40.72	-29.72	1-08	36.63	-25.63	4.09
Cu-7082Z	11202LC	13	260	6-05	42.39	-29.39	1-07	41.74	-28.74	.65
Cameron Parish										
Cn-80L	112CHCTU	4.73	481	6-14	37.37	-32.64	1-10	31.70	-26.97	2.67
Cn-81L	112CHCTU	4.45	478	--	--	--	1-10	33.71	-29.26	--
Cn-90	11202LC	3.19	396	6-05	34.61	-31.42	1-07	29.22	-26.03	5.39
Cn-92	11202LC	5.50	443	6-05	45.35	-39.85	1-07	34.70	-29.20	10.65
Cn-93	112CHCTU	3.76	360	6-05	21.76	-18.00	1-07	22.33	-18.57	-.57
Cn-118	112CHCTU	5	638	6-05	21.82	-16.82	1-07	22.19	-17.19	-.37
Evngeline Parish										
Ev-23	112CHCT	51.06	360	6-05	103.23	-52.17	1-08	93.04	-41.98	10.19
Ev-79	112CHCT	55	250	6-04	126.62	-71.62	1-07	118.64	-63.64	7.98
Ev-229	112CHCT	65.66	231	6-04	105.73	-40.07	1-07	95.71	-30.05	10.02
Ev-500	112CHCT	117.52	120	6-04	50.11	67.41	1-07	50.41	67.11	-.30

Table 1. Water-level data used to construct potentiometric-surface maps for June 2002 and January 2003, and water-level change map, June 2002 to January 2003, in the massive, upper, and "200-foot" sands of the Chicot aquifer system in southwestern Louisiana.—Continued

[NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112CHCT, massive sand; 112CHCTU, upper sand; and 11202LC, "200-foot" sand. --, no data]

Well number	Aquifer code	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Water-level data						Water-level changes, June 2002 to January 2003 (feet)
				June 2002			January 2003			
				Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	
Evngeline Parish—Continued										
Ev-547	112CHCT	113.38	80	6-04	53.61	59.77	1-06	44.77	68.61	8.84
Ev-606	112CHCT	75	255	6-05	110.29	-35.29	1-08	105.82	-30.82	4.47
Ev-623	112CHCT	137.20	96	--	--	--	1-07	59.44	77.76	--
Ev-659	112CHCT	60.52	252	6-05	111.33	-50.81	1-07	105.89	-45.37	5.44
Ev-665	112CHCT	59.29	100	6-04	70.91	-11.62	1-06	67.49	-8.20	3.42
Ev-667	112CHCT	122.20	91.50	6-04	48.81	73.39	1-07	49.04	73.16	-.23
Ev-673	112CHCT	60	247	6-05	126.16	-66.16	1-08	119.96	-59.96	6.20
Ev-679	112CHCT	46	70	6-04	5.27	40.73	1-07	4.00	42.00	1.27
Ev-680	112CHCT	120	89	6-04	55.76	64.24	1-07	55.28	64.72	.48
Ev-751	112CHCT	53	275	6-05	133.49	-80.49	1-08	109.59	-56.59	23.90
Ev-UR008	--	56	--	6-12	123.68	-67.68	1-09	109.91	-53.91	13.77
Ev-UR009	--	58	--	--	--	--	1-09	106.19	-48.19	--
Iberia Parish										
I-19	112CHCTU	9.72	460	6-04	18.16	-8.44	1-13	15.68	-5.96	2.48
I-93	112CHCTU	18.53	585	6-04	19.66	-1.13	1-13	19.55	-1.02	.11
Jefferson Davis Parish										
JD-9	112CHCTU	24.10	318	6-11	84.70	-60.60	1-09	68.60	-44.50	16.10
JD-31	112CHCT	50	250	6-10	89.51	-39.51	1-09	87.96	-37.96	1.55
JD-33	112CHCTU	7.18	350	6-07	49.67	-42.49	1-10	40.07	-32.89	9.60

Table 1. Water-level data used to construct potentiometric-surface maps for June 2002 and January 2003, and water-level change map, June 2002 to January 2003, in the massive, upper, and "200-foot" sands of the Chicot aquifer system in southwestern Louisiana.—Continued

[NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112CHCT, massive sand; 112CHCTU, upper sand; and 11202LC, "200-foot" sand. --, no data]

Well number	Aquifer code	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Water-level data						Water-level changes, June 2002 to January 2003 (feet)
				June 2002			January 2003			
				Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	
Jefferson Davis Parish—Continued										
JD-166	112CHCTU	2	--	6-11	84.63	-46.63	1-09	76.88	-38.88	7.75
JD-222	112CHCTU	4.61	300	6-07	41.42	-36.81	1-09	35.38	-30.77	6.04
JD-298	112CHCTU	15	297	6-14	66.08	-51.08	1-10	59.52	-44.52	6.56
JD-317	112CHCT	42.27	289	6-11	91.18	-48.91	1-09	85.38	-43.11	5.80
JD-353	112CHCT	25	300	6-06	40.70	-15.70	1-08	46.49	-21.49	-5.79
JD-401	112CHCTU	14	282	6-07	66.90	-52.90	1-09	50.33	-36.33	16.57
JD-406	112CHCT	50	450	6-10	83.91	-33.91	1-09	83.26	-33.26	.65
JD-470	112CHCTU	10	325	6-07	65.08	-55.08	1-10	52.68	-42.68	12.40
JD-485A	112CHCTU	21.36	290	6-07	75.52	-54.16	1-09	56.79	-35.43	18.73
JD-492	112CHCTU	25	613	6-07	85.32	-60.32	1-10	77.90	-52.90	7.42
JD-493	112CHCT	37.95	220	6-14	60.55	-22.60	1-09	59.04	-21.09	1.51
JD-581	112CHCT	35	--	6-11	88.44	-53.44	--	--	--	--
JD-740	112CHCT	35	264	6-10	89.67	-54.67	1-09	84.20	-49.20	5.47
JD-751	112CHCTU	10	193	6-14	53.30	-43.30	1-10	41.96	-31.96	11.34
JD-772	112CHCTU	27	340	6-11	84.93	-57.93	1-09	68.27	-41.27	16.66
JD-835	112CHCTU	31	280	6-14	70.83	-39.83	1-09	64.47	-33.47	6.36
JD-848	112CHCTU	32	243	6-06	69.84	-37.84	1-09	61.38	-29.38	8.46

Table 1. Water-level data used to construct potentiometric-surface maps for June 2002 and January 2003, and water-level change map, June 2002 to January 2003, in the massive, upper, and "200-foot" sands of the Chicot aquifer system in southwestern Louisiana.—Continued

[NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112CHCT, massive sand; 112CHCTU, upper sand; and 11202LC, "200-foot" sand. --, no data]

Well number	Aquifer code	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Water-level data						Water-level changes, June 2002 to January 2003 (feet)
				June 2002			January 2003			
				Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	
Lafayette Parish										
Lf-524	112CHCTU	25	174	6-04	30.80	-5.80	1-13	29.97	-4.97	.83
Lf-662	112CHCTU	40.37	152	--	--	--	1-13	49.58	-9.21	--
Lf-822	112CHCTU	30	--	--	--	--	1-14	54.80	-24.80	--
Lf-823	112CHCTU	30	363	6-04	59.58	-29.58	--	--	--	--
Lf-914	112CHCTU	30	250	6-13	67.43	-37.43	1-14	62.79	-32.79	4.64
Lf-958	112CHCTU	50	115	6-05	53.53	-3.53	1-13	53.37	-3.37	.16
St. Landry Parish										
SL-142	112CHCT	50	235	--	--	--	1-09	85.58	-35.58	--
SL-179	112CHCT	55.23	94	6-04	58.47	-3.24	1-06	58.75	-3.52	-0.28
SL-190	112CHCT	74.36	175	6-06	87.97	-13.61	1-06	87.54	-13.18	.43
SL-331	112CHCT	62	--	6-06	89.95	-27.95	1-09	89.51	-27.51	.44
SL-347	112CHCT	50	300	6-06	118.38	-68.38	1-09	107.82	-57.82	10.56
SL-392	112CHCT	46.74	126	6-06	56.44	-9.70	1-10	95.39	-48.65	-38.95
SL-412	112CHCT	70	302	6-06	80.27	-10.27	1-10	79.65	-9.65	.62
SL-566	112CHCT	51	250	6-06	104.13	-53.13	1-10	102.68	-51.68	1.45
St. Martin Parish										
SMn-109	112CHCTU	11.34	375	6-04	3.15	8.19	1-13	5.76	5.58	-2.61
St. Mary Parish										
SM-57U	112CHCTU	8.72	638	6-04	10.05	-1.33	1-13	10.52	-1.80	-.47

Table 1. Water-level data used to construct potentiometric-surface maps for June 2002 and January 2003, and water-level change map, June 2002 to January 2003, in the massive, upper, and "200-foot" sands of the Chicot aquifer system in southwestern Louisiana.—Continued

[NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112CHCT, massive sand; 112CHCTU, upper sand; and 11202LC, "200-foot" sand. --, no data]

Well number	Aquifer code	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Water-level data						Water-level changes, June 2002 to January 2003 (feet)
				June 2002			January 2003			
				Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	Date measured	Depth to water level (feet below land surface)	Altitude of water level (feet relative to NGVD 29)	
Vermilion Parish										
Ve-28	112CHCTU	6.74	260	6-10	13.23	-6.49	1-15	12.47	-5.73	.76
Ve-442	112CHCTU	5.42	281	6-11	31.23	-25.81	1-14	25.81	-20.39	5.42
Ve-460	112CHCTU	9.78	300	6-11	26.63	-16.85	1-14	25.64	-15.86	.99
Ve-501	112CHCTU	22	227	6-04	29.61	-7.99	1-13	28.46	-6.84	1.15
Ve-556	112CHCTU	6	263	6-11	40.91	-34.91	--	--	--	--
Ve-586	112CHCTU	15.40	259	6-11	36.00	-20.60	1-15	34.29	-18.89	1.71
Ve-629L	112CHCTU	1.79	487	6-10	9.25	-7.46	1-15	7.89	-6.19	1.27
Ve-629U	112CHCTU	1.79	457	6-10	8.16	-6.37	1-15	6.87	-5.08	1.29
Ve-630U	112CHCTU	4.75	528	6-10	14.95	-10.20	1-15	13.37	-8.62	1.58
Ve-637L	112CHCTU	4.06	243	6-10	14.54	-10.48	1-15	13.43	-9.37	1.11
Ve-637U	112CHCTU	4.06	198	6-10	14.15	-10.09	1-15	13.32	-9.26	.83
Ve-639	112CHCTU	5.84	608	6-10	10.73	-4.89	1-15	10.72	-4.88	.01
Ve-654	112CHCTU	9.60	267	6-11	30.80	-21.20	1-14	26.65	-17.05	4.15
Ve-764	112CHCTU	15	250	6-11	44.50	-29.50	1-14	44.34	-29.34	.16
Ve-882	112CHCTU	10	279	6-11	39.79	-29.79	1-14	36.50	-26.50	3.29
Ve-1134	112CHCTU	5	190	6-11	44.91	-39.91	1-14	35.99	-30.99	8.92
Ve-1152	112CHCTU	10	235	6-11	57.57	-47.57	1-14	47.07	-37.07	10.50

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Acadia Parish												
Ac-3	302623	921939	112CHCT	I	50	338	--	--	6-05-2002	912	897	110
Ac-69	302236	922029	112CHCT	I	43	--	--	--	6-05-2002	699	682	40
Ac-80	302240	921856	112CHCT	I	--	--	--	--	5-22-2002	744	--	--
Ac-113	301441	922050	112CHCTU	I	25	331	--	--	5-03-2001	697	674	24
Ac-147	300731	922131	112CHCTU	I	17.78	298	--	--	6-28-2000	845	--	--
									7-18-2000	831	--	--
									8-14-2000	849	--	--
									8-30-2000	839	--	--
									10-09-2000	844	--	--
									10-24-2000	852	--	--
									4-05-2001	808	--	--
									5-02-2001	860	841	87
									5-10-2001	827	--	--
									10-08-2001	858	--	--
Ac-179	301904	922725	112CHCTU	I	34.61	313	--	--	6-06-2002	626	626	54
Ac-204	301323	921723	112CHCTU	I	--	--	--	--	6-01-2000	602	--	--
									6-16-2000	555	--	--
									6-28-2000	578	--	--
									7-15-2000	602	--	--
									8-02-2000	608	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Acadia Parish—Continued												
Ac-204	301323	921723	112CHCTU	I	--	--			8-15-2000	609	--	--
									9-03-2000	610	--	--
									9-16-2000	606	--	--
									12-11-2000	606	--	--
									5-02-2001	619	612	22
Ac-222	301904	921040	112CHCTU	I	36	--	--	--	6-05-2002	554	539	12
Ac-369	300850	922742	112CHCTU	I	15	280	200	280	6-06-2002	727	711	36
Ac-394	302545	923445	112CHCT	I	36	287	197.24	283.66	5-30-2002	386	375	37
Ac-446	302209	921924	112CHCT	I	40	234	167	234	5-22-2002	735	--	--
Ac-451	300740	922650	112CHCTU	N	14	293	212.5	293.4	3-15-2000	762	793	41
									9-13-2000	771	803	41
									3-09-2001	771	771	39
									9-19-2001	765	792	38
									4-09-2002	770	794	42
									9-13-2002	759	799	40
									3-28-2003	761	799	40
Ac-475	300848	922746	112CHCTU	I	14	286	226.4	286.4	5-16-2001	735	716	36
Ac-477	300937	922144	112CHCTU	I	20	269	208.95	269	5-16-2001	700	672	27
Ac-548	301558	922321	112CHCTU	I	25	278	208	278	5-10-2001	676	--	--
									5-24-2001	678	--	--
									6-19-2001	684	--	--
									7-12-2001	684	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Acadia Parish—Continued												
Ac-558	302109	921634	112CHCTU	I	42	205	175	205	5-30-2002	--	528	24
Ac-618	302533	922051	112CHCT	I	40	249	209	249	5-30-2002	670	636	43
Ac-711	301337	921814	112CHCTU	I	25	260	238	260	5-02-2001	665	651	26
Ac-809	301430	922647	112CHCTU	I	23	235	160	220	5-15-2001	758	747	60
Ac-822	301343	922024	112CHCTU	I	25	300	--	--	6-05-2000	686	--	--
									6-20-2000	698	--	--
									6-28-2000	569	--	--
									7-15-2000	700	--	--
									8-02-2000	679	--	--
									8-15-2000	642	--	--
									9-01-2000	700	--	--
									9-16-2000	713	--	--
									12-11-2000	701	--	--
									5-02-2001	719	714	29
Ac-836	302304	923431	112CHCT	I	37	275	--	--	5-31-2002	444	427	40
									6-06-2002	444	434	39
Ac-848	302254	922045	112CHCT	I	42	248	168	241	5-15-2001	692	671	39
Ac-855	302528	921742	112CHCT	I	45	253	179	252	5-30-2002	727	710	45
Ac-857	302158	922756	112CHCT	I	41	272	174	271	5-31-2002	771	706	78
Ac-919	300846	923227	112CHCTU	I	10	274	202	273	4-30-2003	806	791	87
Ac-929	302515	922431	112CHCTU	I	40	285	203	285	5-15-2001	690	673	61
Ac-971	302309	921835	--	I	46	--	--	--	5-22-2002	750	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Acadia Parish—Continued												
Ac-980	302055	921946	112CHCTU	I	36	276	179	274	5-22-2002	727	--	--
Ac-UR001	300847	923245	--	I	10	--	--	--	5-11-2000	847	--	--
									5-20-2000	787	--	--
Ac-UR004	300847	923312	--	I	11	--	--	--	6-28-2000	823	--	--
									7-29-2000	814	--	--
Ac-UR006	300827	922501	--	I	--	--	--	--	6-28-2000	682	--	--
									7-18-2000	677	--	--
									8-14-2000	690	--	--
									8-30-2000	685	--	--
									10-09-2000	677	--	--
									10-24-2000	687	--	--
									4-05-2001	676	--	--
									5-02-2001	699	685	23
									5-04-2001	675	--	--
									5-18-2001	676	--	--
									7-17-2001	682	--	--
									10-08-2001	692	--	--
Ac-UR007	302202	922151	--	I	40	--	--	--	5-15-2001	705	679	46
Ac-UR008	301629	922317	--	I	--	--	--	--	5-24-2001	690	--	--
									6-19-2001	689	--	--
									7-12-2001	673	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Calcasieu Parish												
Cu-168	300440	930845	11202LC	I	7.81	375	--	--	6-04-2001	514	508	38
Cu-171	300820	930837	11202LC	I	13	375	--	--	4-27-2000	466	--	--
									5-16-2000	466	--	--
									5-06-2001	480	--	--
									5-16-2001	491	--	--
									5-19-2001	481	--	--
									5-23-2001	497	--	--
									5-30-2001	497	--	--
									6-19-2001	491	--	--
									6-26-2001	498	--	--
Cu-633	300545	930652	11202LC	I	--	300	--	--	5-18-2000	732	--	--
									6-18-2000	754	--	--
									5-22-2001	746	733	49
Cu-688	300540	931303	11205LC	I	10.96	694	614	694	6-22-2000	550	--	--
Cu-771	301336	931830	11202LC	O	17.76	241	231	241	3-14-2000	420	415	16
									9-12-2000	425	425	16
									3-07-2001	409	421	15
									9-17-2001	424	419	15
									4-11-2002	425	416	16
									9-12-2002	430	415	16
									3-27-2003	429	416	16
Cu-787	300353	932102	11205LC	O	4.33	734	729	734	3-14-2000	543	528	49

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Calcasieu Parish—Continued												
Cu-787	300353	932102	11205LC	O	4.33	734			9-12-2000	537	527	50
									3-06-2001	514	532	48
									9-18-2001	527	520	47
									4-11-2002	525	510	46
									9-12-2002	523	509	45
									3-27-2003	523	507	45
Cu-812	301211	930133	112CHCTU	I	--	265	--	--	5-15-2000	993	--	--
									4-30-2003	1,010	998	130
Cu-960	301031	932049	11205LC	O	21	598	592	598	9-13-2000	774	753	140
									3-05-2001	759	750	140
									9-17-2001	755	744	140
									4-10-2002	758	729	140
									9-12-2002	754	722	130
									3-27-2003	766	733	140
Cu-1012	300707	930435	11202LC	I	20	363	280.2	363	5-17-2000	817	--	--
									6-20-2000	769	--	--
									4-29-2003	789	783	57
Cu-1092	300858	931131	11205LC	I	17.5	600	519.2	600.1	5-18-2000	488	--	--
Cu-1093	301341	930024	112CHCTU	I	25	303	243	303	4-24-2000	906	--	--
									5-20-2000	915	--	--
									6-16-2000	916	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Calcasieu Parish—Continued												
									9-03-2000	901	--	--
Cu-1093	301341	930024	112CHCTU	I	25	303			4-16-2001	900	--	--
									5-28-2001	891	--	--
									5-02-2002	933	--	--
Cu-1211	301753	930239	11202LC	I	20	205	143	205	5-16-2000	826	--	--
Cu-1253	301544	930455	11202LC	I	21	236	176	236	4-24-2000	1,220	--	--
									5-08-2000	1,230	--	--
									5-20-2000	1,180	--	--
									7-07-2000	1,180	--	--
									9-01-2000	1,190	--	--
									3-08-2001	1,200	--	--
									4-12-2001	1,190	--	--
									5-03-2001	1,140	--	--
									5-10-2001	1,070	--	--
									5-22-2001	1,230	1,220	260
									5-27-2001	1,180	--	--
									4-02-2002	1,230	--	--
									5-09-2002	1,220	--	--
									5-01-2003	1,200	--	--
Cu-1287	301223	930420	11202LC	I	20	282	200	282	5-07-2000	1,270	--	--
									5-18-2000	1,270	--	--
Cu-1369	301040	930823	11205LC	I	21	594	--	--	5-16-2000	504	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Calcasieu Parish—Continued												
									6-21-2000	512	--	--
Cu-1369	301040	930823	11205LC	I	21	594			5-15-2001	515	510	57
Cu-1385	301324	931705	11205LC	N	15	580	400	575	3-14-2000	805	784	140
									9-13-2000	754	734	130
									3-06-2001	715	712	120
									10-11-2001	699	673	110
									9-12-2002	699	671	110
									3-27-2003	694	663	110
Cu-1386	301048	930348	11202LC	I	24	325	204	316	4-06-2000	1,380	--	--
									5-09-2001	1,380	1,350	160
									6-05-2001	1,230	--	--
Cu-1387	301100	930305	11202LC	I	30	283	203	283	4-26-2000	1,350	--	--
									6-07-2000	1,330	--	--
									6-05-2001	1,210	--	--
									7-25-2001	1,160	--	--
Cu-1389	301123	930119	112CHCTU	I	24	302	182	302	5-22-2001	997	989	120
Cu-1391	301205	930157	11202LC	I	23	254	--	--	4-25-2000	1,080	--	--
									5-15-2000	1,090	--	--
Cu-1397	301307	930409	11202LC	I	22	291	181	291	4-26-2000	1,310	--	--
									6-07-2000	1,290	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Calcasieu Parish—Continued												
									5-22-2001	1,290	1,270	210
									6-05-2001	1,160	--	--
Cu-1398	300954	930535	11202LC	I	22	322	216	321	4-27-2000	1,060	--	--
Cu-1398	300954	930535	11202LC	I	22	322			5-16-2000	985	--	--
									4-23-2001	973	--	--
Cu-1402	301006	925948	112CHCTU	I	17	275	255	275	5-05-2000	1,690	--	--
									5-15-2000	1,100	--	--
									5-23-2000	1,360	--	--
									6-09-2000	1,020	--	--
Cu-1415	301353	930224	11202LC	I	16	273	167	272	4-25-2000	1,240	--	--
									5-15-2000	1,250	--	--
									5-23-2001	1,250	1,220	260
Cu-1422	301250	930320	11202LC	I	22	262	200	262	6-05-2002	1,120	1,180	200
Cu-1432	300930	930944	11202LC	I	19	272	202	272	6-12-2000	488	--	--
									5-22-2001	494	483	42
Cu-9069Z	300838	930318	11202LC	I	21	270	260	270	4-26-2000	714	--	--
									5-16-2000	897	--	--
									5-27-2000	713	--	--
									6-08-2000	912	--	--
									6-17-2000	907	--	--
									6-22-2000	913	--	--
									5-15-2001	900	895	74

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Calcasieu Parish—Continued												
Cu-UR001	300928	932941	--	I	15	--	--	--	5-17-2001	434	--	--
									5-18-2001	433	--	--
Cu-UR002	300815	932836	--	I	10	--	--	--	5-17-2001	506	--	--
Cu-UR002	300815	932836	--	I	10	--			5-18-2001	526	--	--
									5-19-2001	534	--	--
Cu-UR003	301225	925954	--	I	23	190	150	190	4-27-2000	1,090	--	--
									6-16-2000	1,130	--	--
									4-02-2001	1,700	--	--
									4-24-2001	2,020	--	--
									5-22-2001	1,930	--	--
									6-20-2001	2,010	--	--
									8-30-2001	2,140	--	--
									2-15-2002	2,750	--	--
									3-18-2002	2,440	--	--
									6-01-2002	2,150	--	--
									4-08-2003	2,860	--	--
Cu-UR004	301340	930133	--	I	23	--	--	--	4-25-2000	1,080	--	--
									5-15-2000	1,090	--	--
Cu-UR005	300536	930547	--	I	26	--	--	--	6-12-2000	825	--	--
									6-17-2000	801	--	--
Cu-UR006	300351	930648	--	I	16	--	--	--	4-28-2000	714	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Calcasieu Parish—Continued												
Cu-UR009	300830	930559	--	I	19	--	--	--	4-27-2000	982	--	--
									5-31-2000	988	--	--
Cu-UR010	301009	930241	--	I	20	--	--	--	7-11-2000	688	--	--
									7-18-2000	676	--	--
Cu-UR010	301009	930241	--	I	20	--			7-25-2000	674	--	--
Cu-UR015	300817	930250	--	I	--	--	--	--	5-16-2000	653	--	--
									6-21-2000	645	--	--
									5-15-2001	640	629	48
Cu-UR016	301347	925948	--	I	30	--	--	--	4-25-2000	614	--	--
									5-16-2000	611	--	--
									5-17-2000	617	--	--
Cu-UR019	300639	930502	--	I	--	--	--	--	5-16-2000	962	--	--
									6-20-2000	957	--	--
Cameron Parish												
Cn-22	300042	930854	11202LC	I	10	388	--	--	1-30-2000	572	--	--
									4-27-2000	570	--	--
Cn-80L	295846	923811	112CHCTU	O	4.73	481	475	481	3-15-2000	1,290	1,260	250
									9-13-2000	1,210	1,180	270
									3-09-2001	1,300	1,250	260
									9-19-2001	1,300	1,260	260
									4-09-2002	1,300	1,260	260
									9-10-2002	1,280	1,240	250

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Cameron Parish—Continued												
									3-28-2003	1,320	1,270	260
Cn-90	295611	930448	11202LC	O	3.19	396	386	396	3-13-2000	998	960	160
									9-11-2000	985	962	170
									3-07-2001	964	973	170
Cn- 90	295611	930448	11202LC	O	3.19	396			9-18-2001	980	963	170
									4-10-2002	985	959	170
									9-11-2002	988	959	160
									3-26-2003	996	955	160
Cn-92	300104	930156	11202LC	O	5.5	443	438	443	3-13-2000	1,830	1,770	390
									9-12-2000	1,820	1,770	410
									3-07-2001	1,870	1,840	430
									9-18-2001	1,950	1,890	450
									4-10-2002	1,900	1,840	430
									9-11-2002	1,870	1,820	420
									3-26-2003	1,850	1,800	410
Cn-196	300122	930604	11202LC	I	10	420	320	420	4-20-2000	1,270	--	--
									5-11-2000	1,270	--	--
									5-25-2000	1,270	--	--
									6-03-2000	1,270	--	--
									6-15-2000	1,270	--	--
									4-29-2003	1,250	1,210	240

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Cameron Parish—Continued												
Cn-197	300216	930518	11202LC	I	10	462	362	462	4-27-2000	762	--	--
									6-14-2000	764	--	--
Cn-198	300029	930716	11202LC	I	10	402	302	402	4-20-2000	1,190	--	--
									5-11-2000	1,190	--	--
									5-25-2000	1,190	--	--
Cn-198	300029	930716	11202LC	I	10	402			6-03-2000	1,190	--	--
									6-16-2000	1,200	--	--
									6-21-2000	1,180	--	--
									6-29-2000	1,160	--	--
									7-19-2000	1,190	--	--
Cn-UR001	300001	930859	--	I	10	--	--	--	4-27-2000	622	--	--
									5-31-2000	622	--	--
Cn-UR002	300150	930718	--	I	20	--	--	--	4-27-2000	853	--	--
									5-31-2000	861	--	--
Evangeline Parish												
Ev-673	303801	922500	112CHCT	P	60	247	187	247	5-16-2001	740	720	68
Ev-834	303617	923013	112CHCT	I	50	260	190	260	5-15-2001	336	321	27
Ev-879	304545	921911	112CHCT	I	80	220	153	220	5-16-2001	341	323	12
Ev-889	303944	922725	112CHCT	I	60	201	151	201	5-15-2001	599	580	66
Ev-923	304201	922636	112CHCT	I	--	188	--	--	5-16-2001	793	751	110
Ev-UR001	303832	922637	--	I	--	--	--	--	5-15-2001	737	712	83
Ev-UR003	303832	922744	--	I	--	--	--	--	5-15-2001	488	471	24

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Evangeline Parish—Continued												
Ev-UR004	304036	922343	--	I	--	--	--	--	5-16-2001	479	458	32
Ev-UR005	303704	921717	--	I	--	--	--	--	5-16-2001	689	648	28
Ev-UR006	304254	922021	--	I	--	--	--	--	5-17-2001	648	621	60
Ev-UR007	304346	922015	--	I	--	--	--	--	5-17-2001	546	526	57
Ev-UR009	303222	922206	--	I	58	--	--	--	4-07-2001	606	--	--
Ev-UR009	303222	922206	--	I	58	--			4-17-2001	603	--	--
									4-23-2001	604	--	--
Iberia Parish												
I-93	300035	914433	112CHCTU	O	18.53	585	580	585	3-16-2000	734	713	43
									9-15-2000	740	714	42
									3-08-2001	728	711	40
									9-13-2001	716	702	39
									3-27-2002	729	701	39
									9-10-2002	728	689	37
									3-25-2003	730	691	38
Jefferson Davis Parish												
JD-50	301244	924435	112CHCTU	I	--	310	--	--	6-06-2000	455	--	--
									7-07-2000	450	--	--
JD-79	300404	924429	112CHCTU	I	18.77	313	--	--	6-18-2001	588	--	--
									6-20-2001	585	--	--
JD-135	301439	924637	112CHCTU	I	20	--	--	--	5-17-2000	449	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Jefferson Davis Parish—Continued												
									6-08-2000	450	--	--
									5-03-2001	454	442	48
									3-06-2002	467	--	--
									6-10-2002	452	--	--
JD-176	301536	924405	112CHCTU	I	--	290	--	--	4-24-2000	888	--	--
									7-31-2000	857	--	--
JD-176	301536	924405	112CHCTU	I	--	290			8-10-2000	858	--	--
									9-04-2000	849	--	--
									10-02-2000	857	--	--
									3-02-2001	874	--	--
									4-02-2001	867	--	--
									5-08-2001	848	--	--
									7-05-2001	846	--	--
									8-25-2001	862	--	--
JD-241	301913	925848	112CHCTU	I	25	275	195	275	4-22-2001	554	--	--
JD-352	302314	925713	112CHCT	I	30	329	--	--	4-21-2000	259	--	--
									5-30-2000	259	--	--
JD-447	302050	925645	112CHCT	I	--	262	--	--	3-06-2001	318	--	--
									4-05-2001	317	--	--
									5-07-2001	321	--	--
									5-25-2001	320	--	--
									7-22-2001	325	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Jefferson Davis Parish—Continued												
									4-22-2002	344	--	--
									5-06-2002	339	--	--
									5-14-2002	341	--	--
									6-05-2002	336	--	--
									3-04-2003	337	--	--
JD-469	300845	924313	112CHCTU	I	15	276	196	276	2-25-2001	615	--	--
JD-469	300845	924313	112CHCTU	I	15	276			4-06-2001	613	--	--
									5-22-2001	614	--	--
									6-30-2001	616	--	--
									8-24-2001	623	--	--
JD-491	300508	924056	112CHCTU	P	10	377	326	377	3-15-2000	701	693	99
									9-13-2000	713	696	100
									3-09-2001	705	696	99
									9-19-2001	712	695	98
									4-09-2002	711	690	99
									9-13-2002	712	680	96
									3-28-2003	717	692	98
JD-493	302509	925321	112CHCT	I	37.95	220	160	220	5-25-2001	245	--	--
									6-06-2002	245	226	22
JD-499	301752	924009	112CHCTU	I	30	250	190	250	5-16-2001	448	438	49
JD-523	301550	924514	112CHCTU	I	25	311	229.58	311	4-24-2000	466	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Jefferson Davis Parish—Continued												
JD-650	301350	924411	112CHCTU	I	22	263	183	263	4-24-2000	437	--	--
JD-727	300552	924559	112CHCTU	I	15	327.5	247.04	327.5	5-02-2001	530	--	--
									5-24-2001	526	--	--
JD-751	300547	924426	112CHCTU	I	10	193	133	193	5-03-2001	606	604	68
									6-07-2002	578	596	66
JD-772	301354	924455	112CHCTU	I	27	340	259	340	5-16-2001	465	456	50
									6-07-2002	449	453	49
JD-817	301352	925614	112CHCTU	I	20	296	227	296	5-24-2000	779	--	--
									6-26-2000	982	--	--
									2-20-2001	959	--	--
									4-16-2001	982	--	--
JD-860	301242	925920	112CHCTU	I	26	275	215	275	4-27-2000	1,290	--	--
									5-16-2000	1,290	--	--
									4-02-2001	1,050	--	--
									4-24-2001	1,060	--	--
									5-22-2001	1,090	--	--
									6-20-2001	1,070	--	--
									8-30-2001	1,060	--	--
									2-15-2002	1,090	--	--
									3-18-2002	1,170	--	--
									6-01-2002	1,070	--	--
									4-08-2003	1,060	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Jefferson Davis Parish—Continued												
									4-29-2003	1,120	1,100	160
JD-867	301126	924801	112CHCTU	I	16	202	142	202	6-06-2000	451	--	--
									7-13-2000	422	--	--
JD-871	300604	924850	112CHCTU	I	9	200	140	200	5-18-2000	540	--	--
									6-09-2000	542	--	--
									5-03-2001	538	536	57
JD-UR002	300616	924631	--	I	20	--	--	--	5-18-2000	632	--	--
JD-UR002	300616	924631	--	I	20	--			5-24-2000	631	--	--
									6-13-2000	618	--	--
									7-18-2000	616	--	--
									7-31-2000	616	--	--
									8-15-2000	620	--	--
									4-11-2001	604	--	--
									5-03-2001	610	611	68
JD-UR006	301203	925715	--	I	16	--	--	--	9-12-2000	1,030	--	--
									10-19-2001	1,030	--	--
									9-15-2002	1,080	--	--
JD-UR008	301701	925903	--	I	33	--	--	--	2-22-2001	1,140	--	--
									4-08-2001	1,120	--	--
JD-UR009	301724	930111	--	I	26	--	--	--	4-21-2000	959	--	--
									5-30-2000	969	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Jefferson Davis Parish—Continued												
JD-UR011	301000	924807	--	I	13	--	--	--	6-06-2000	456	--	--
JD-UR012	301222	924747	--	I	16	--	--	--	6-06-2000	398	--	--
									7-17-2000	391	--	--
JD-UR013	301159	924630	--	I	20	--	--	--	6-06-2000	456	--	--
									7-07-2000	447	--	--
JD-UR014	301852	925724	--	I	--	--	--	--	4-06-2001	514	--	--
									4-15-2001	571	--	--
									4-27-2001	516	--	--
JD-UR014	301852	925724	--	I	--	--			5-11-2001	516	--	--
									5-26-2001	622	--	--
									4-29-2002	653	--	--
									5-11-2002	663	--	--
									5-15-2002	626	--	--
									6-17-2002	565	--	--
									8-11-2002	589	--	--
JD-UR015	301700	925903	--	I	33	--	--	--	5-14-2000	1,310	--	--
									5-30-2000	1,300	--	--
JD-UR017	300409	925222	--	I	7	--	--	--	5-02-2001	536	--	--
									5-24-2001	550	--	--
JD-UR018	301725	930111	--	I	26	--	--	--	5-19-2000	969	--	--
									5-03-2001	957	945	180
JD-UR019	301747	930020	--	I	33	--	--	--	5-19-2000	918	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Jefferson Davis Parish—Continued												
									5-03-2001	812	797	150
JD-UR020	301708	930048	--	I	33	--	--	--	5-19-2000	828	--	--
JD-UR022	301836	925648	--	I	--	--	--	--	5-14-2001	435	--	--
									5-26-2001	447	--	--
									8-11-2002	472	--	--
									4-29-2002	480	--	--
									5-11-2002	481	--	--
									5-25-2002	465	--	--
Lafayette Parish												
Lf-524	300605	915935	112CHCTU	P	25	174	141	174	3-15-2000	325	327	6.8
									9-14-2000	295	289	7.8
									3-08-2001	282	309	7.1
									9-14-2001	320	326	7.3
									4-09-2002	310	301	7.8
									9-10-2002	307	299	8.4
St. Landry Parish												
SL-142	302732	921029	112CHCT	I	50	235	--	--	5-03-2002	--	497	23
SL-331	303200	921005	112CHCT	I	62	--	--	--	4-03-2002	--	541	16
SL-345	304911	920637	112ACFL	I	40	158	90	157.5	4-30-2003	1,220	1,200	100
SL-459	303151	922145	112CHCT	I	51	249	179	249	4-07-2001	609	--	--
									4-17-2001	606	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
St. Landry Parish—Continued												
									4-23-2001	599	--	--
									6-07-2002	613	590	42
SL-564	304845	921149	112ACFL	I	43	199	123	199	5-04-2001	806	--	--
SL-673	304832	921142	112ACFL	I	48	187	123	186	5-04-2001	773	--	--
SL-714	304827	921011	112CHCT	I	45	178	126	176	2-24-2001	1,100	--	--
									5-30-2001	1,070	--	--
									7-30-2001	1,080	--	--
									4-30-2003	1,110	1,110	95
SL-UR001	304920	921210	--	I	46	--	--	--	4-20-2001	791	--	--
									11-09-2001	514	--	--
SL-UR001	304920	921210	--	I	46	--			2-01-2002	--	597	18
SL-UR004	304416	920343	--	I	40	--	--	--	1-22-2001	1,800	--	--
									2-26-2001	1,710	--	--
									4-05-2001	1,810	--	--
									5-04-2001	1,810	--	--
									7-27-2001	1,800	--	--
SL-UR005	304555	915248	--	I	39	--	--	--	4-26-2001	657	--	--
SL-UR006	304807	915239	--	I	39	--	--	--	4-26-2001	910	--	--
									5-31-2001	821	--	--
SL-UR007	303459	920852	--	I	66	--	--	--	5-03-2002	--	526	15
St. Martin Parish												
SMn-109	301304	914240	112CHCTU	O	11.34	375	370	375	3-16-2000	1,200	1,130	110

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
St. Martin Parish—Continued												
									9-14-2000	1,190	1,150	120
									3-08-2001	1,180	1,150	110
									9-13-2001	1,170	1,150	120
									3-27-2002	1,190	1,150	120
									9-09-2002	1,190	1,150	120
									3-25-2003	1,200	1,150	120
St. Mary Parish												
SM-57U	294749	914023	112CHCTU	O	8.72	638	628	638	3-16-2000	1,140	1,120	180
									9-15-2000	1,170	1,130	190
									3-08-2001	1,150	1,120	180
SM-57U	294749	914023	112CHCTU	O	8.72	638			9-13-2001	1,140	1,120	190
									3-28-2002	1,160	1,120	190
									9-10-2002	1,170	1,130	180
									3-25-2003	1,180	--	--
Vermilion Parish												
Ve-170	300121	920057	112CHCTS	H	--	70	50	70	8-03-2000	300	277	4.2
Ve-312	300236	923910	112CHCTU	I	6	205	155	205	5-17-2001	703	--	--
									6-18-2001	709	--	--
Ve-384	300257	924011	112CHCTU	I	6	348	--	--	5-17-2001	630	--	--
									6-18-2001	645	--	--
Ve-425	295927	922755	112CHCTU	I	--	--	--	--	6-05-2000	831	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Vermilion Parish—Continued												
Ve-426	300000	922722	112CHCTU	I	--	354	--	--	6-12-2000	912	--	--
									6-13-2000	918	--	--
									6-15-2000	920	--	--
									8-28-2000	887	--	--
									8-29-2000	900	--	--
									5-30-2001	878	--	--
									5-31-2001	877	--	--
Ve-432	295835	922549	112CHCTU	I	--	350	--	--	4-26-2002	821	745	54
Ve-460	921655	295645	112CHCTU	I	9.78	300	--	--	5-05-2000	1,300	--	--
Ve-586	300240	920832	112CHCT	I	15.4	259	195	259	4-24-2002	618	595	30
Ve-637L	295345	921007	112CHCTU	O	4.06	243	233	243	3-16-2000	2,790	2,650	680
Ve-637L	295345	921007	112CHCTU	O	4.06	243			9-11-2000	2,750	2,700	690
									3-08-2001	2,750	2,680	700
									9-14-2001	2,760	2,710	690
									3-28-2002	2,800	2,740	720
									9-10-2002	2,860	2,750	700
									3-26-2003	2,890	2,770	730
Ve-639	293845	922649	112CHCTU	O	5.84	608	603	608	3-13-2000	1,550	1,500	280
									9-11-2000	1,550	1,510	300
									3-07-2001	1,510	1,500	290
									9-14-2001	1,520	1,500	300
									3-28-2002	1,540	1,540	300

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Vermilion Parish—Continued												
									9-10-2002	1,550	1,500	300
									3-26-2003	1,560	1,500	300
Ve-725	300315	921909	112CHCTU	I	14	300	--	--	4-24-2002	1,010	945	110
Ve-733	300537	921801	112CHCTU	I	15	297	190.67	297.33	4-24-2002	--	749	69
Ve-1081	295947	922310	112CHCTU	I	10	190	160	190	4-26-2002	726	688	37
Ve-1123	300351	923108	112CHCTU	I	10	175	--	--	5-16-2001	--	721	42
Ve-1152	300501	921534	112CHCTU	I	10	235	195	235	4-24-2002	--	548	18
Ve-UR001	295951	922913	--	I	6	--	--	--	6-13-2000	589	--	--
									8-18-2000	601	--	--
									9-19-2000	593	--	--
									5-10-2001	823	802	46
Ve-UR002	300039	923232	--	H	--	--	--	--	5-09-2000	883	--	--
									6-06-2000	882	--	--
									4-01-2001	856	--	--
									5-02-2001	881	--	--
									5-10-2001	894	875	66
									5-29-2001	862	--	--
									7-02-2001	887	--	--
Ve-UR003	300129	921243	--	I	23	--	--	--	6-03-2000	794	--	--
									6-17-2000	772	--	--
									7-03-2000	755	--	--

Table 3. Selected data for wells in the Chicot aquifer system or the Atchafalaya aquifer in southwestern Louisiana, including specific conductance values and chloride concentrations, 2000-03.—Continued

[NAD 27, North American Datum of 1927; NGVD 29, National Geodetic Vertical Datum of 1929; aquifer code: 112ACFL, Atchafalaya aquifer; 112CHCT, massive sand; 112CHCTU, upper sand; 112CHCTS, shallow sand; 11202LC, "200-foot" sand; and 11205LC, "500-foot" sand. Primary use of well: H, domestic; I, irrigation; N, industry; O, observation; and P, public supply. --, no data]

Well number	Latitude (NAD 27)	Longitude (NAD 27)	Aquifer code	Primary use of well	Altitude of land surface (feet relative to NGVD 29)	Depth of well (feet)	Depth to top of screen (feet)	Depth to bottom of screen (feet)	Date sampled	Field specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Laboratory specific conductance (microsiemens per centimeter at 25 degrees Celsius)	Chloride concentration (milligrams per liter)
Vermilion Parish—Continued												
									7-15-2000	752	--	--
									8-15-2000	717	--	--
Ve-UR004	300246	921344	--	I	26	--	--	--	6-07-2000	681	--	--
									6-20-2000	687	--	--
									7-07-2000	669	--	--
									8-14-2000	666	--	--
Ve-UR005	295705	921601	--	I	13	--	--	--	6-14-2000	865	--	--
									6-28-2000	838	--	--
									7-15-2000	842	--	--
									7-28-2000	833	--	--
									8-14-2000	835	--	--
Ve-UR007	300239	924019	--	I	6	--	--	--	5-17-2001	654	--	--
Ve-UR007	300239	924019	--	I	6	--			6-18-2001	660	--	--
Ve-UR010	300524	920734	--	I	26	--	--	--	5-10-2001	595	584	27
Ve-UR011	300233	922650	--	I	10	--	--	--	4-26-2002	957	872	99
Ve-UR012	295644	921026	--	I	16	--	--	--	5-08-2002	--	932	180