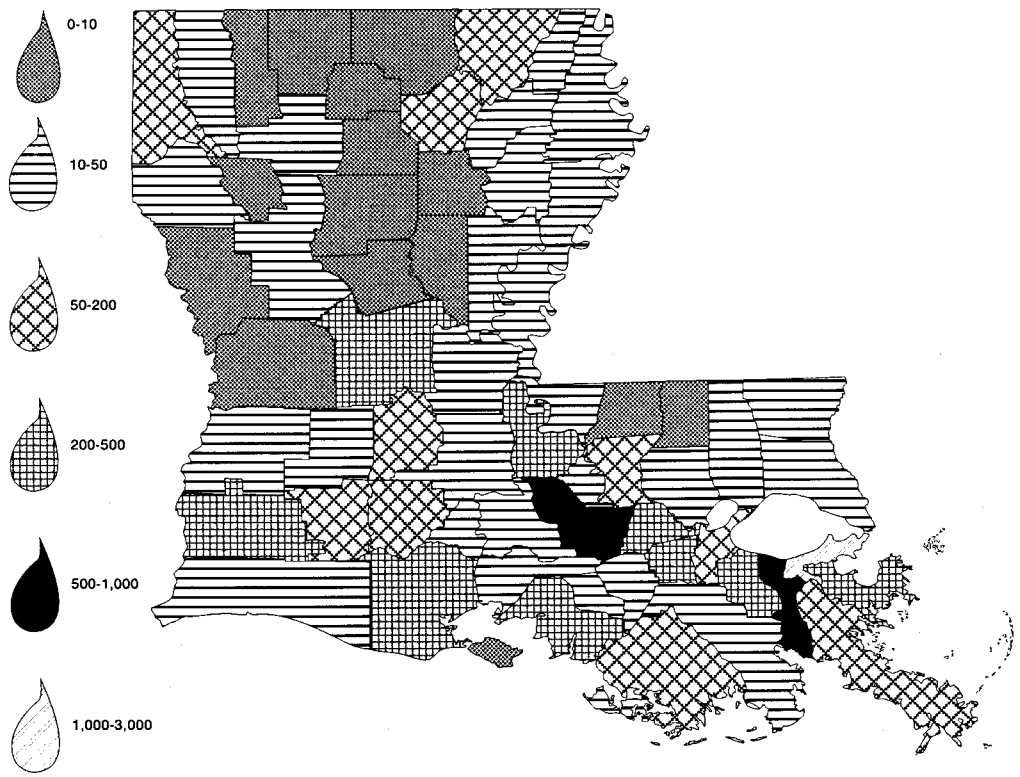
Water Use In Louisiana, 1995

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
Water Resources Special Report No. 11



In million gallons per day

STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
PUBLIC WORKS AND FLOOD CONTROL DIRECTORATE
WATER RESOURCES SECTION
in cooperation with
U.S. GEOLOGICAL SURVEY

1996

STATE OF LOUISIANA

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

PUBLIC WORKS AND FLOOD CONTROL DIRECTORATE

WATER RESOURCES SECTION

In cooperation with the

U.S. DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY

WATER RESOURCES

SPECIAL REPORT

NO. 11

WATER USE IN LOUISIANA, 1995

By

John K. Lovelace and Penny M. Johnson

U.S. GEOLOGICAL SURVEY

Published by

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

Baton Rouge, Louisiana

1996

STATE OF LOUISIANA
M.J. "MIKE" FOSTER, JR., Governor

DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT

FRANK M. DENTON, Secretary

PUBLIC WORKS AND FLOOD CONTROL DIRECTORATE

Curtis G. Patterson, Director

WATER RESOURCES SECTION

Zahir "Bo" Bolourchi, Chief

Cooperative project with the

U.S. DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY

Gordon P. Eaton, Director

For additional information write to:

Edward H. Martin
District Chief
U.S. Geological Survey
3535 S. Sherwood Forest Blvd., Suite 120
Baton Rouge, LA 70816

Telephone: (504) 389-0281

Zahir "Bo" Bolourchi, P.E.
Chief, Water Resources Section
Louisiana Department of
Transportation and Development
P.O. Box 94245
Baton Rouge, Louisiana 70804-9245

Telephone: (504) 379-1434

CONTENTS

FIGURES

TABLES

CONVERSION FACTORS

Multiply	By	To obtain
acre	4,047	square meter
acre-foot (acre-ft)	0.00123	cubic hectometer
gallon per day (gal/d)	0.003785	cubic meter per day
mile (mi)	1.609	kilometer
million gallons per day (Mgal/d)	3,785	cubic meters per day
square mile (mi^2)	2.590	square kilometer

WATER USE IN LOUISIANA, 1995

By John K. Lovelace *and* Penny M. Johnson

ABSTRACT

In 1995, approximately 9,800 Mgal/d (million gallons per day) of water was withdrawn from ground- and surface-water sources in Louisiana. Total ground-water withdrawals were 1,300 Mgal/d, and total surface-water withdrawals were 8,600 Mgal/d. From 1990 to 1995, ground-water withdrawals in Louisiana decreased by 3.1 percent, and surface-water withdrawals increased by 6.7 percent. Total water withdrawals in Louisiana increased by 5.3 percent from 1990 to 1995.

Water withdrawal totals in 1995 for various categories of use were as follows: public supply, 650 Mgal/d; industry, 2,600 Mgal/d; power generation, 5,500 Mgal/d; rural domestic, 39 Mgal/d; livestock, 9.0 Mgal/d; rice irrigation, 710 Mgal/d; general irrigation, 62 Mgal/d; and aquaculture, 320 Mgal/d.

Forty-three percent (550 Mgal/d) of all ground water withdrawn was from the Chicot aquifer system, and 19 percent (240 Mgal/d) was withdrawn from the Mississippi River alluvial aquifer. About 72 percent (6,200 Mgal/d) of all surface water withdrawn was from the Mississippi River.

INTRODUCTION

Louisiana has a total land and water area of 48,000 mi^2, and abundant water resources are throughout the State. Every day, large amounts of water are withdrawn from natural sources for public supply, industrial, power generation, rural domestic, livestock, irrigation, and aquaculture uses. Water-use data are essential to appraise effects of present use and plan future use of Louisiana's water resources. The U.S. Geological Survey, in cooperation with the Louisiana Department of Transportation and Development, has collected and published water withdrawal and use information on a 5-year basis since 1960.

Purpose and Scope

This report presents data from a 1995 inventory of water withdrawals in Louisiana. The report presents information on withdrawals from ground-water and surface-water sources for use in public supply, industry, power generation, rural domestic, livestock, irrigation, and aquaculture for each parish in Louisiana. Included in the report are tables of water use by category, parish, aquifer, and surface-water basin. This report also presents trends in Louisiana water withdrawals based on data from previous 5-year reports since 1960.

Data in this report, with the exception of irrigation data, are based on water withdrawals made during the 1994 and 1995 calendar years. To facilitate the timely completion of this report, irrigation data from the 1994 growing season were used. The data are limited by the accuracy of the information reported by the individual facilities or users. All water-use data presented in this report are on file at the U.S. Geological Survey.

Presentation of Data

The 1995 water-use data in this report are aggregated by category of use, parish, water source, aquifer, and surface-water basin. The information is presented in several formats to offer a complete description of water use in Louisiana. The section entitled "Water Use by Category" describes the 1995 water withdrawals for public supply, industry, power generation, rural domestic, livestock, irrigation, and aquaculture.

Following this section are graphical and tabular data for each parish, major aquifer, and surface-water basin in Louisiana. Data for the 64 parishes in Louisiana (fig. 1) are presented by parish in alphabetical order. Water-use data also are presented for 13 major aquifers or aquifer systems and 10 surface-water basins in Louisiana. The aquifers and aquifer systems in Louisiana for which ground-water withdrawals by aquifer are reported are presented in figure 2. The aquifers are listed in order from shallowest to deepest (fig. 2). The report also contains sections on total water withdrawals and trends in water withdrawals in Louisiana since 1960.

Totals in the text are rounded to 2 significant figures. Numbers and totals in tables and figures are rounded to 2 decimal places. All calculations of percentages were made using numbers rounded to 2 decimal places. Tabulation totals in various sections of the report may differ slightly due to rounding. For example, as stated in the section "Rice Irrigation," withdrawals for rice irrigation totaled approximately 710 Mgal/d, but using the rounded total for each source (ground water--420 Mgal/d and surface water--280 Mgal/d) the sum is 700 Mgal/d.

Previous Reports

The previous 5-year reports that have been published are as follows: Snider and Forbes (1961), Bieber and Forbes (1966), Dial (1970), Cardwell and Walter (1979), Walter (1982), Lurry (1987), and Lovelace (1991). In addition, Lurry (1985) and Stuart and Lurry (1988) discuss specific information about public water supplies in Louisiana.

Acknowledgments

This report was made possible through the assistance and cooperation of personnel at public-supply, industrial, and power-generation facilities throughout Louisiana. Special thanks are given to Zahir "Bo" Bolourchi, Chief, Water Resources Section, Louisiana Department of Transportation and Development, who contributed substantially to the design and format of the report. Don C. Dial, Director, Capital Area Ground Water Conservation Commission, provided information on the five-parish area under its jurisdiction. Larry McNease, Louisiana Department of Wildlife and Fisheries, provided information on aquaculture. The Louisiana Cooperative Extension Service specialists and County Agents provided livestock, irrigation, and aquaculture information. The U.S. Consolidated Farm Service Agency assisted with the collection of representative irrigation information from Louisiana farmers. The Sabine River Compact Administration provided information for the Sabine River-Toledo Bend Reservoir System. The U.S. Farmers Home Administration and the Louisiana Rural Water Association provided lists of rural water-supply facilities. The Louisiana Department of Health and Hospitals provided extensive lists of public and bottled water suppliers.

DATA COLLECTION

Information for public-supply, industrial, and power-generation facilities was primarily obtained directly from the facilities. A master list was created by combining lists from several sources. These lists included public and bottled water suppliers from the Louisiana Department of Health and Hospitals, rural water suppliers from the U.S. Farmers Home Administration and the Louisiana Rural Water Association, and the "1994 Directory of Louisiana Manufacturers" (Louisiana Department of Economic Development, 1994).

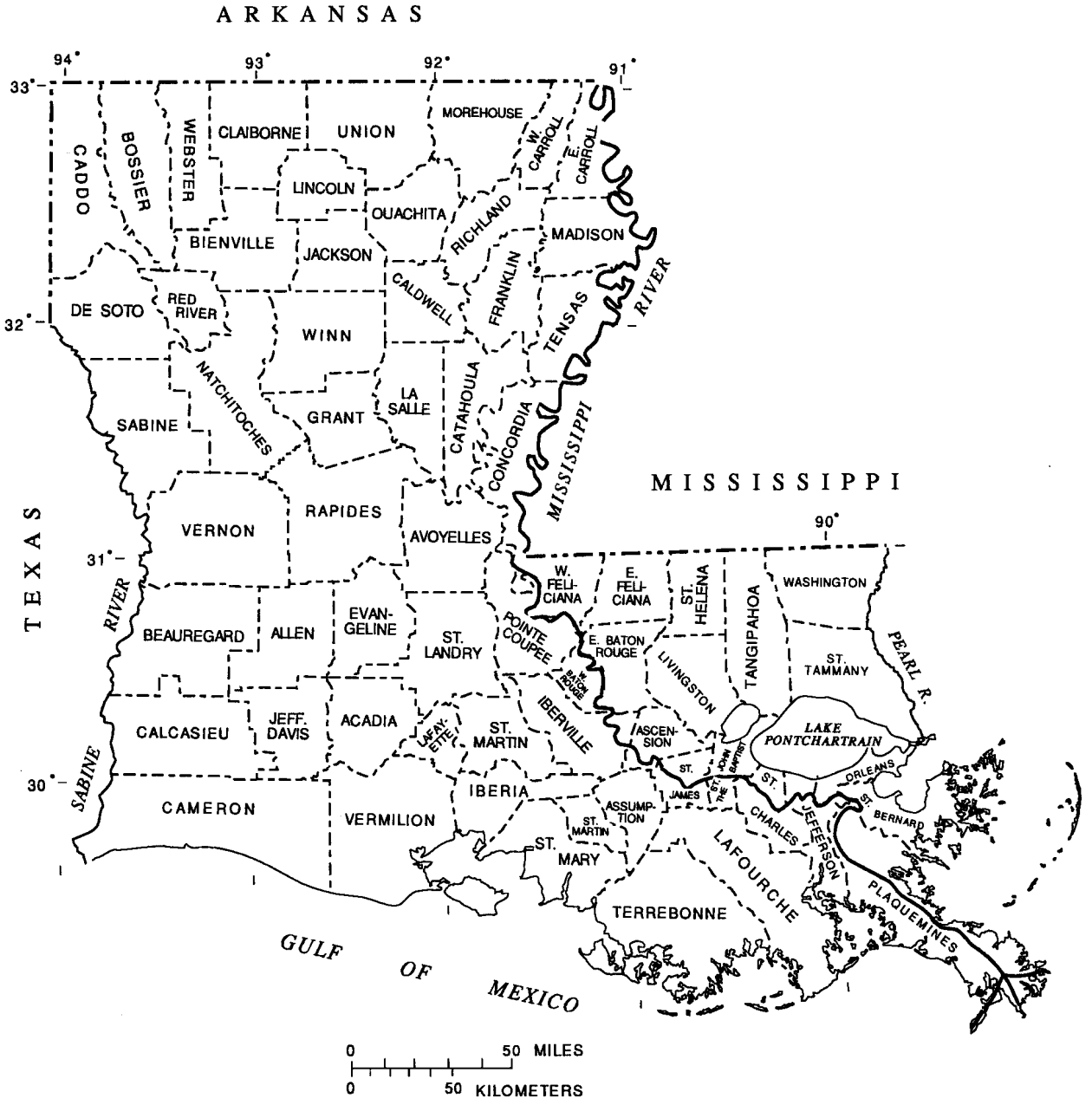


Figure 1. Parishes in Louisiana.

System	Series	Stratigraphic Unit		Hydrogeologic Unit: Northern Louisiana — Aquifer or confining unit	Central and southwestern Louisiana — Aquifer system or confining unit	Central and southwestern Louisiana — Aquifer or confining unit: Lake Charles area	Central and southwestern Louisiana — Aquifer or confining unit: Rice growing area	Southeastern Louisiana — Aquifer system or confining unit[1]	Southeastern Louisiana — Aquifer or confining unit[2]: Baton Rouge area	Southeastern Louisiana — Aquifer or confining unit[2]: St. Tammany, Tangipahoa, and Washington Parishes	Southeastern Louisiana — Aquifer or confining unit[2]: New Orleans area and lower Mississippi River Parishes[3]
Quaternary	Pleistocene	Red River alluvial deposits Mississippi River alluvial deposits Northern Louisiana terrace deposits Unnamed Pleistocene deposits		Red River alluvial aquifer or surficial confining unit Mississippi River alluvial aquifer or surficial confining unit Upland terrace aquifer or surficial confining unit	Chicot aquifer system or surficial confining unit	"200-foot" sand "500-foot" sand "700-foot" sand	Upper sand unit Lower sand unit	Chicot equivalent aquifer system or surficial confining unit	Mississippi River alluvial aquifer or surficial confining unit Shallow sand "400-foot" sand "600-foot" sand	Upland terrace aquifer Upper Ponchatoula aquifer	Gramercy aquifer Norco aquifer Gonzales-New Orleans aquifer "1,200-foot" sand
Tertiary	Pliocene — ? —	Fleming Formation	Blounts Creek Member	Units absent	Evangeline aquifer or surficial confining unit			Evangeline equivalent aquifer system or surficial confining unit	"800-foot" sand "1,000-foot" sand "1,200-foot" sand "1,500-foot" sand "1,700-foot" sand	Lower Ponchatoula aquifer Big Branch aquifer Kentwood aquifer Abita aquifer Covington aquifer Slidell aquifer	
	Miocene		Castor Creek Member		Castor Creek confining unit			Unnamed confining unit	"2,000-foot" sand "2,400-foot" sand "2,800-foot" sand	Tchefuncte aquifer Hammond aquifer Amite aquifer Ramsay aquifer Franklinton aquifer	
			Williamson Creek Member Dough Hills Member Carnahan Bayou Member		Jasper aquifer system or surficial confining unit	Williamson Creek aquifer Dough Hills confining unit Carnahan Bayou aquifer		Jasper equivalent aquifer system or surficial confining unit			
			Lena Member		Lena confining unit			Unnamed confining unit			
	— ? — Oligocene	Catahoula Formation			Catahoula aquifer			Catahoula equivalent aquifer system or surficial confining unit			
	Oligocene	Vicksburg Group, undifferentiated		Vicksburg-Jackson confining unit	No freshwater occurs in deeper units						
	Eocene	Jackson Group, undifferentiated									
		Claiborne Group	Cockfield Formation	Cockfield aquifer or surficial confining unit							
			Cook Mountain Formation	Cook Mountain aquifer or confining unit							
			Sparta Sand	Sparta aquifer or surficial confining unit							
			Cane River Formation	Cane River aquifer or confining unit							
			Carrizo Sand — ? —	Carrizo-Wilcox aquifer or surficial confining unit							
	Paleocene	Wilcox Group, undifferentiated									
		Midway Group, Undifferentiated		Midway confining unit							

[1]The interval containing the four aquifer systems is called the Southern Hills aquifer system.
[2]Clay units separating aquifers in southeastern Louisiana are discontinuous, unnamed, and not listed herein.
[3]The interval containing the four aquifers is called the New Orleans aquifer system.

Modified from Lovelace and Lovelace, 1995.

Figure 2. Hydrogeologic units in Louisiana.

Population data and acreage data were compiled from various sources. Parish and State population estimates for 1994 were obtained from the Center for Business and Economic Research, Louisiana Tech University. Population data used for livestock estimates were obtained from the Louisiana Cooperative Extension Service. For consistency and comparability with past water-use reports, the per capita use rates for livestock from previous reports were used to estimate withdrawals for livestock. Population data used for rural domestic use were obtained from a report by the U.S. Bureau of Census (1993). A per capita rural domestic water-use estimate of 80 gallons per person per day (Lurry, 1987) was used to estimate total rural domestic use.

Representative data for irrigation, collected by the U.S. Consolidated Farm Service Agency directly from farmers, were used to estimate total withdrawals based on crop acreage inventories made by the Louisiana Cooperative Extension Service. Aquaculture acreage and application rates were obtained from the Louisiana Cooperative Extension Service and the Louisiana Department of Wildlife and Fisheries.

The information for public-supply, industrial, and power-generation facilities was collected on a site-specific basis; that is, the location of the facility was known and recorded with the withdrawal data. The information for rural domestic, livestock, irrigation, and aquaculture withdrawals was estimated on a parish-wide basis, without the exact location of each user known. This type of information is referred to as aggregated withdrawals and was divided into the appropriate aquifers and surface-water basins with the use of well registration inventories and information from Louisiana Cooperative Extension Service agents in each parish. Estimated-use rates were used to estimate withdrawal rates for some of the aggregated data when information was unavailable. Withdrawal estimates also were made for a few facilities when actual withdrawal information was unavailable.

Information obtained was entered into a water-use data base at the U.S. Geological Survey. Withdrawal data were converted to millions of gallons per day before entering into the data base. Seasonal withdrawal, such as for irrigation and sugar cane processing, was prorated for the entire year. All withdrawal information in this report was retrieved from the data base.

WATER USE BY CATEGORY

Water use is defined in this report as water withdrawn or diverted from a ground- or surface-water source to be used for public supply, industry, power generation, rural domestic, livestock, irrigation, and aquaculture. The following definitions are included to clarify water-use terms discussed in this report:

Public-supply withdrawal refers to water withdrawn and delivered to a group of users by public and private water suppliers. The water is used for a variety of purposes such as domestic, commercial, industrial, and public water use.

Industrial withdrawal refers to water withdrawn for industrial purposes such as process and production, boiler feed, air conditioning, cooling, sanitation, washing, and steam generation.

Power-generation withdrawal refers to water withdrawn for thermoelectric power-generation purposes such as cooling, sanitation, washing, and steam generation. Use of water for hydroelectric power generation is considered an instream use and not a withdrawal. Therefore, hydroelectric power-generation use is not included in surface-water withdrawals in this report, but is reported as an instream use.

Once-through cooling refers to the one-time use of water for cooling and other industrial uses. Water used in this manner is usually returned to the source and little, if any, water is consumed.

Rural-domestic withdrawal refers to water withdrawn by a person or family for personal home use. These users are often in rural areas where public supplies are unavailable.

Livestock withdrawal refers to water withdrawn for use in the production of cattle, horses, sheep, swine, poultry, and other animals. The water can be used for livestock consumption, sanitation, and other on-farm needs.

Irrigation refers to any withdrawal of water for application to vegetation. This includes application to field crops such as rice, corn, and cotton; fruit crops; and nurseries, as well as special applications such as the watering of golf courses and sporting fields.

Aquaculture withdrawal refers to the withdrawal of water for fish, crawfish, and alligator farming. Instream fish farming is not included in this category.

Instream use refers to the use of surface water without removal from its natural environment. Common instream uses include hydroelectric power generation, fishing, and navigation. Instream use is not included in surface water totals of this report because the water is not withdrawn.

Miscellaneous streams refer to surface-water sources from which water is withdrawn for the aggregated use categories, livestock, irrigation, and aquaculture, when specific water-body sources were not identified. The term, miscellaneous streams, also is used to indicate sources such as streams, lakes, bayous, and canals for which withdrawals would be insignificant if listed individually.

Standard Industrial Classification (SIC) is the standard used by Federal agencies for the classification of establishments by type of activity in which they are engaged. The SIC was created by the U.S. Office of Management and Budget to facilitate comparisons of economic statistics by the various government agencies (Office of Management and Budget, 1987).

Public Supply

Approximately 3.8 million people, 89 percent of Louisiana's total population of 4.3 million in 1994, (Center for Business and Economic Research, Louisiana Tech University, written commun., 1995; U.S. Bureau of Census, 1993) used about 650 Mgal/d of water provided by public suppliers in 1995 (fig. 3). This water accounted for about 6.6 percent of the total water withdrawn in the State. The per capita use of this water was 170 gal/d. Of the 650 Mgal/d, about 300 Mgal/d came from ground-water sources, and about 340 Mgal/d came from surface-water sources. Of these 3.8 million people, 56 percent were supplied with water from a ground-water source, and 44 percent were supplied with water from a surface-water source.

All of the major aquifers and aquifer systems in Louisiana were used as sources of public-supply water. However, the chief sources of ground water were the Sparta aquifer in northern Louisiana, the Jasper aquifer system in central Louisiana, the Chicot aquifer system in southwestern Louisiana, and the Jasper equivalent and Evangeline equivalent aquifer systems in southeastern Louisiana.

The Mississippi River provided the largest source of surface water for public supplies; 240 Mgal/d of Mississippi River water were supplied primarily to parishes in southeastern Louisiana where ground-water supplies are limited or unavailable. Orleans Parish, with the largest parish population of 490,000 people (Center for Business and Economic Research, Louisiana Tech University, written commun., 1995), had the highest withdrawal, 120 Mgal/d, by public suppliers (fig. 4).

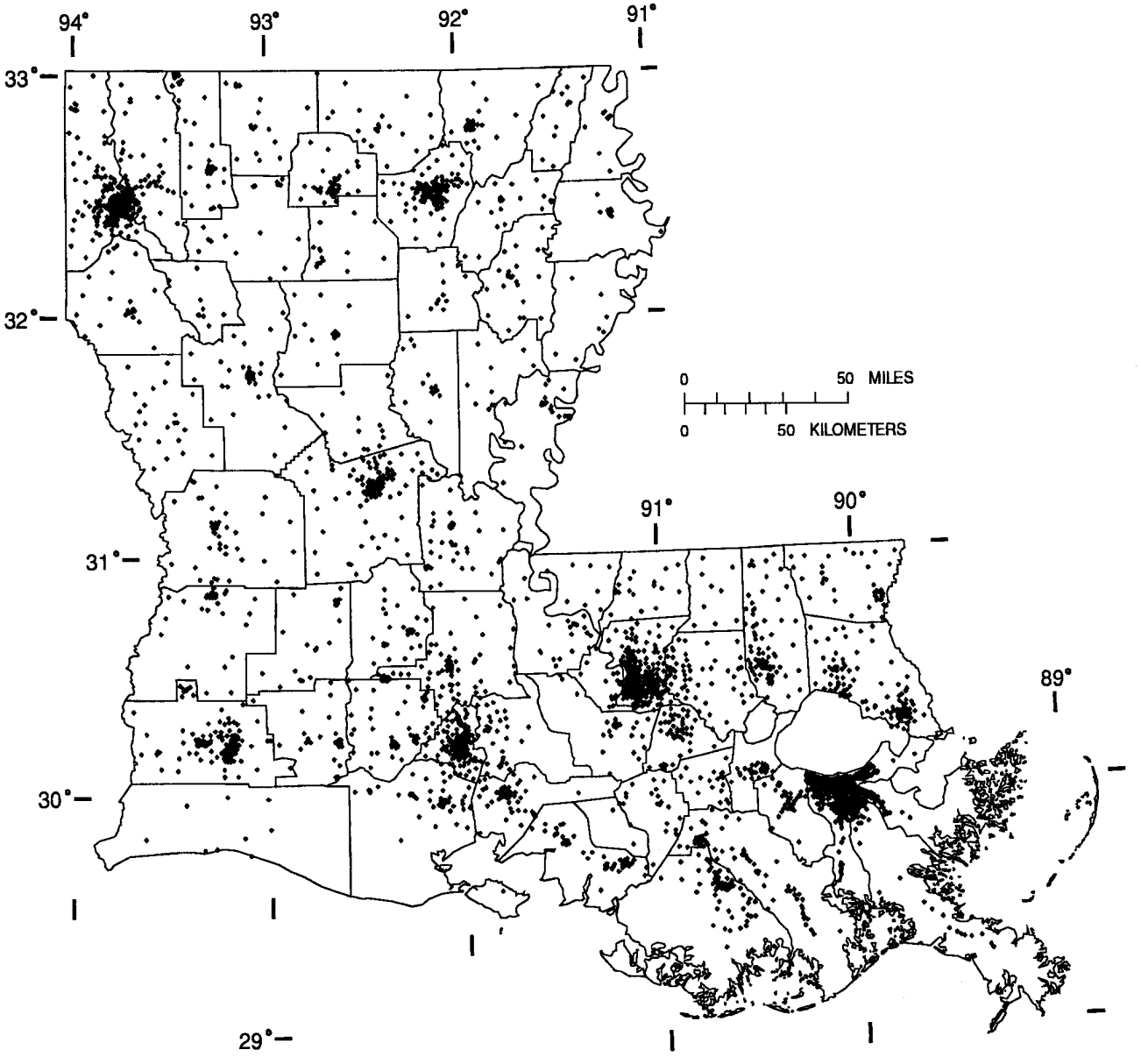


Figure 3. Louisiana population distribution, 1990; each dot represents 1,000 people within a census tract. (Source: compiled by the U.S. Geological Survey for U.S. Bureau of Census data.)

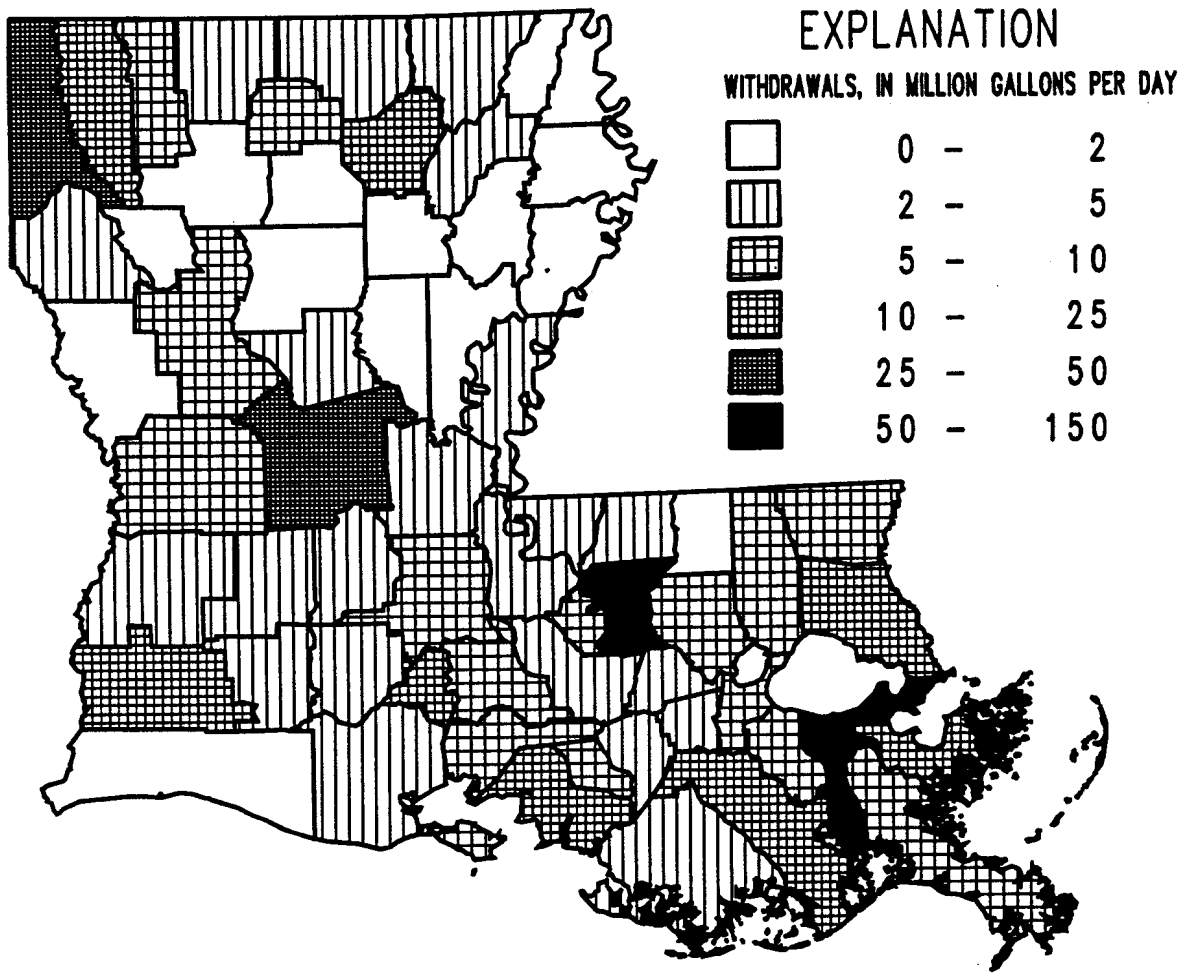


Figure 4. Public-supply water withdrawals in Louisiana by parish, 1995.

Industrial

Industry in Louisiana withdrew 2,600 Mgal/d of water in 1995, 310 Mgal/d from ground-water sources and 2,300 Mgal/d from surface-water sources. Industrial withdrawals in 1995 accounted for almost 26 percent of all withdrawals. However, most of the surface water withdrawn by industry was used for once-through cooling and was returned to its source after use. Chemical manufacturers withdrew 1,700 Mgal/d or 66 percent of total industrial withdrawals. Table 1 lists withdrawals in 1995 by SIC code for the major industrial groups.

Table 1: Water withdrawals in Louisiana by major industrial group, 1995

[Withdrawals are in million gallons per day. Dashes indicate withdrawals are less than or equal to 0.005 Mgal/d. Source of Standard Industrial Classification: Office of Management and Budget, 1987]

Standard Industrial Classification		Ground-water withdrawals	Surface-water withdrawals
13	Oil and gas extraction	1.50	0.16
14	Nonfuels/nonmetals mining	.40	1.44
20	Food products	22.12	39.58
24	Lumber	2.69	.24
26	Paper products	109.36	102.93
28	Chemicals	124.42	1,573.21
29	Petroleum refining	33.15	512.56
30	Rubber and plastics	3.79	---
32	Glass, clay, and concrete	1.28	12.84
33	Primary metals	1.95	34.25
34	Metal products	---	.73
37	Transportation equipment	5.12	---

The Chicot aquifer system provided 27 percent of the ground water and the Mississippi River provided about 78 percent of the surface water withdrawn by industry in Louisiana. Industrial withdrawals in Iberville Parish were the highest in the State, 510 Mgal/d, and accounted for 20 percent of all industrial withdrawals (fig. 5).

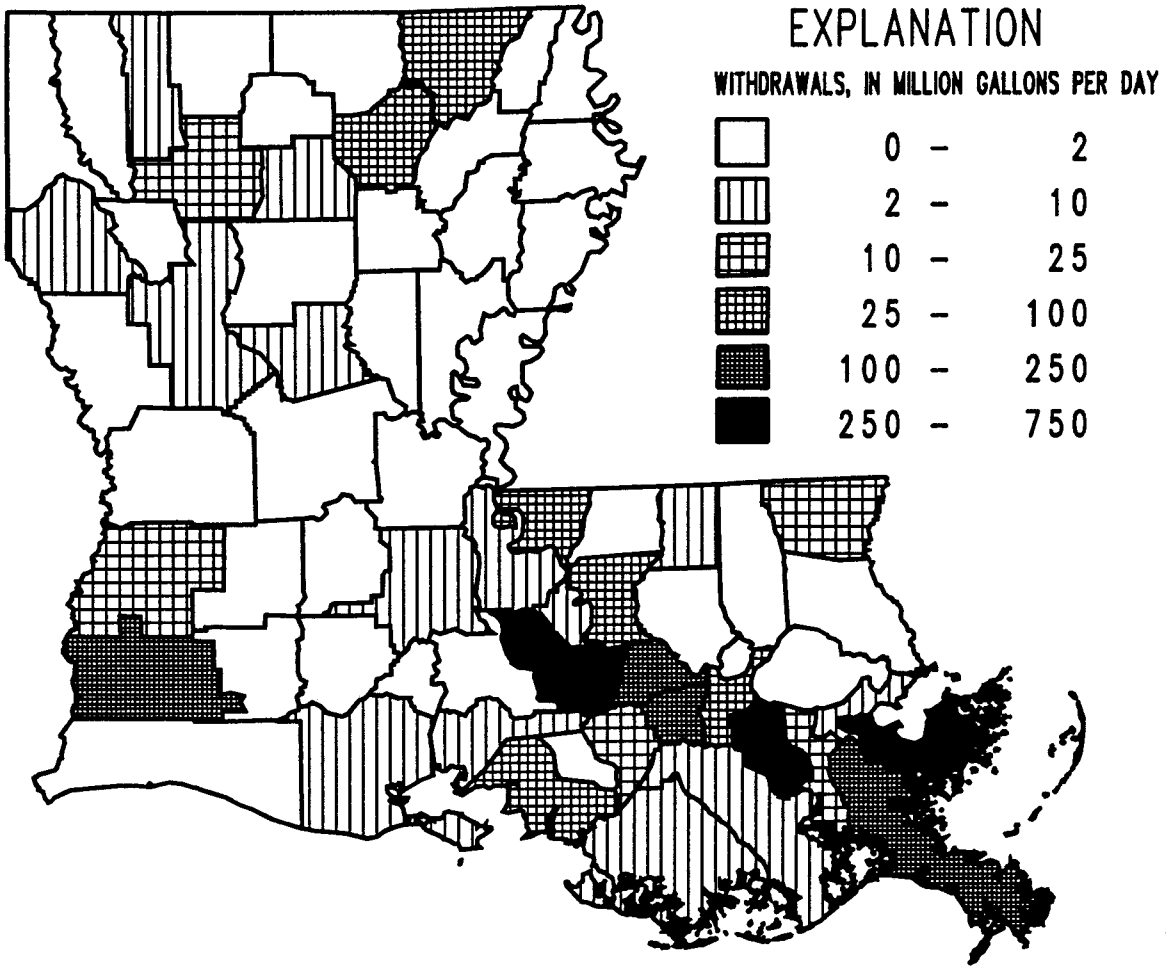


Figure 5. Industrial water withdrawals in Louisiana by parish, 1995.

Power Generation

Power-generation facilities withdrew approximately 5,500 Mgal/d, about 56 percent of all water withdrawn in 1995. Of this amount, only 31 Mgal/d came from ground-water sources. Seventy-six percent (4,100 Mgal/d) of the surface water withdrawn for power-generation purposes was obtained from the Mississippi River in southeastern Louisiana, 2,100 Mgal/d of which was withdrawn in St. Charles Parish (fig. 6). Most surface water withdrawn for power-generation purposes was, as in industry, used for cooling purposes and was returned to its source after use. Of the total water withdrawn for power generation, 31 Mgal/d of ground water and 4,400 Mgal/d of surface water were withdrawn for use in fossil-fueled plants; 3.3 Mgal/d of surface water were withdrawn for use in hydroelectric plants; and 0.07 Mgal/d of ground water and 1,000 Mgal/d of surface water were withdrawn for use in nuclear plants.

In 1995, 76,000 Mgal/d of water passed through Louisiana's two hydroelectric power plants. The larger of the two hydroelectric power plants is located at the Old River Control Structure near Tarbert Landing, Mississippi, and uses water from the Mississippi River. In 1995, an average of 74,000 Mgal/d passed through the plant's turbines.

The other hydroelectric power plant in Louisiana uses water impounded in the Toledo Bend Reservoir on the Louisiana-Texas border and releases the water through the turbines near Burkeville, Texas. Because the plant is located on the Louisiana-Texas border, one-half of the water used was counted in Louisiana's water-use inventory. In 1995, an average of 4,200 Mgal/d of water passed through the plant's turbines. Of this amount, 2,100 Mgal/d was counted as power-generation instream use for Louisiana. Hydroelectric power-generation instream use was not included in surface-water withdrawals in this report because the water was not withdrawn.

Rural Domestic

Approximately 11 percent of Louisiana's population, 490,000 people (Center for Business and Economic Research, Louisiana Tech University, written commun., 1995; U.S. Bureau of Census, 1993), using privately owned domestic wells, withdrew an estimated 39 Mgal/d of ground water for domestic use in 1995. For the purpose of this report, an average of 80 gallons per person per day was used to estimate withdrawals by the rural domestic portion of the population (Lurry, 1987). Little or no surface water is used for rural domestic purposes in Louisiana because suitable ground water generally is available that requires minimal treatment. Every major aquifer and aquifer system was used as a source for rural domestic water. St. Tammany Parish had the highest withdrawal rate of 5.0 Mgal/d (fig. 7)

Livestock

In 1995, livestock consumed approximately 9.0 Mgal/d of water supplied by individual ranchers and farmers. Of this total, 4.3 Mgal/d was ground water and 4.7 Mgal/d was surface water. Ground water used for livestock came from most of the major aquifers and aquifer systems. Surface water generally was supplied by small streams, canals, and private ponds. Union Parish had the highest livestock withdrawal rate of 0.6 Mgal/d (fig. 8). Livestock in Louisiana that required substantial amounts of water included cattle, horses, swine, sheep, and poultry. For the purpose of this report, estimates of livestock use rates were used to calculate water withdrawals for livestock. The rates used (in gallons per head per day) are milk cows, 20; other cattle, 10; horses, 10; swine, 3; sheep, 2; and poultry, 0.04 (D.L. Lurry, U.S. Geological Survey, written commun., 1990).

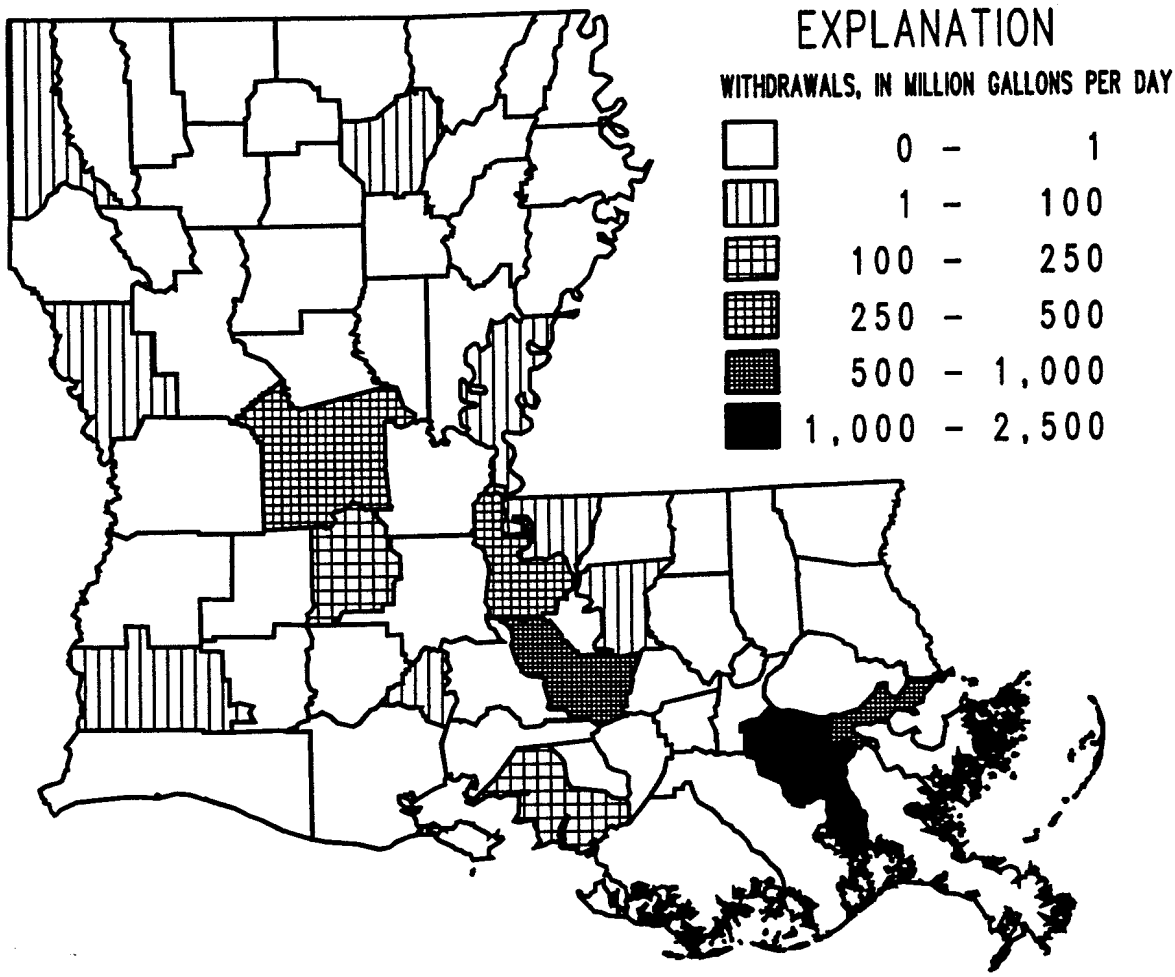


Figure 6. Power-generation water withdrawals in Louisiana by parish, 1995.

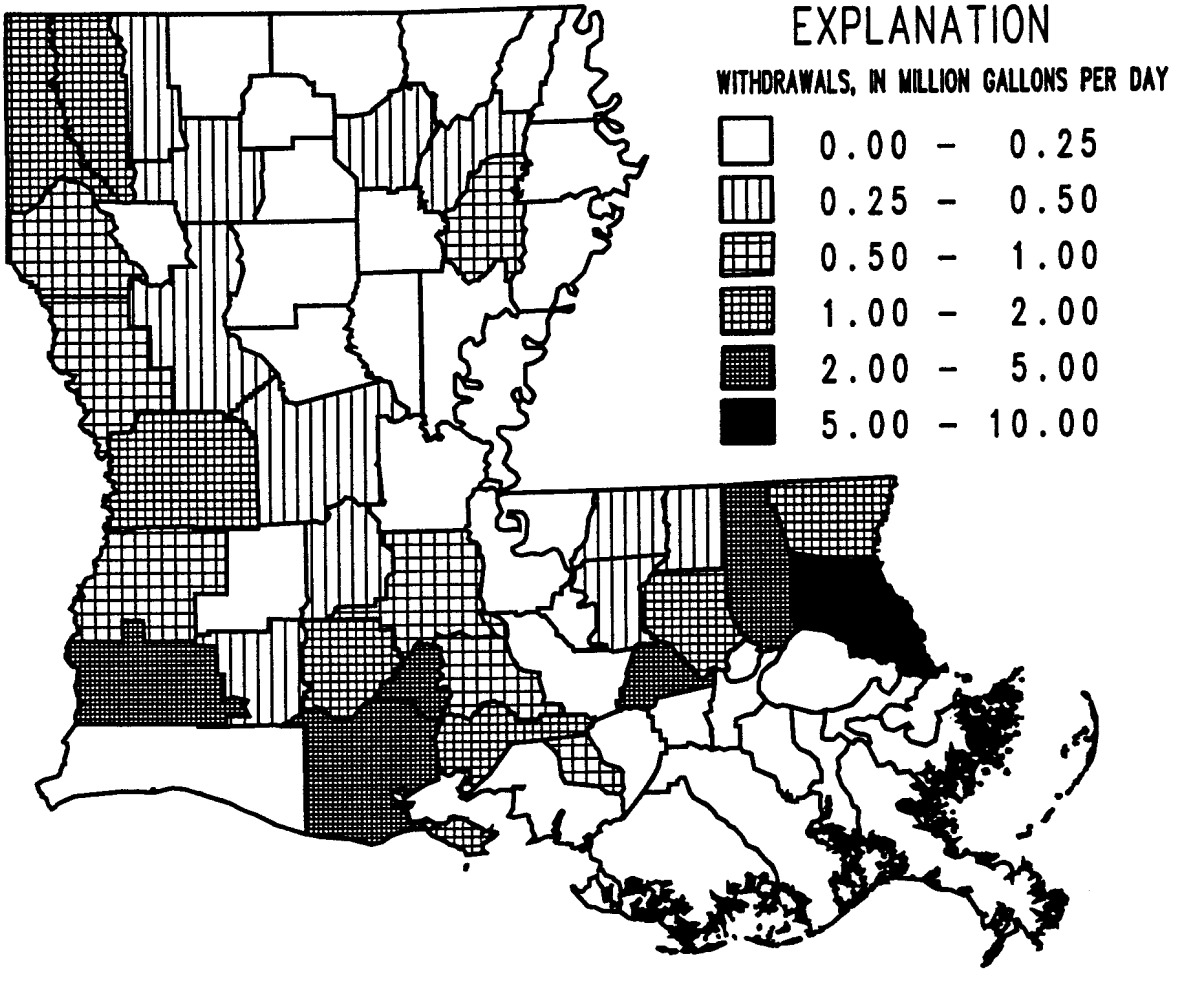


Figure 7. Rural-domestic water withdrawals in Louisiana by parish, 1995.

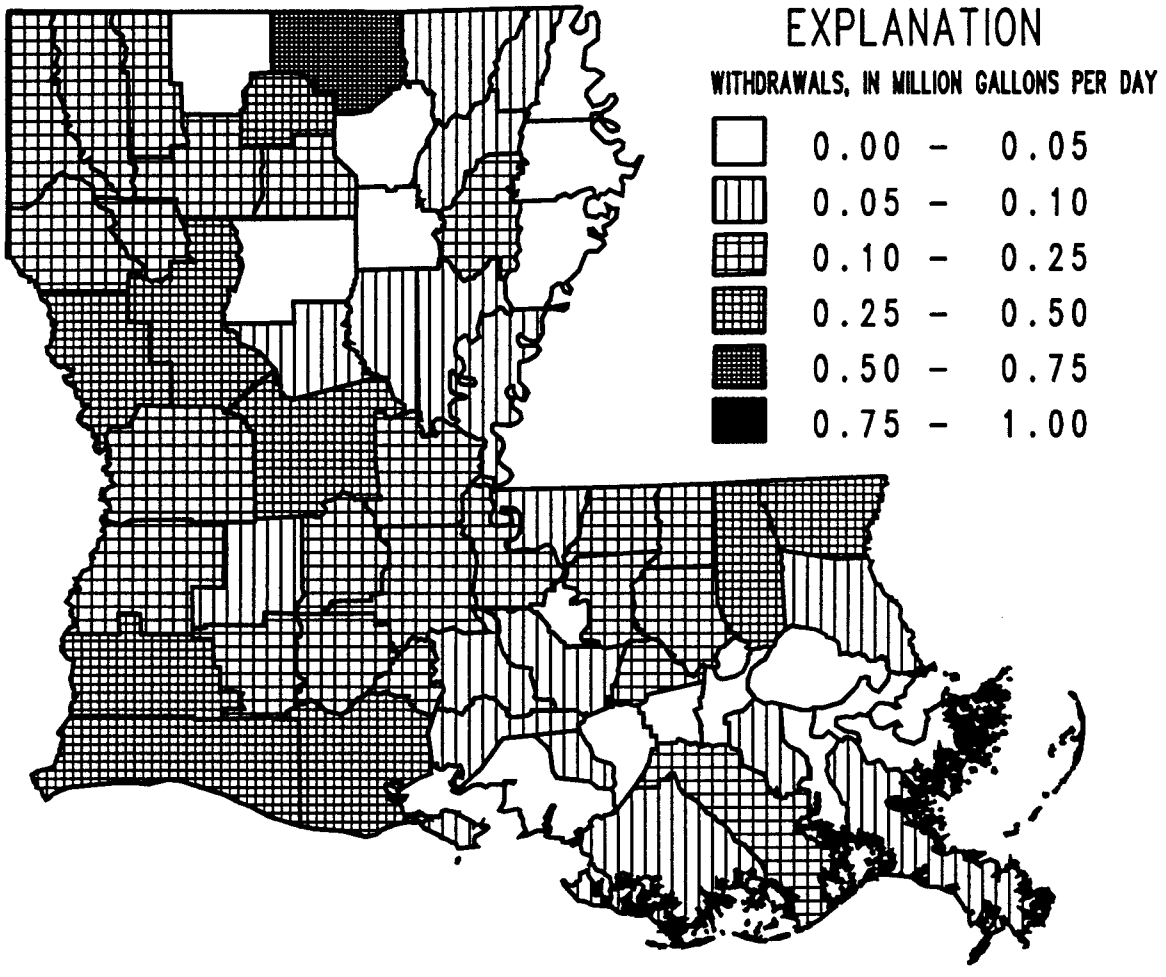


Figure 8. Livestock water withdrawals in Louisiana by parish, 1995.

Rice Irrigation

For purposes of this report, the amount and distribution of water used for rice irrigation in 1995 is assumed to be the same as that for 1994. In 1994, approximately 620,000 acres of rice were harvested in 30 parishes, mainly in southwestern and northeastern Louisiana (Louisiana Cooperative Extension Service, 1995). All rice grown in Louisiana is assumed to be irrigated. The average application rate in 1994 was about 1.3 acre-ft per acre. Rice farmers withdrew approximately 710 Mgal/d of water to irrigate their fields in 1994. Of the total, 420 Mgal/d was ground water and 280 Mgal/d was surface water.

The Chicot aquifer system in southwestern Louisiana supplied 74 percent of the ground water used for rice irrigation. In northeastern Louisiana, the Mississippi River alluvial aquifer provided 24 percent of the total ground water used for rice irrigation. Surface water is withdrawn from many streams, lakes, bayous, and canals in the rice growing areas. Rice farmers in Jefferson Davis Parish withdrew more ground water, 100 Mgal/d, and rice farmers in Vermilion Parish withdrew more surface water, 150 Mgal/d, than did farmers in any other parish. Vermilion Parish also had the highest total withdrawals for rice irrigation of 180 Mgal/d (fig. 9).

General Irrigation

As with rice irrigation, the amount and distribution of water used for general irrigation of crops other than rice, in 1995, is assumed to be the same as that reported for 1994. In 1994, farmers irrigated approximately 190,000 acres of crops other than rice (Louisiana Cooperative Extension Service, 1995). Crops with substantial amounts of irrigated acreage included cotton, soybeans, corn, sorghum, sod, sweet potatoes, and strawberries. Based on 1994 irrigation data, the average application rate for these crops was about 0.36 acre-ft per acre per year. Farmers withdrew approximately 62 Mgal/d for irrigation, of which 52 Mgal/d was ground water and 9.1 Mgal/d was surface water. Irrigation of these crops occurred primarily in northeastern Louisiana (fig. 10), and 92 percent of the ground water was withdrawn from the Mississippi River alluvial aquifer in this area.

Aquaculture

In 1995, approximately 320 Mgal/d of water was withdrawn for aquaculture in Louisiana. Of the total, 140 Mgal/d was ground water and 180 Mgal/d was surface water. Sixty-two percent of this water was used to maintain water levels on 110,000 acres of crawfish ponds, 12 percent on 15,000 acres of catfish ponds, and 26 percent at 125 alligator farms (Louisiana Cooperative Extension Service, 1995; Larry McNease, Louisiana Department of Wildlife and Fisheries, written commun., 1995). The Chicot aquifer system supplied 40 percent, and the Mississippi River alluvial aquifer supplied 34 percent of ground water used. Miscellaneous streams were used as sources of surface water. Ground-water withdrawals for aquaculture were highest in St. Martin Parish, 29 Mgal/d, and surface-water withdrawals were highest in Vermilion Parish, 65 Mgal/d (fig. 11).

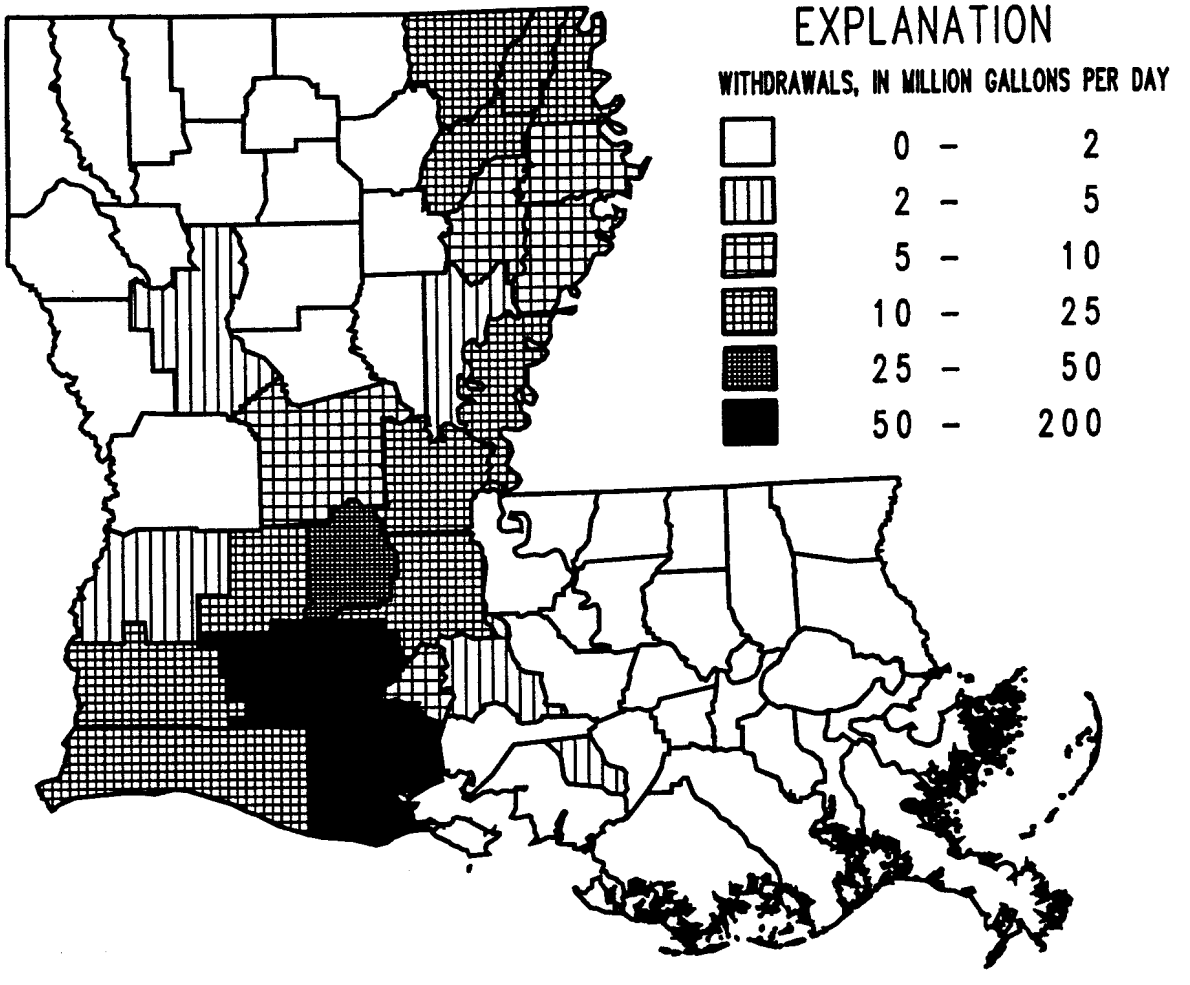


Figure 9. Rice-irrigation water withdrawals in Louisiana by parish, 1995.

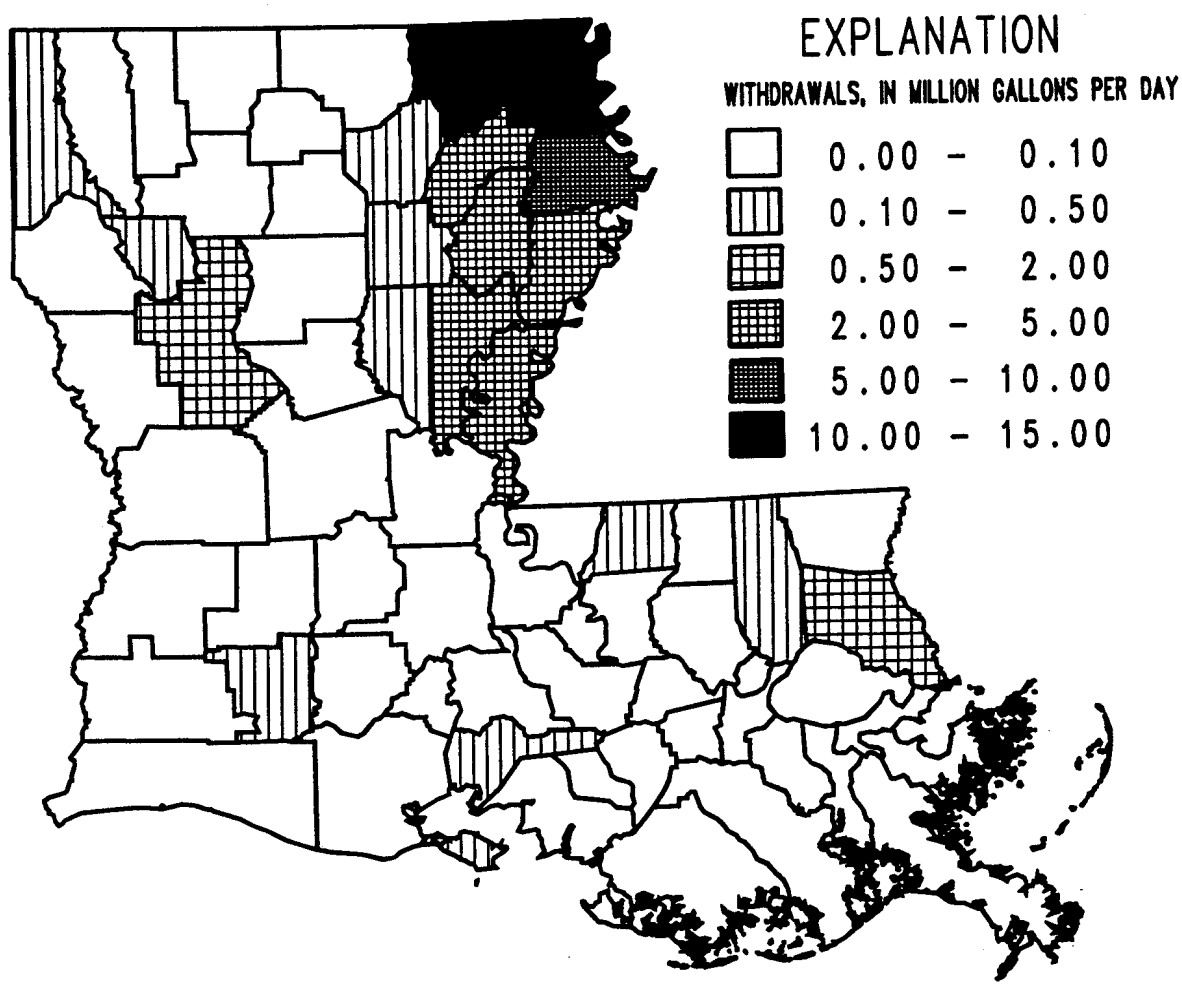


Figure 10. General-irrigation water withdrawals in Louisiana by parish, 1995.

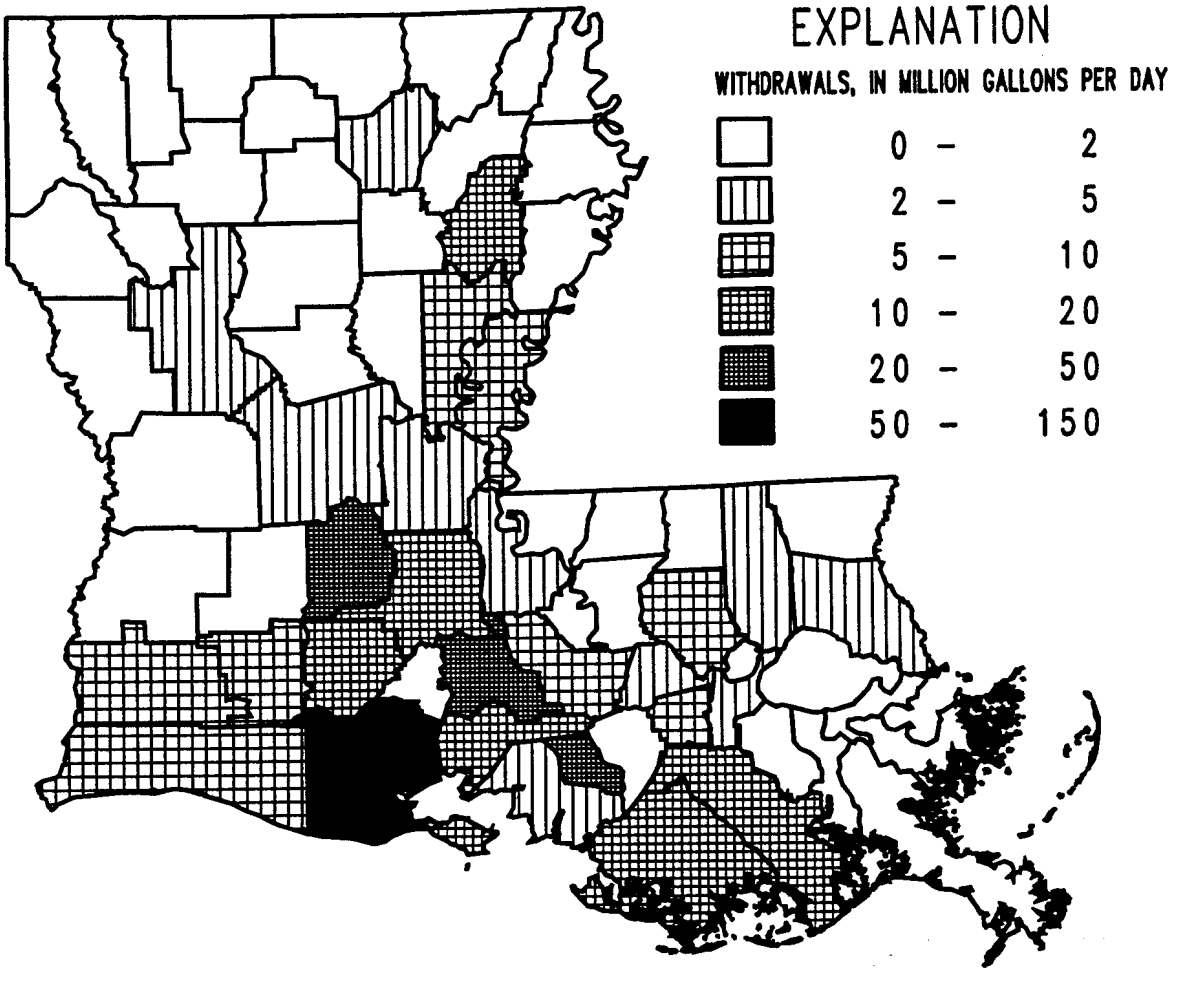


Figure 11. Aquaculture water withdrawals in Louisiana by parish, 1995.

WATER USE BY PARISH

The one-page summaries of water-use information by parish presented in this section of the report contain tables of withdrawals by category of use, lists of major public suppliers, lists of major industrial groups, and bar charts of withdrawal trends since 1960. Also listed are the population, population served by public supply, per capita withdrawals, total irrigated acreage, and the amount of hydroelectric instream use for the parish. The per capita withdrawal rate is the average daily total amount of water withdrawn in the area divided by the total population for the area. A map shows the location of the parish within the State.

In each of the summaries, a table lists average daily withdrawals for the eight major categories of use. The withdrawals are totaled by the source of water used--that is, surface or ground--and by category. Totals for the parish also are shown.

A bar chart on each summary shows water-use trends since 1960 for the parish. The data were compiled from previous 5-year water-use reports, and no effort was made to interpret the graphs on an individual basis.

A table of withdrawals by major industrial groups sorted by SIC code lists withdrawals for ground- and surface-water sources. For the purposes of this table, a withdrawal was included only if it was greater than or equal to 0.01 Mgal/d and was used by the manufacturing sector of industry, rather than the service sector. Therefore, the totaled withdrawals in this table may be less than the totals for industry in the table of withdrawals by category of use.

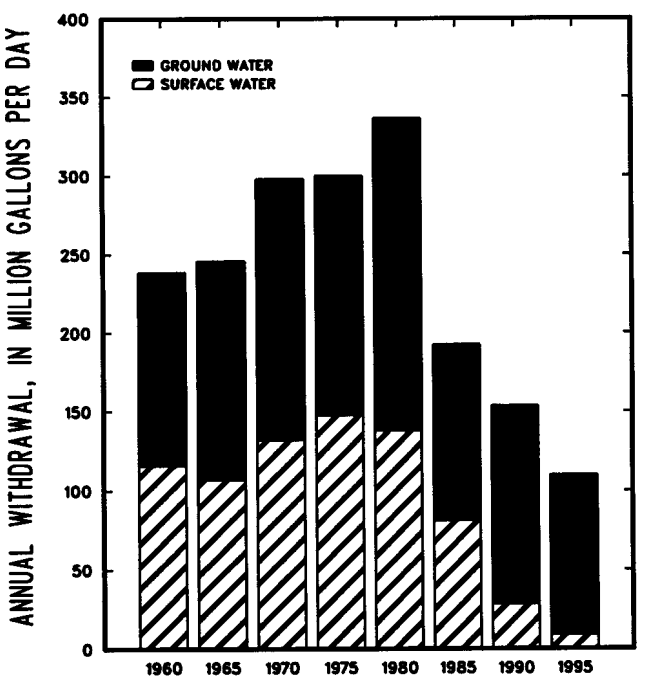
A table of withdrawals by major public suppliers listed in alphabetical order also is presented. For the purposes of this table, public suppliers were included only if the withdrawal was greater than or equal to 0.02 Mgal/d. Therefore, totaled withdrawals from this table may be less than the totals for public supply in the table of withdrawals by category of use. Self-supplied institutions such as hospitals, prisons, and military installations, though included in the withdrawals for public supply, are not listed in this table. Water-use information for each of the 64 parishes in Louisiana is summarized in table 2. The table lists withdrawals and totals for each parish and each major category of use in Louisiana.

ACADIA

Population: 56,685
Population served by public supply: 40,978
Per capita withdrawals (gal/d): 1,940
Acres irrigated: 98,109
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	4.71	0.00	4.71
Industrial	.37	.00	.37
Power generation	.00	.00	.00
Rural domestic	1.26	.00	1.26
Livestock	.13	.00	.13
Rice irrigation	86.87	6.20	93.07
General irrigation	.00	.00	.00
Aquaculture	7.81	2.68	10.48
TOTALS	101.14	8.88	110.02



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

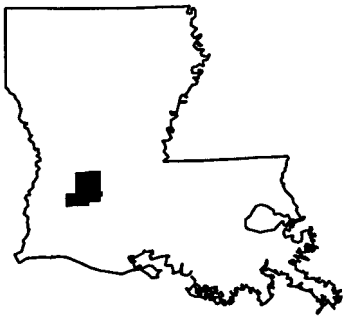
Standard Industrial Classification	GW	SW
13 Oil and gas extraction	0.29	
20 Food products	.01	
29 Petroleum refining	.05	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Church Point Water System	0.62	
Crowley Water System	1.97	
Estherwood Water System	.08	
Iota Water System	.18	
Mermentau Water System	.08	
Mire-Branch Water Corp.	.29	
Morse Water System	.10	
North of Crowley Water Corp.	.17	
Rayne Water System	.98	
South Rayne Water Corp.	.10	

ALLEN

Population: 23,290
Population served by public supply: 20,414
Per capita withdrawals (gal/d): 1,034
Acres irrigated: 25,157
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

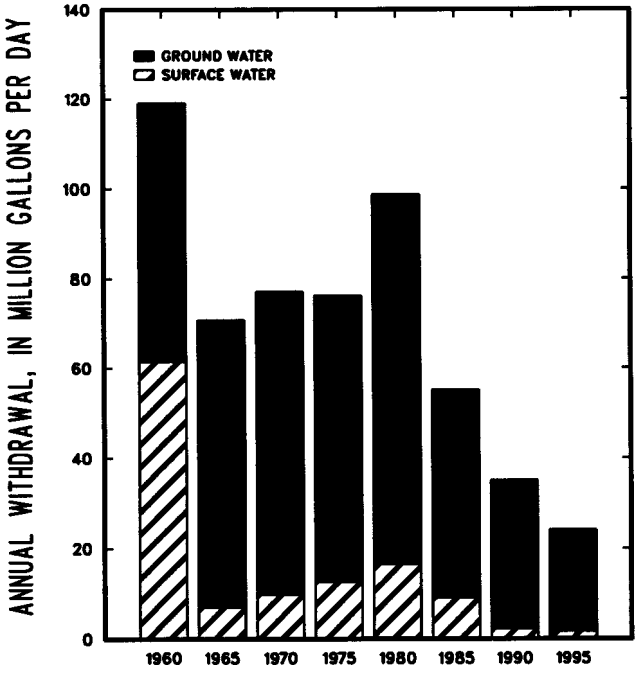
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	2.68	0.00	2.68
Industrial	.37	.00	.37
Power generation	.00	.00	.00
Rural domestic	.23	.00	.23
Livestock	.08	.02	.09
Rice irrigation	18.64	1.62	20.26
General irrigation	.00	.00	.00
Aquaculture	.39	.06	.45
TOTALS	22.39	1.70	24.09

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
26 Paper products	0.26	
28 Chemicals	.11	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Allen Water Dist. 1	0.13	
E. Allen Water District	.13	
Elizabeth Water System	.07	
Fairview Water System	.03	
Kinder Water System	.05	
Oakdale Water System	.88	
Oberlin Water System	.49	
S. Oakdale Water System	.08	
S.W. Allen W.W. Dist. 2	.65	
W. Allen Water District	.18	



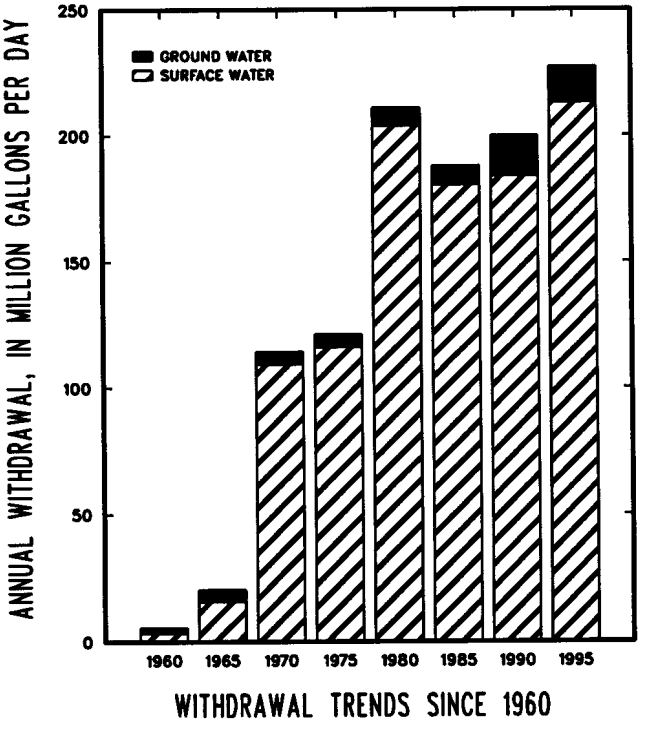
WITHDRAWAL TRENDS SINCE 1960

ASCENSION

Population: 64,128
Population served by public supply: 33,862
Per capita withdrawals (gal/d): 3,541
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	2.62	1.64	4.26
Industrial	9.05	209.05	218.09
Power generation	.00	.00	.00
Rural domestic	2.41	.00	2.41
Livestock	.11	.02	.13
Rice irrigation	.00	.00	.00
General irrigation	.03	.00	.03
Aquaculture	.08	2.10	2.18
TOTALS	14.29	212.81	227.10



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products	4.83	
28 Chemicals	3.96	209.05

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Capitol Utilities Corp.	0.57	
Gonzales Water System	1.17	
Parish Water Co.	.50	
People's Water Service		1.64
Port of Diversion Water Co.	.13	

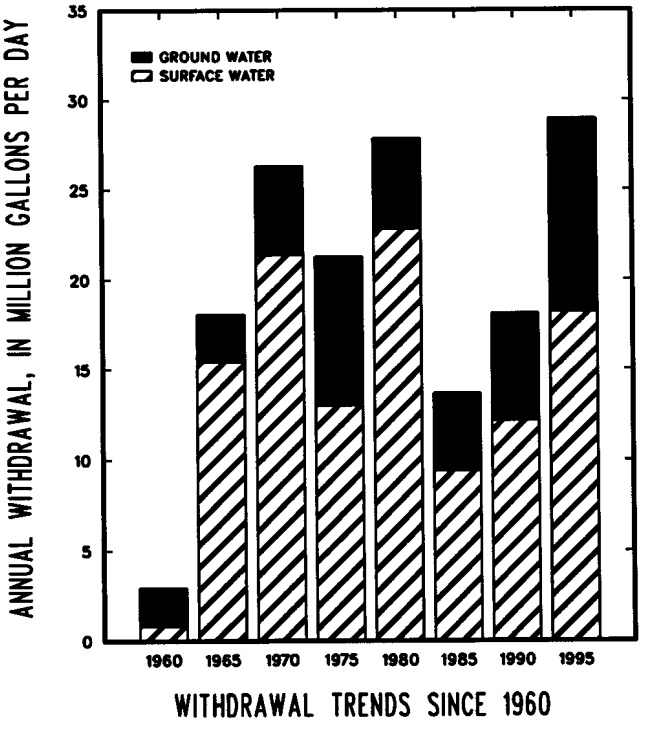
ASSUMPTION

Population: 23,015
Population served by public supply: 22,648
Per capita withdrawals (gal/d): 1,257
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.00	3.14	3.14
Industrial	10.74	13.15	23.89
Power generation	.00	.00	.00
Rural domestic	.03	.00	.03
Livestock	.00	.00	.00
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.00	1.89	1.89
TOTALS	10.77	18.18	28.95

Withdrawals by Major Industrial Group (Mgal/d)		
Standard Industrial Classification	GW	SW
20 Food products	0.11	13.15
28 Chemicals	10.53	

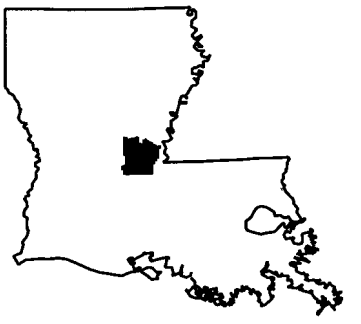
Withdrawals by Major Public Supplier (Mgal/d)		
Public Supplier	GW	SW
Assumption W.W. Dist. 1		3.14



WITHDRAWAL TRENDS SINCE 1960

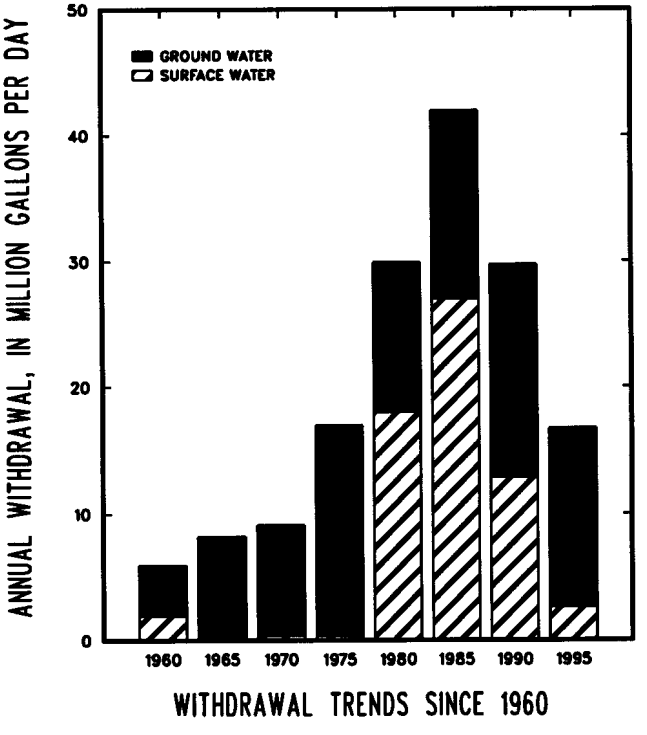
AVOYELLES

Population: 40,536
Population served by public supply: 38,295
Per capita withdrawals (gal/d): 412
Acres irrigated: 12,141
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	3.44	0.00	3.44
Industrial	.44	.00	.44
Power generation	.00	.00	.00
Rural domestic	.18	.00	.18
Livestock	.14	.03	.17
Rice irrigation	8.47	1.73	10.20
General irrigation	.01	.00	.01
Aquaculture	1.46	.83	2.29
TOTALS	14.13	2.59	16.73



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

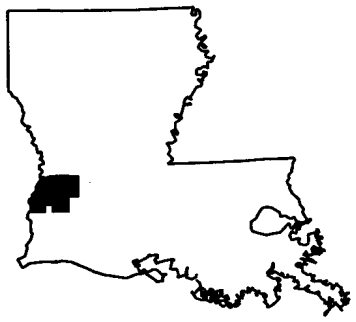
Standard Industrial Classification	GW	SW
20 Food products	0.42	
24 Lumber	.01	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Brouillette Water System	0.21	
Cottonport Water System	.60	
Evergreen Water System	.13	
Fifth Ward Water System	.29	
Hessmer Water System	.32	
Mansura Water System	.14	
Marksville Water System	.73	
Moreauville Water System	.15	
Morrow Water System	.06	
Plaucheville Water System	.17	
Simmesport Water System	.47	
S.W. Avoyelles W.W. Dist.	.07	
Ward 1 Water System	.10	

BEAUREGARD

Population: 31,135
Population served by public supply: 22,372
Per capita withdrawals (gal/d): 948
Acres irrigated: 3,814
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

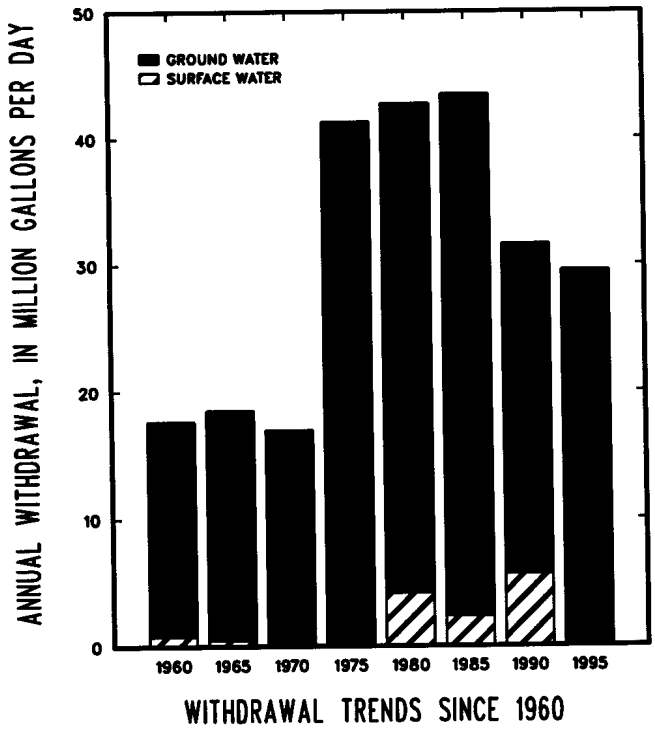
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	3.64	0.00	3.64
Industrial	21.39	.00	21.39
Power generation	.00	.00	.00
Rural domestic	.71	.00	.71
Livestock	.04	.15	.18
Rice irrigation	3.54	.00	3.54
General irrigation	.00	.00	.00
Aquaculture	.07	.00	.07
TOTALS	29.39	.15	29.54

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
26 Paper products	20.88	
28 Chemicals	.51	

Withdrawals by Major Public Supplier (Mgal/d)

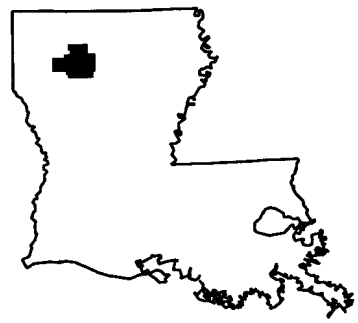
Public Supplier	GW	SW
Beauregard Dist. 2 Ward 5	0.26	
DeRidder Water System	2.18	
Green Acres Water & Sewer	.09	
Merryville Water System	.15	
S. Beauregard W.W. Dist. 3	.91	
S. Merryville Water System	.03	



WITHDRAWAL TRENDS SINCE 1960

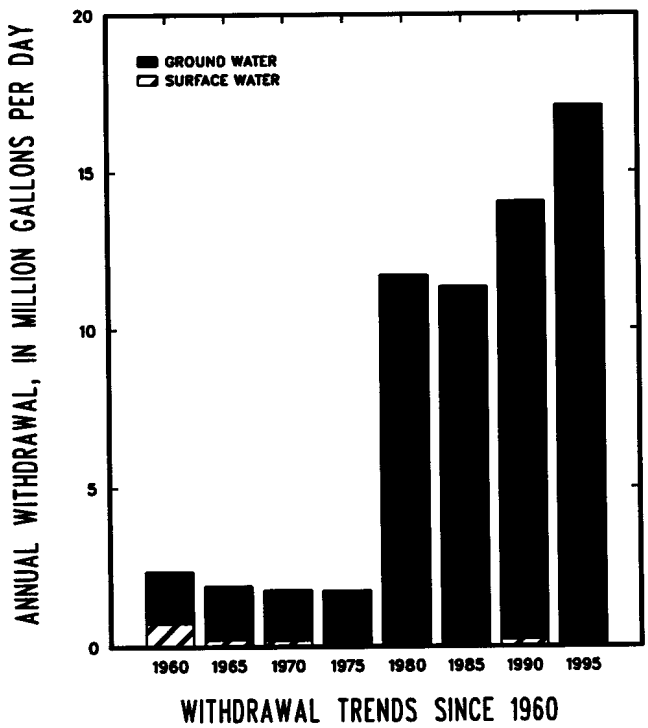
BIENVILLE

Population: 15,952
Population served by public supply: 11,343
Per capita withdrawals (gal/d): 1,071
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.17	0.00	1.17
Industrial	15.42	.03	15.45
Power generation	.00	.00	.00
Rural domestic	.37	.00	.37
Livestock	.06	.04	.10
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.00	.00	.00
TOTALS	17.02	.07	17.09



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
24 Lumber	0.01	0.03
26 Paper products	15.39	
32 Glass, clay, and concrete	.01	

Withdrawals by Major Public Supplier (Mgal/d)

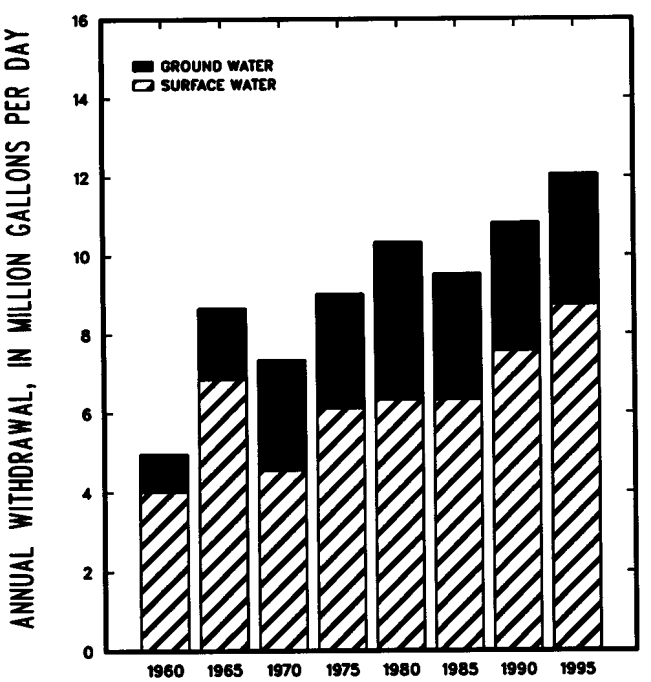
Public Supplier	GW	SW
Alabama Water System	0.09	
Alberta Water System	.08	
Arcadia Water System	.31	
Bryceland Water System	.04	
Castor Water System	.02	
Cypress Water System	.04	
Friendship Water System	.04	
Gibsland Water System	.17	
Mt. Calm Water System	.02	
Mt. Olive Water System	.02	
Old Saline Comm. Water Sys.	.02	
Ringgold Water System	.15	
Saline Water System	.04	
S.E. Bienville Water System	.02	
Social Springs Water System	.02	
Taylor Water System	.04	

BOSSIER

Population: 89,216
Population served by public supply: 75,444
Per capita withdrawals (gal/d): 135
Acres irrigated: 120
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.57	8.66	10.23
Industrial	.36	.01	.37
Power generation	.00	.00	.00
Rural domestic	1.10	.00	1.10
Livestock	.10	.07	.16
Rice irrigation	.09	.00	.09
General irrigation	.00	.00	.00
Aquaculture	.10	.00	.10
TOTALS	3.32	8.74	12.06



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

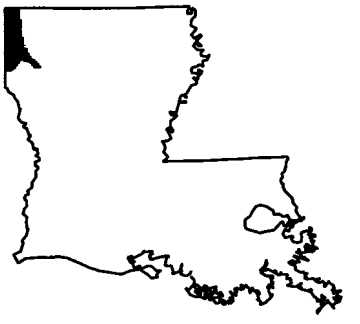
Standard Industrial Classification	GW	SW
29 Petroleum refining	0.36	0.01

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Bossier City Water System		8.66
Central Bossier Water System	0.03	
Haughton Water System	.13	
Plain Dealing Water System	.26	
Red Chute Utilities Co.	.28	
S. Bossier Water System	.10	
St. Mary's Water System	.04	
Village Water System	.52	

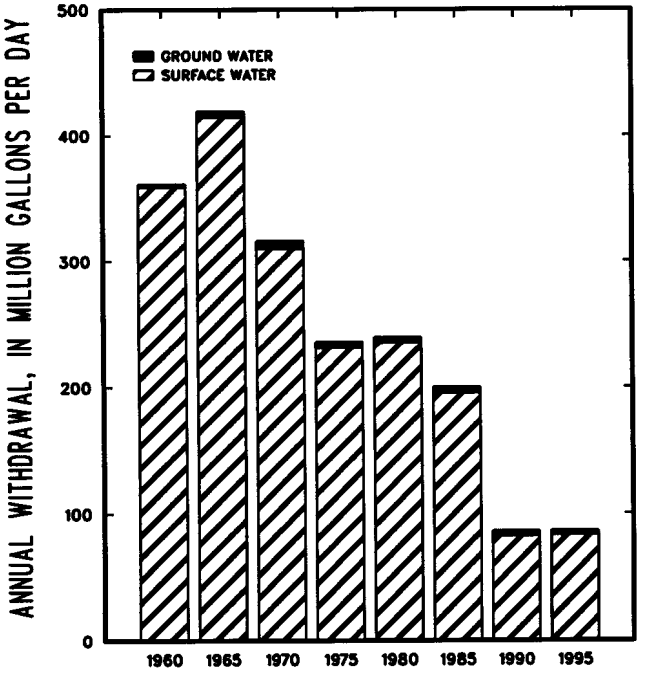
CADDO

Population: 246,435
Population served by public supply: 226,393
Per capita withdrawals (gal/d): 351
Acres irrigated: 2,025
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.48	31.85	33.33
Industrial	.03	.41	.44
Power generation	.00	50.37	50.37
Rural domestic	1.60	.00	1.60
Livestock	.07	.16	.23
Rice irrigation	.04	.00	.04
General irrigation	.49	.00	.49
Aquaculture	.00	.00	.00
TOTALS	3.71	82.80	86.50



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products		0.01
29 Petroleum refining	0.03	.40

Withdrawals by Major Public Supplier (Mgal/d)

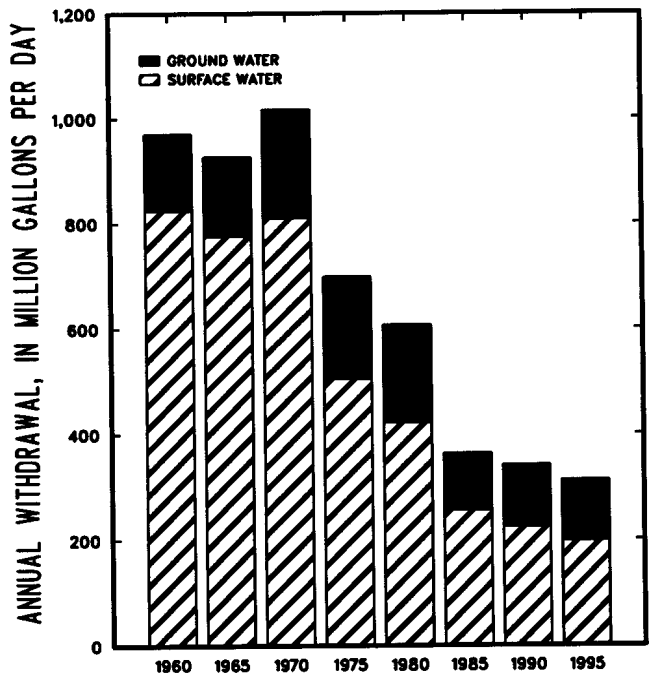
Public Supplier	GW	SW
Bel-Di-Gil Water System	0.08	
Blanchard Water System		0.70
Caddo Water Dist. 1		.22
Caddo Water Dist. 7	.24	
Deep Woods Utilities	.04	
E. Cove Util. Water System		.04
E. Mooringsport Water System		.02
Eagle Water Co.	.08	
Four Forks Water System	.03	
Greenwood Comm. Water System	.39	
Hosston Mira Water System	.05	
Ida Water System	.03	
Mooringsport Water System		.11
N. Caddo Utilities Inc.	.04	
Pine Hills Water Works	.23	
Rodessa Water System	.03	
Shreveport Water System		30.35
Vivian Water System		.41
Wildwood South Water System	.03	

CALCASIEU

Population: 173,954
Population served by public supply: 148,267
Per capita withdrawals (gal/d): 1,793
Acres irrigated: 29,484
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	21.74	0.25	21.99
Industrial	68.60	170.74	239.34
Power generation	7.75	8.61	16.36
Rural domestic	2.06	.00	2.06
Livestock	.13	.20	.33
Rice irrigation	10.94	12.82	23.76
General irrigation	.00	.00	.00
Aquaculture	2.87	5.28	8.15
TOTALS	114.10	197.89	311.99



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

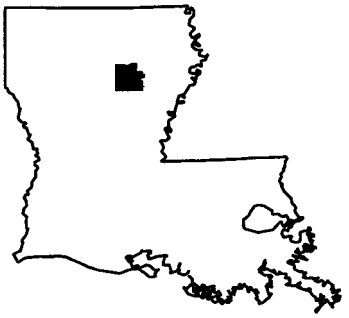
Standard Industrial Classification	GW	SW
24 Lumber	0.60	
28 Chemicals	45.15	112.39
29 Petroleum refining	20.00	58.34
30 Rubber and plastics	1.03	
33 Primary metals	1.73	
37 Transportation equipment	.01	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Brigas Subdivision	0.03	
Calcasieu Water Dist. 5	.36	
Calcasieu W.W. Dist. 4	.33	
Calcasieu W.W. Dist. 7	.20	
Calcasieu W.W. Dist. 8	.04	
Calcasieu W.W. Dist. 9	.85	
Country Pines Subdivision	.08	
DeQuincy Water System	.60	
Garden Heights Subdivision	.04	
Hayes Water System	.05	
Houston River W.W. Dist. 11		0.25
Iowa Water System	.38	
Lake Charles Water Co.	10.42	
Lake Street Water Co.	.04	
St. Charles Raintree Cove	.02	
Starks Water and Gas	.05	
Sulphur Water System	4.34	
Util. Services of L.C.	.03	
Vinton Water System	.97	
Westlake Water System	.94	
W.W. Dist. 1 of Ward 1	1.45	
W.W. Dist. 2 of Ward 4	.19	

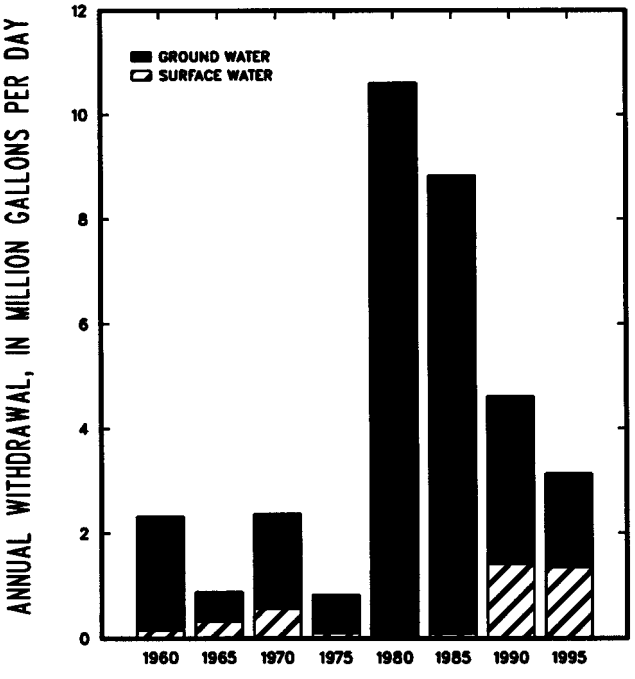
CALDWELL

Population: 10,076
Population served by public supply: 9,320
Per capita withdrawals (gal/d): 310
Acres irrigated: 3,348
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.13	0.00	1.13
Industrial	.00	.00	.00
Power generation	.00	.00	.00
Rural domestic	.06	.00	.06
Livestock	.02	.02	.04
Rice irrigation	.54	1.25	1.79
General irrigation	.03	.08	.12
Aquaculture	.00	.00	.00
TOTALS	1.78	1.35	3.13



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW

Withdrawals by Major Public Supplier (Mgal/d)

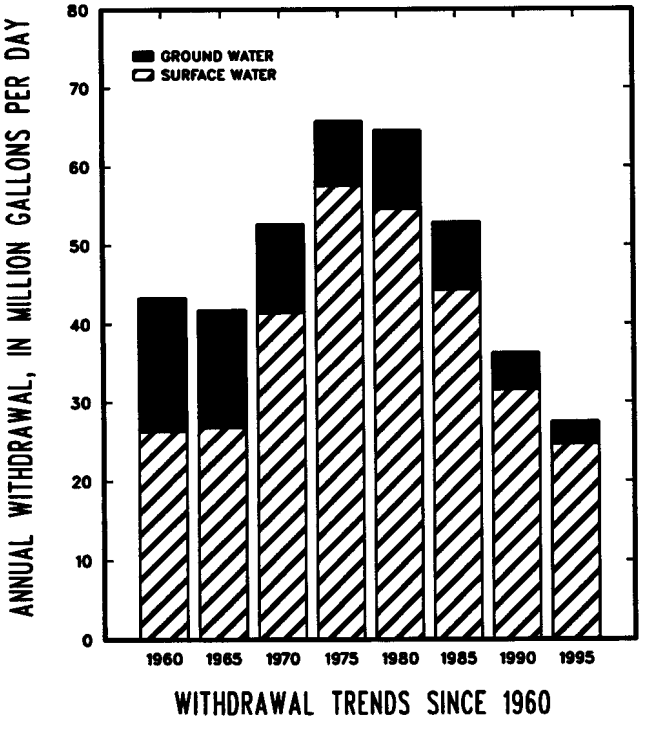
Public Supplier	GW	SW
Clarks Water System	0.10	
Columbia Heights Water Dist.	.23	
Columbia Water System	.09	
Cottonplant Water System	.05	
E. Columbia Water Dist.	.14	
Grayson Water System	.22	
Hebert Water System	.09	
Holum Water System	.06	
Kelly Water System	.06	
Vixen Water System	.02	
Wards 4 & 5 Water System	.07	

CAMERON

Population: 8,949
Population served by public supply: 7,818
Per capita withdrawals (gal/d): 3,071
Acres irrigated: 15,171
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.52	0.00	1.52
Industrial	.22	1.33	1.55
Power generation	.00	.00	.00
Rural domestic	.09	.00	.09
Livestock	.09	.29	.38
Rice irrigation	.83	16.43	17.26
General irrigation	.00	.00	.00
Aquaculture	.12	6.57	6.70
TOTALS	2.87	24.62	27.49



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

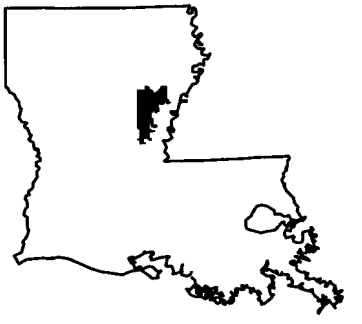
Standard Industrial Classification	GW	SW
20 Food products	0.02	1.32
29 Petroleum refining		.02

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Cameron W.W. Dist. 1	0.31	
Cameron W.W. Dist. 11	.19	
Cameron W.W. Dist. 2	.59	
Cameron W.W. Dist. 7	.06	
Cameron W.W. Dist. 9	.37	

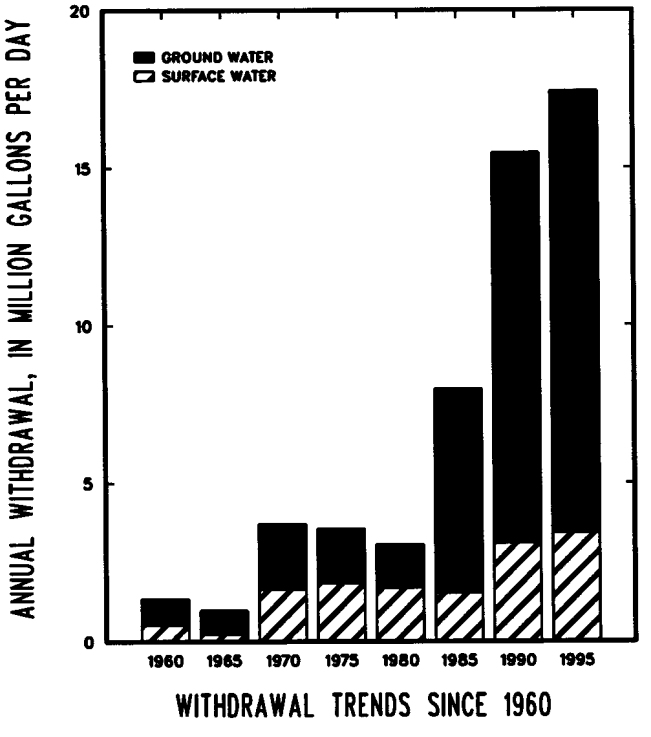
CATAHOULA

Population: 11,142
Population served by public supply: 9,771
Per capita withdrawals (gal/d): 1,565
Acres irrigated: 12,198
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.18	0.00	1.18
Industrial	.00	.02	.02
Power generation	.00	.00	.00
Rural domestic	.11	.00	.11
Livestock	.03	.04	.06
Rice irrigation	3.42	1.14	4.56
General irrigation	2.19	2.24	4.43
Aquaculture	7.09	.00	7.09
TOTALS	14.01	3.43	17.45



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

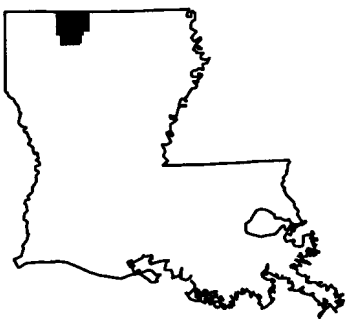
Standard Industrial Classification	GW	SW
14 Non-fuels/non-metals mining		0.02

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Black River Water System	0.12	
Enterprise W.W. Dist. 1	.03	
Harrisonburg Water System	.05	
Jonesville Water System	.27	
Larto Mayna Water System	.04	
Leland Water System	.05	
Maitland W.W. District	.04	
Manifest-Rhinehart W.S.	.07	
S. Bayou Macon Water System	.12	
Sandy Lake Water System	.22	
Sicily Island Water System	.07	
Whitehall Water System	.11	

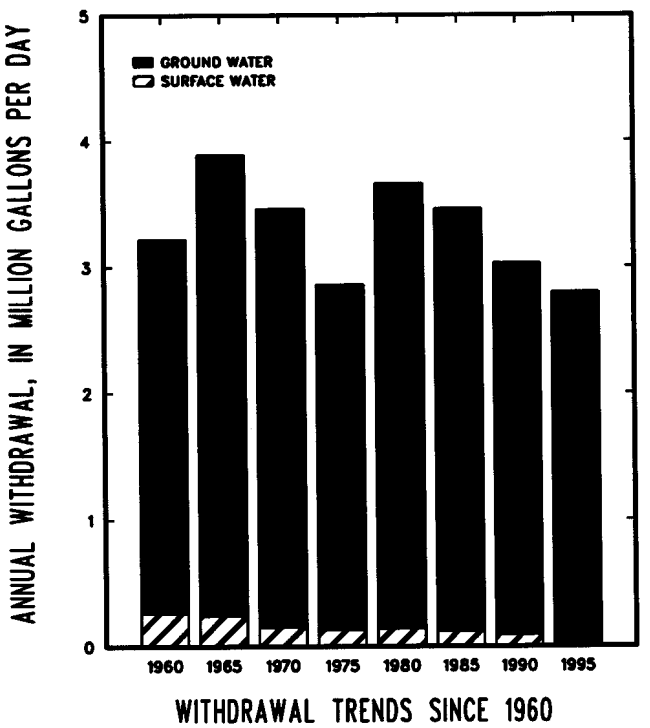
CLAIBORNE

Population: 17,433
Population served by public supply: 15,240
Per capita withdrawals (gal/d): 160
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	2.27	0.00	2.27
Industrial	.35	.00	.35
Power generation	.00	.00	.00
Rural domestic	.18	.00	.18
Livestock	.00	.00	.00
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.00	.00	.00
TOTALS	2.80	.00	2.80



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

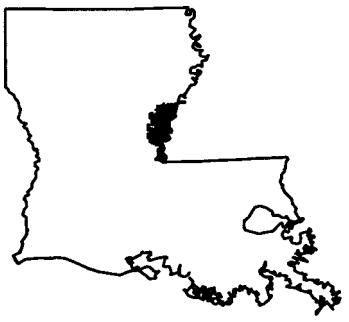
Standard Industrial Classification	GW	SW
26 Paper products	0.15	
29 Petroleum refining	.20	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Athens Water System	0.04	
Central Claiborne Water Sys.	.12	
Claiborne Ward 9 Water Sys.	.03	
Haynesville Water System	.57	
Homer Water System	.82	
Junction City Water System	.06	
Lisbon Water System	.03	
Middle Fork Water System	.05	
Pine Hill Water System	.08	
S. Claiborne Water System	.25	
Summerfield Water System	.09	

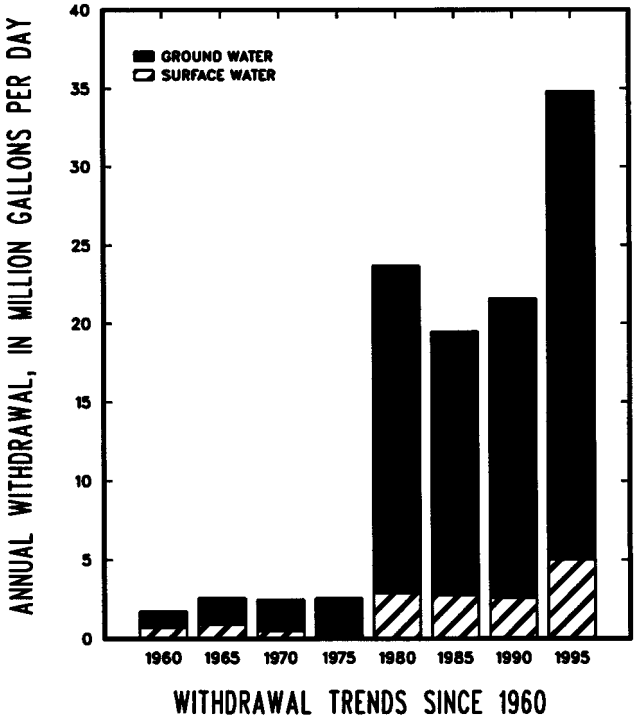
CONCORDIA

Population: 20,688
Population served by public supply: 19,890
Per capita withdrawals (gal/d): 1,682
Acres irrigated: 17,878
Hydroelectric power instream use (Mgal/d): 74,065.98



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.92	0.92	2.84
Industrial	.00	.00	.00
Power generation	.00	3.28	3.28
Rural domestic	.06	.00	.06
Livestock	.06	.01	.07
Rice irrigation	18.28	.62	18.89
General irrigation	2.22	.16	2.38
Aquaculture	7.27	.02	7.28
TOTALS	29.82	4.99	34.81



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW

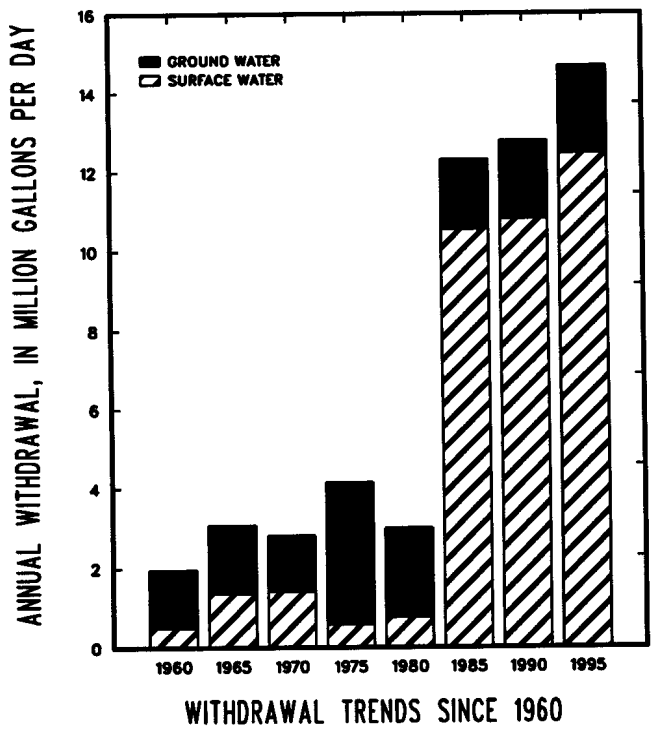
Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Clayton Water System	0.06	
Concordia W.W. Dist. 1	.73	
Ferriday Water System		0.92
Lake St. John Water Dist.	.10	
Monterey Rural Water System	.25	
Ridgecrest Water System	.05	
Vidalia Water System	.74	

DE SOTO

Population: 25,226
Population served by public supply: 17,817
Per capita withdrawals (gal/d): 508
Acres irrigated: 168
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.32	1.43	2.74
Industrial	.00	9.25	9.25
Power generation	.00	.00	.00
Rural domestic	.59	.00	.59
Livestock	.02	.14	.16
Rice irrigation	.00	.00	.00
General irrigation	.01	.08	.08
Aquaculture	.00	.00	.00
TOTALS	1.94	10.89	12.82



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)		
Standard Industrial Classification	GW	SW
12 Coal and lignite mining		0.01
26 Paper products		9.24

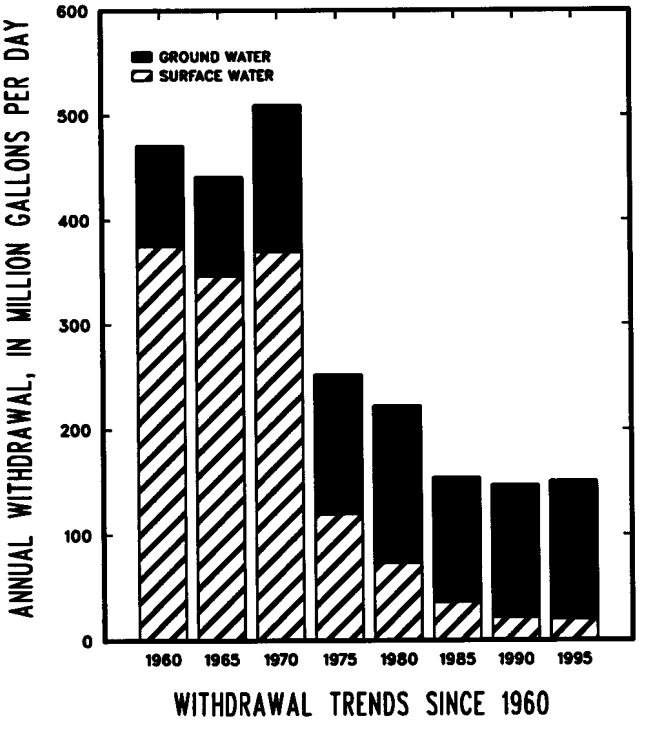
Withdrawals by Major Public Supplier (Mgal/d)		
Public Supplier	GW	SW
Bayou Pierre Water System	0.11	
E. De Soto Water System	.10	
Grand Cane Water System	.04	
Keatchie Water System	.30	
Logansport Water System		0.90
Mansfield Water System	.26	.53
N. De Soto Water System	.15	
Rambin-Wallace Water System	.09	
S. De Soto Water System	.07	
S. Mansfield Water System	.14	
Stanley Water System	.03	

EAST BATON ROUGE

Population: 396,364
Population served by public supply: 393,335
Per capita withdrawals (gal/d): 381
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	55.05	0.00	55.05
Industrial	69.79	19.89	89.68
Power generation	5.04	.00	5.04
Rural domestic	.26	.00	.26
Livestock	.14	.01	.15
Rice irrigation	.00	.00	.00
General irrigation	.09	.00	.09
Aquaculture	.76	.00	.76
TOTALS	131.13	19.90	151.04



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products	0.29	
26 Paper products	36.90	
28 Chemicals	22.07	
29 Petroleum refining	7.81	19.89
30 Rubber and plastics	1.93	
33 Primary metals	.22	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Baker Water System	1.92	
Baton Rouge Water Works	43.46	
Bellingrath Water System	.20	
Parish Water Co.	7.31	
Red Oak Water Co.	.58	
Slaughter Water System	.03	
Zachary Water System	1.43	

EAST CARROLL

Population: 9,676
Population served by public supply: 9,445
Per capita withdrawals (gal/d): 3,927
Acres irrigated: 63,794
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

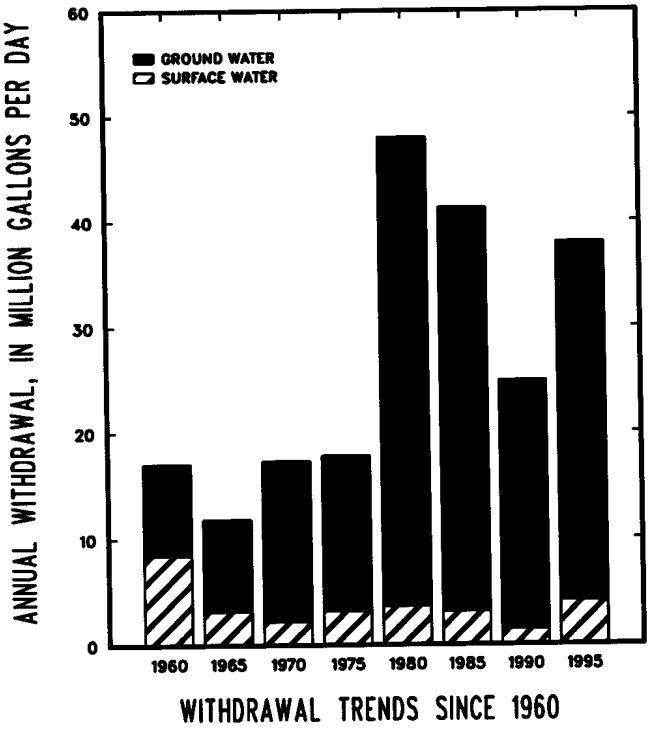
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.23	0.00	1.23
Industrial	.00	.00	.00
Power generation	.00	.00	.00
Rural domestic	.02	.00	.02
Livestock	.01	.03	.04
Rice irrigation	22.41	2.49	24.90
General irrigation	9.58	1.58	11.16
Aquaculture	.66	.00	.66
TOTALS	33.90	4.10	38.01

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Lake Providence Water System	1.23	



WITHDRAWAL TRENDS SINCE 1960

EAST FELICIANA

Population: 20,085
Population served by public supply: 16,928
Per capita withdrawals (gal/d): 164
Acres irrigated: 202
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

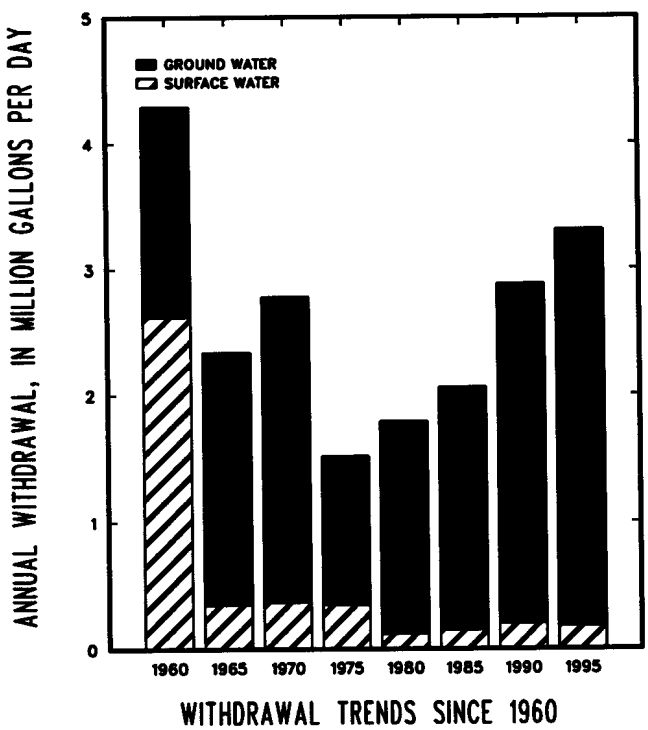
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	2.57	0.00	2.57
Industrial	.03	.00	.03
Power generation	.00	.00	.00
Rural domestic	.26	.00	.26
Livestock	.04	.17	.21
Rice irrigation	.00	.00	.00
General irrigation	.22	.00	.22
Aquaculture	.00	.01	.01
TOTALS	3.13	.18	3.31

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW

Withdrawals by Major Public Supplier (Mgal/d)

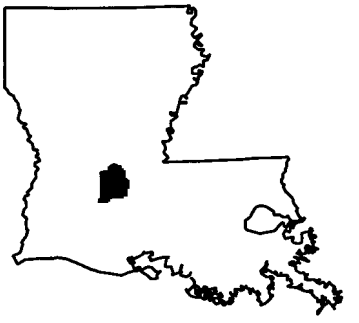
Public Supplier	GW	SW
Clinton Water System	0.33	
E. Feliciana Rural Water	1.03	
E. Feliciana W.W. Dist. 1	.06	
E. Feliciana W.W. Dist. 7	.10	
Jackson Water System	.19	
Norwood Water System	.04	
Plantation Utilities	.07	
Slaughter Water System	.11	



WITHDRAWAL TRENDS SINCE 1960

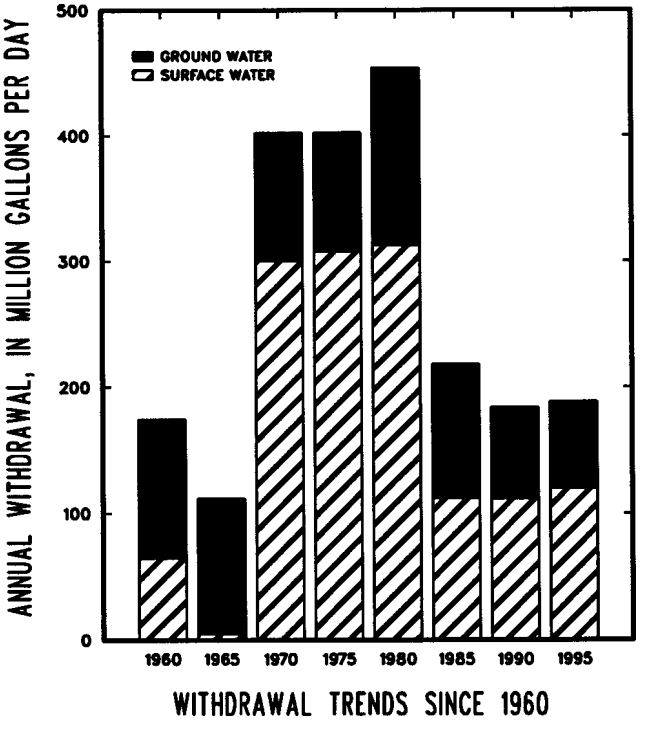
EVANGELINE

Population: 34,154
Population served by public supply: 29,933
Per capita withdrawals (gal/d): 5,520
Acres irrigated: 52,479
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	4.62	0.00	4.62
Industrial	1.99	.00	1.99
Power generation	.00	107.40	107.40
Rural domestic	.34	.00	.34
Livestock	.13	.01	.14
Rice irrigation	44.83	3.90	48.73
General irrigation	.00	.00	.00
Aquaculture	16.97	8.36	25.33
TOTALS	68.88	119.67	188.55



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

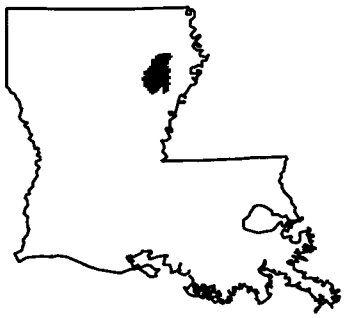
Standard Industrial Classification	GW	SW
28 Chemicals	1.97	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Basile Water System	0.44	
Bayou Des Cannes Water Sys.	.16	
Chataignier Water System	.07	
East Side Water System	.31	
Evangeline Water Dist. 1	.12	
Mamou Road Water District	.14	
Mamou Water System	.71	
Point Blue Water System	.14	
Reddell-Vidrine Water Dist.	.15	
Savoy-Swords Water System	.31	
Te Mamou Water District	.22	
Turkey Creek Water System	.30	
Ville Platte Water System	1.48	
Ward 4 Water District	.03	

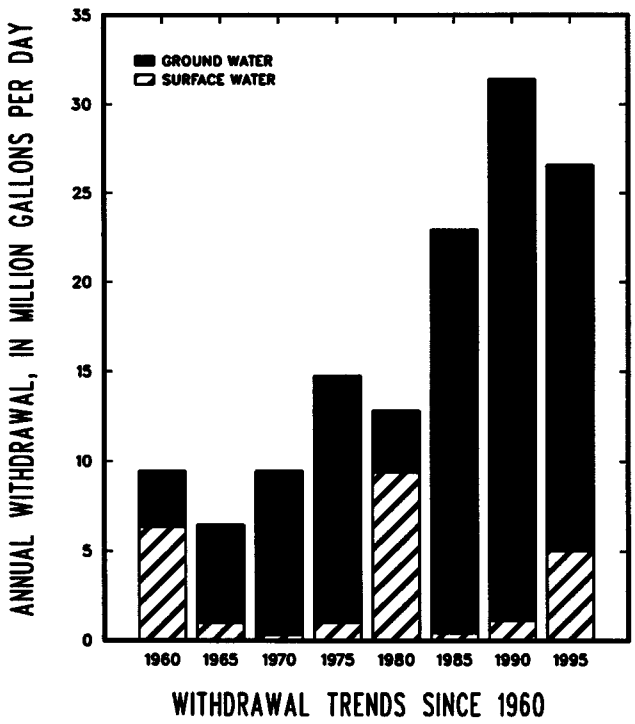
FRANKLIN

Population: 22,144
Population served by public supply: 13,544
Per capita withdrawals (gal/d): 1,200
Acres irrigated: 10,507
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.89	0.00	1.89
Industrial	1.12	.00	1.12
Power generation	.00	.00	.00
Rural domestic	.70	.00	.70
Livestock	.20	.00	.20
Rice irrigation	1.10	4.97	6.07
General irrigation	2.20	.05	2.26
Aquaculture	14.36	.00	14.36
TOTALS	21.56	5.02	26.59



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

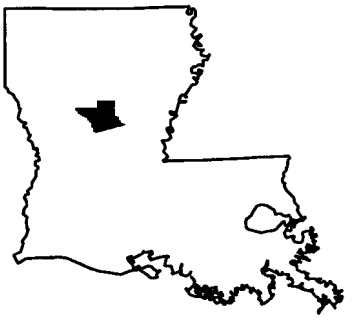
Standard Industrial Classification	GW	SW
20 Food products	0.37	
30 Rubber and plastics	.75	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Gilbert Water System	0.10	
W. Winnsboro Water System	.11	
Winnsboro Water System	1.50	
Wisner Water System	.18	

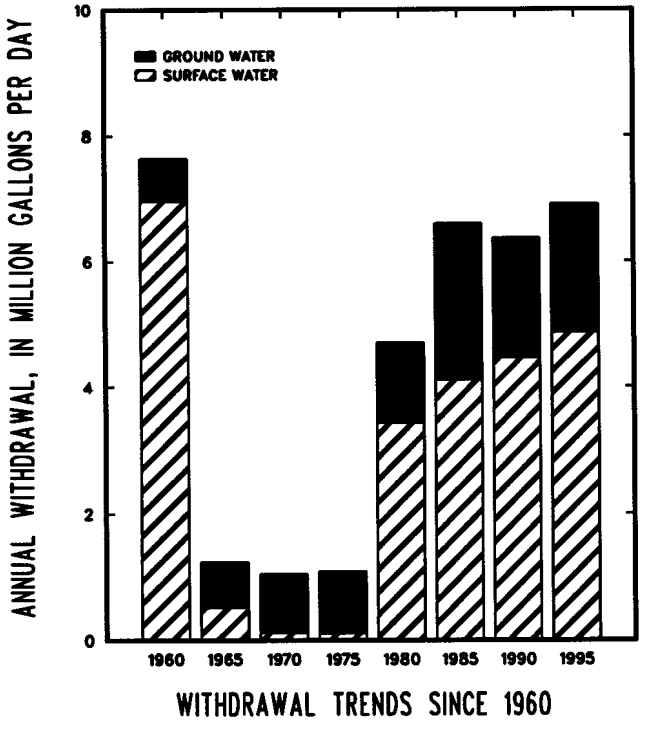
GRANT

Population: 17,667
Population served by public supply: 15,086
Per capita withdrawals (gal/d): 391
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.67	2.69	4.35
Industrial	.13	2.14	2.27
Power generation	.00	.00	.00
Rural domestic	.21	.00	.21
Livestock	.03	.04	.07
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.00	.00	.00
TOTALS	2.04	4.87	6.91



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
24 Lumber	0.07	
28 Chemicals	.07	2.14

Withdrawals by Major Public Supplier (Mgal/d)

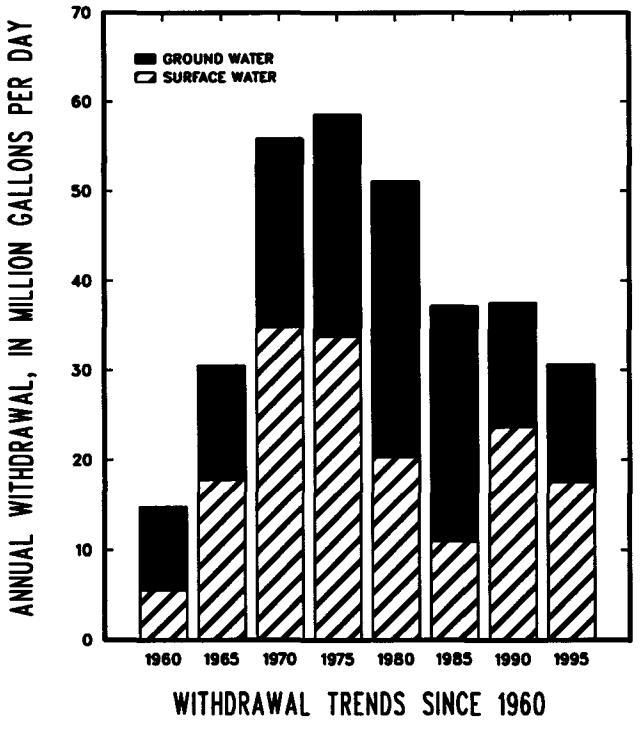
Public Supplier	GW	SW
Central Grant Water System	0.21	
Colfax Water System	.40	
Dry Prong Water System	.05	
Georgetown Water System		0.03
Montgomery Water System	.22	
Pollock Area Water System	.13	
Pollock Water System	.05	
Rapides W.W. Dist. 3		2.66
Red Hill Water Works	.03	
S. Grant Water Corp.	.30	
S.E. Grant Water System	.02	
W. Grant Water Assoc.	.14	
Zone 2 Water System	.11	

IBERIA

Population: 70,308
Population served by public supply: 56,544
Per capita withdrawals (gal/d): 436
Acres irrigated: 1,720
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	7.39	0.00	7.39
Industrial	2.29	6.44	8.73
Power generation	.00	.00	.00
Rural domestic	1.11	.00	1.11
Livestock	.06	.01	.06
Rice irrigation	1.53	.38	1.92
General irrigation	.11	.00	.11
Aquaculture	.63	10.70	11.33
TOTALS	13.13	17.53	30.66



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
14 Non-fuels/non-metals mining	0.40	1.34
20 Food products	1.34	.03
28 Chemicals	.54	5.07

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Bayou Teche Water Works	0.50	
Coteau Water System	.31	
Jeanerette Water System	1.31	
Loreauville Water System	.10	
Lydia Water System	.14	
New Iberia Water System	5.02	

IBERVILLE

Population: 31,263
Population served by public supply: 29,448
Per capita withdrawals (gal/d): 38,874
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

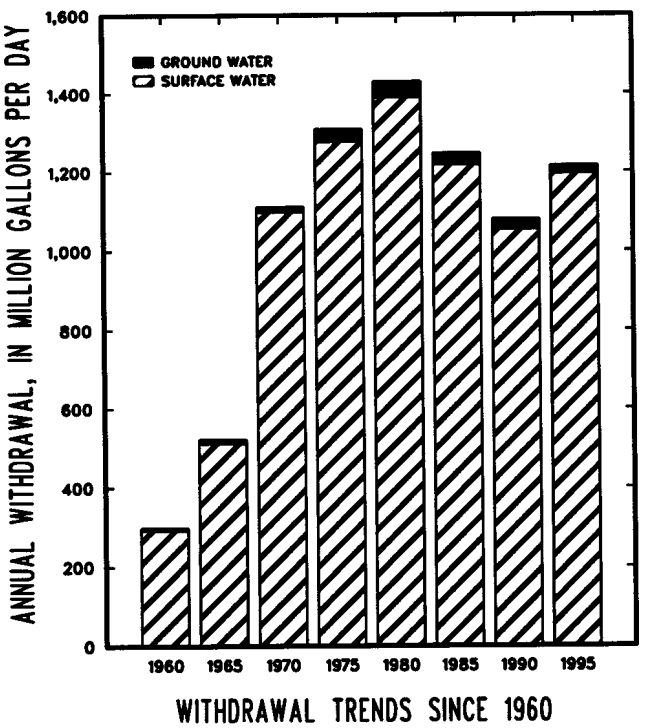
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.81	1.04	2.84
Industrial	16.97	492.45	509.42
Power generation	1.68	692.82	694.50
Rural domestic	.14	.00	.14
Livestock	.06	.01	.07
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.50	7.87	8.37
TOTALS	21.16	1,194.19	1,215.35

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products	4.23	
28 Chemicals	12.72	492.32

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Iberville W.W. Dist. 3		1.04
Iberville W.W. Dist. 4	0.31	
Maringouin Water System	1.18	
Rosedale Water System	.07	
White Castle Water System	.13	



WITHDRAWAL TRENDS SINCE 1960

JACKSON

Population: 15,400
Population served by public supply: 13,565
Per capita withdrawals (gal/d): 378
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

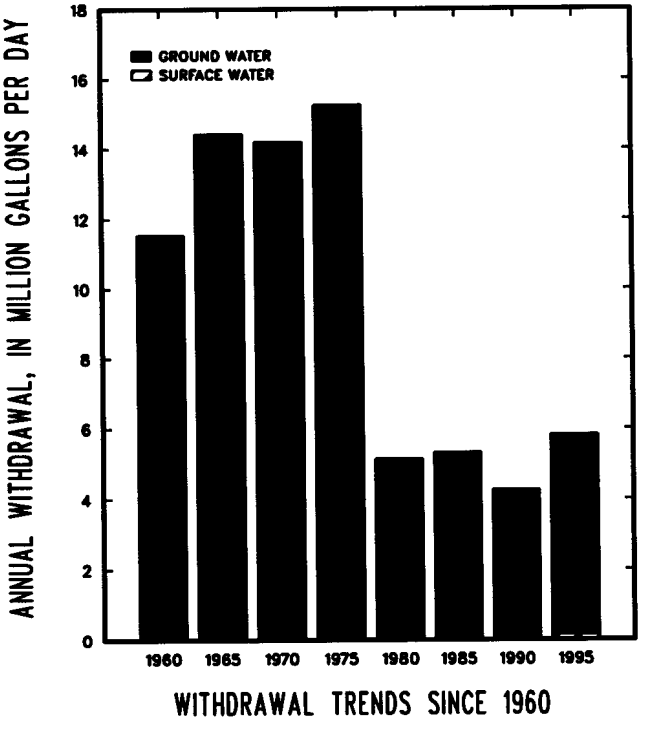
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.79	0.00	1.79
Industrial	3.69	.00	3.69
Power generation	.00	.00	.00
Rural domestic	.15	.00	.15
Livestock	.01	.14	.15
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.06	.00	.06
TOTALS	5.68	.14	5.82

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
26 Paper products	3.69	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Bear Creek Water System	0.03	
Chatham Water System	.09	
Clay Water System	.02	
E. Hodge Water System	.05	
Eros Comm. Water System	.05	
Hodge Water System	.35	
Jonesboro Water System	.72	
McDonald Water System	.05	
N. Hodge Water System	.04	
Punkin-Hilltop Water System	.12	
St. Rest Water System	.03	
Weston Water System	.11	



WITHDRAWAL TRENDS SINCE 1960

JEFFERSON

Population: 457,481
Population served by public supply: 456,814
Per capita withdrawals (gal/d): 2,491
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

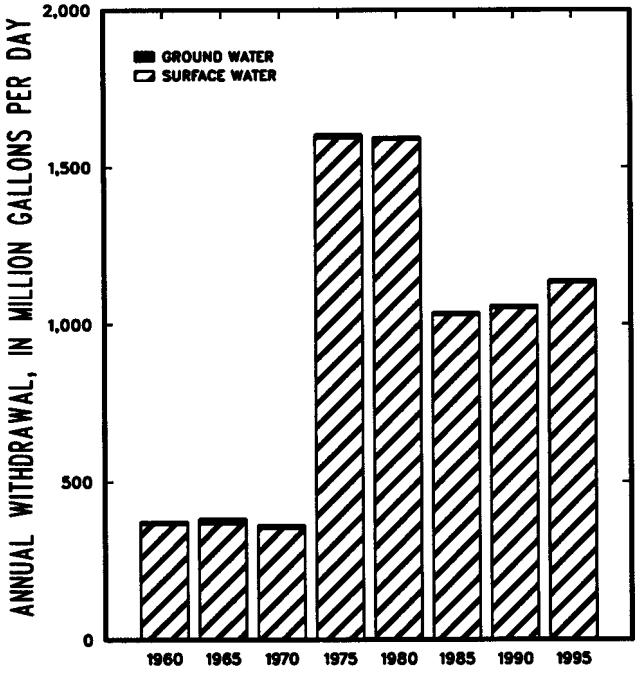
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.00	79.45	79.45
Industrial	6.07	14.69	20.76
Power generation	3.40	1,036.07	1,039.47
Rural domestic	.04	.00	.04
Livestock	.00	.00	.00
Rice irrigation	.00	.00	.00
General irrigation	.04	.00	.04
Aquaculture	.00	.09	.09
TOTALS	9.55	1,130.31	1,139.85

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products	0.16	
26 Paper products	.80	
28 Chemicals		14.69
37 Transportation equipment	5.10	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
E. Jefferson W.W. Dist. 1		49.09
Gretna Water Works		4.41
W. Jefferson W.W. Dist. 2		23.96
Westwego Water System		2.00



WITHDRAWAL TRENDS SINCE 1960

JEFFERSON DAVIS

Population: 30,982
Population served by public supply: 26,237
Per capita withdrawals (gal/d): 4,890
Acres irrigated: 95,750
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

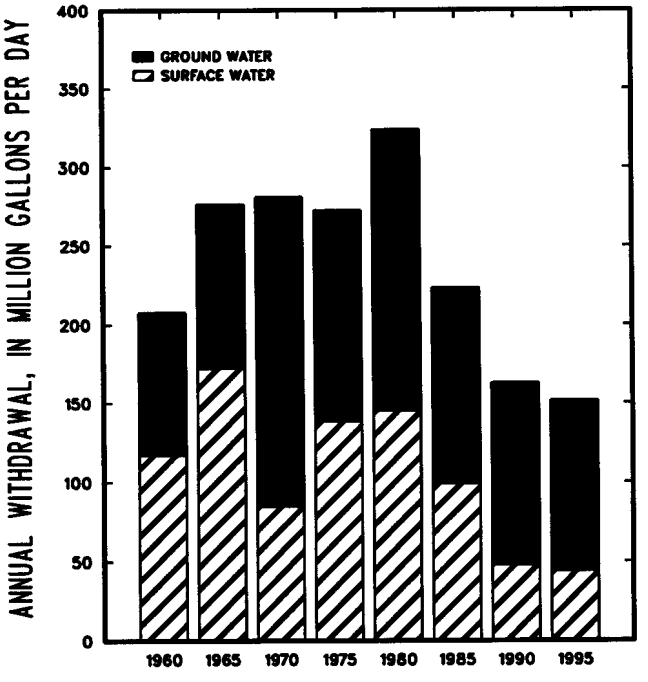
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	3.46	0.00	3.46
Industrial	.00	.00	.00
Power generation	.00	.00	.00
Rural domestic	.38	.00	.38
Livestock	.15	.00	.15
Rice irrigation	100.17	40.96	141.12
General irrigation	.29	.16	.45
Aquaculture	3.08	2.88	5.96
TOTALS	107.53	43.99	151.53

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Fenton Water System	0.03	
Jeff Davis Central W.W.	.30	
Jeff Davis W.W. Dist. 1	.05	
Jeff Davis W.W. Dist. 4	.21	
Jeff Davis W.W. Dist. 5	.02	
Jennings Water System	1.67	
Lake Arthur Water System	.70	
Welsh Water System	.45	



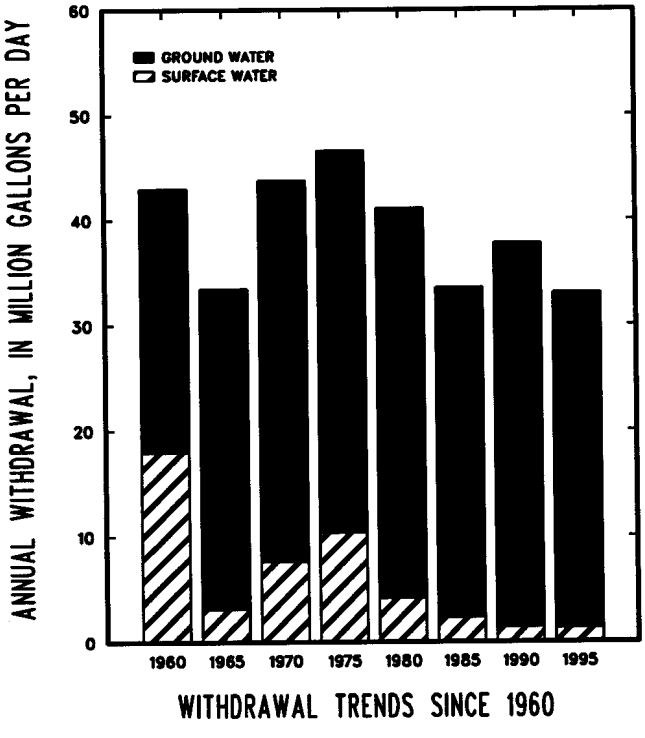
WITHDRAWAL TRENDS SINCE 1960

LAFAYETTE

Population: 176,180
Population served by public supply: 142,496
Per capita withdrawals (gal/d): 187
Acres irrigated: 8,585
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	19.20	0.00	19.20
Industrial	.03	.00	.03
Power generation	1.32	.00	1.32
Rural domestic	2.70	.00	2.70
Livestock	.10	.00	.11
Rice irrigation	6.79	1.20	7.98
General irrigation	.00	.00	.00
Aquaculture	1.61	.11	1.72
TOTALS	31.75	1.31	33.06



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products	0.03	

Withdrawals by Major Public Supplier (Mgal/d)

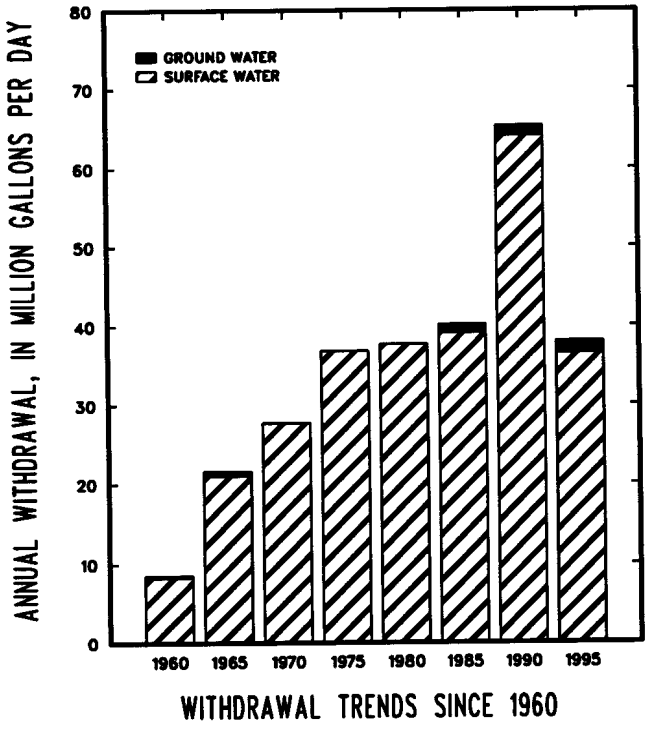
Public Supplier	GW	SW
Acadiana Treatment System	0.30	
Broussard Water System	.28	
Carencro Water System	1.06	
Duson Water System	.11	
Garden Heights Subdivision	.03	
Lafayette Water System	16.48	
Milton Water System	.19	
S. Lafayette W.W. Dist.	.29	
Youngsville Water System	.16	

LAFOURCHE

Population: 87,335
Population served by public supply: 87,034
Per capita withdrawals (gal/d): 435
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.00	19.94	19.94
Industrial	1.20	5.34	6.54
Power generation	.00	.00	.00
Rural domestic	.02	.00	.02
Livestock	.19	.05	.24
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.11	11.18	11.30
TOTALS	1.52	36.52	38.04



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

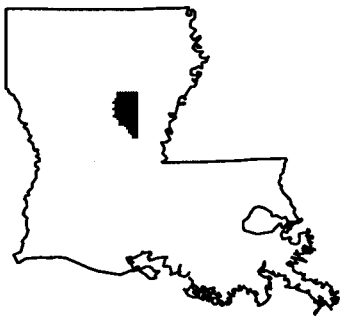
Standard Industrial Classification	GW	SW
20 Food products		2.87
26 Paper products		2.13
28 Chemicals	1.20	.34

Withdrawals by Major Public Supplier (Mgal/d)

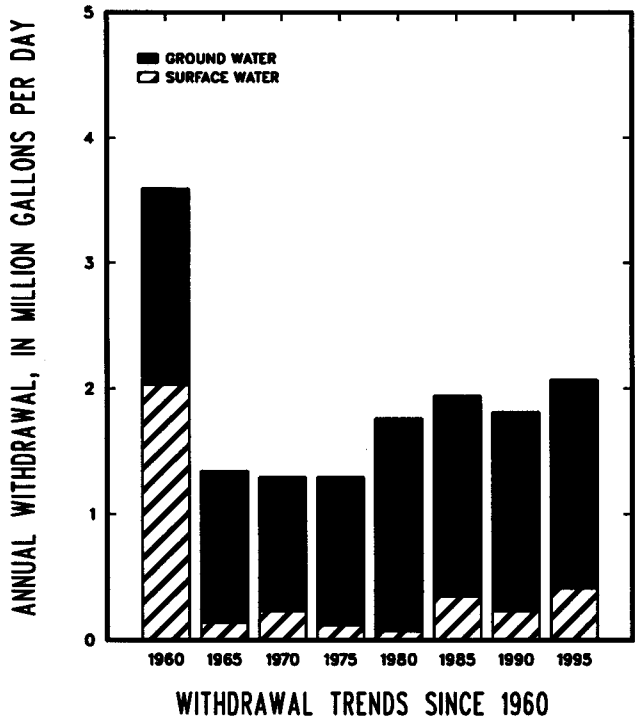
Public Supplier	GW	SW
Lafourche W.W. Dist. 1		7.94
Lockport Water System		.22
Terrebonne W.W. Dist. 1		8.50
Thibodaux Water System		3.29

LA SALLE

Population: 13,920
Population served by public supply: 13,248
Per capita withdrawals (gal/d): 149
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.43	0.00	1.43
Industrial	.10	.15	.25
Power generation	.00	.00	.00
Rural domestic	.05	.00	.05
Livestock	.02	.04	.05
Rice irrigation	.00	.00	.00
General irrigation	.00	.22	.22
Aquaculture	.05	.00	.05
TOTALS	1.66	.41	2.07



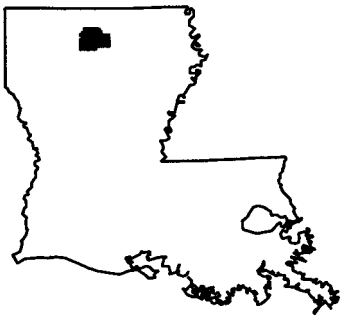
WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)		
Standard Industrial Classification	GW	SW
24 Lumber	0.10	0.15

Withdrawals by Major Public Supplier (Mgal/d)		
Public Supplier	GW	SW
Belah-Fellowship Water Sys.	0.05	
E. Jena Water System	.05	
Jena Water System	.42	
La Salle W.W. Dist. 1	.30	
Nebo Water System	.04	
Olla Water System	.19	
Rogers Comm. Water System	.02	
Summerville-Rosefield Water	.17	
Tullos Water System	.04	
Urania Water System	.14	

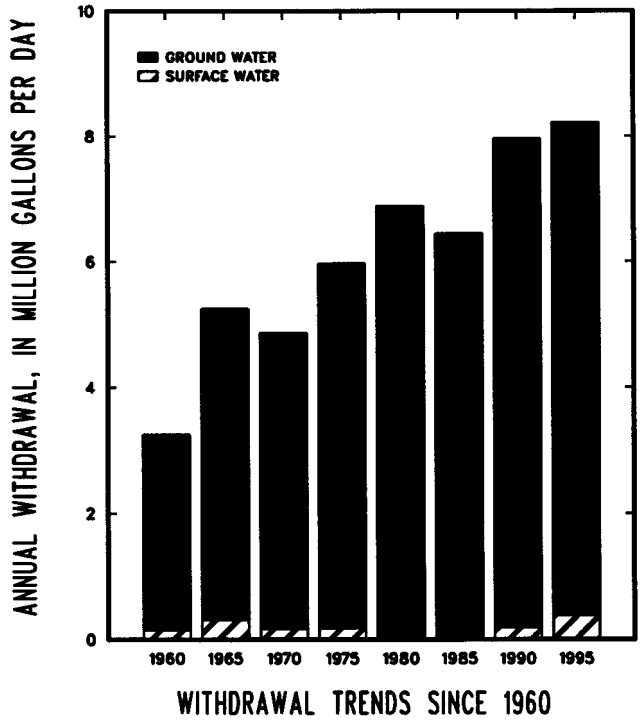
LINCOLN

Population: 42,950
Population served by public supply: 40,820
Per capita withdrawals (gal/d): 191
Acres irrigated: 185
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	6.99	0.00	6.99
Industrial	.50	.00	.50
Power generation	.00	.00	.00
Rural domestic	.17	.00	.17
Livestock	.03	.24	.27
Rice irrigation	.00	.00	.00
General irrigation	.09	.00	.09
Aquaculture	.07	.14	.21
TOTALS	7.84	.38	8.23



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
13 Oil and gas extraction	0.47	
24 Lumber	.02	

Withdrawals by Major Public Supplier (Mgal/d)

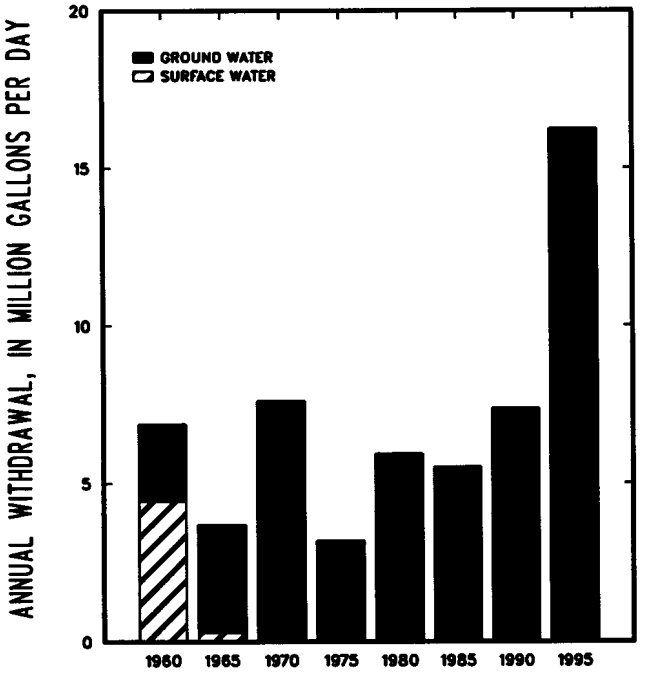
Public Supplier	GW	SW
Choudrant Water System	0.08	
Culbertson Water System	.37	
Dubach Water System	.25	
Fellowship Water System	.05	
Grambling Water System	.38	
Greater Ward One W.W.	.30	
Hico Water System	.13	
Hilly-Greenwood Water System	.05	
Lincoln W.W. Dist. 1	.04	
Lincoln W.W. Dist. 3	.17	
Mineral Springs Water System	.10	
Mt. Olive Water Dist.	.08	
Mt. Zion Water System	.08	
Ruston Water and Light	4.13	
Simsboro Water System	.21	
Wesley Chapel Water System	.12	

LIVINGSTON

Population: 77,391
Population served by public supply: 54,547
Per capita withdrawals (gal/d): 209
Acres irrigated: 130
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	7.19	0.00	7.19
Industrial	.02	.00	.02
Power generation	.00	.00	.00
Rural domestic	1.84	.00	1.84
Livestock	.11	.01	.13
Rice irrigation	.00	.00	.00
General irrigation	.05	.00	.05
Aquaculture	7.02	.00	7.02
TOTALS	16.23	.01	16.24



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

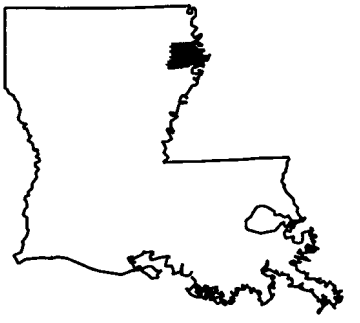
Standard Industrial Classification	GW	SW
24 Lumber	0.02	
33 Primary metals	.01	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Albany Water System	0.24	
Capitol Utilities Corp.	.39	
Colyell Comm. Water Assoc.	.16	
Denham Springs Water System	3.05	
Fourth Ward Water Assoc.	.18	
French Settlement Water Co.	.37	
Killian Water System	.02	
Livingston Water System	.29	
Port Vincent Water System	.05	
Vincent Place Subdivision	.03	
Walker Water System	.63	
Ward 2 Water District	1.61	
Water Dist. 2	.08	

MADISON

Population: 12,449
Population served by public supply: 12,201
Per capita withdrawals (gal/d): 1,493
Acres irrigated: 26,922
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

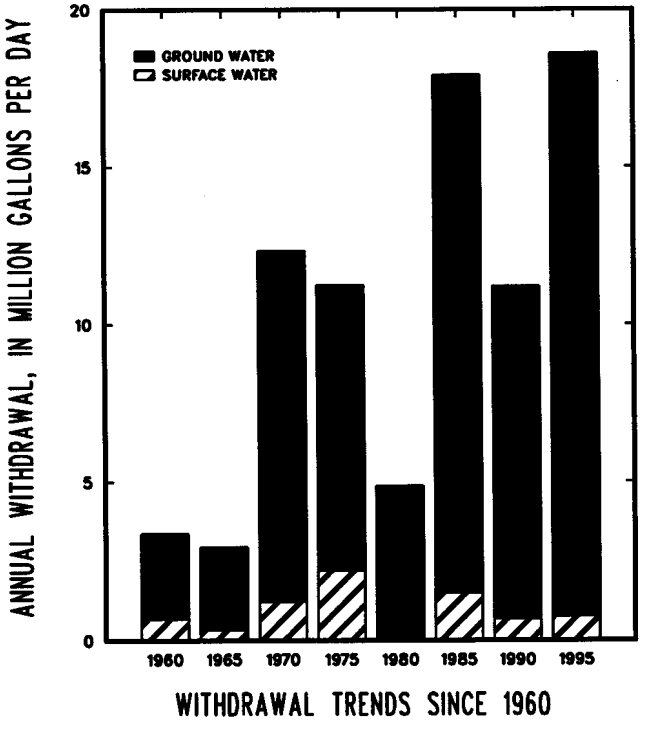
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.78	0.00	1.78
Industrial	.00	.00	.00
Power generation	.00	.00	.00
Rural domestic	.02	.00	.02
Livestock	.01	.01	.02
Rice irrigation	8.09	.70	8.80
General irrigation	7.20	.04	7.24
Aquaculture	.74	.00	.74
TOTALS	17.85	.75	18.60

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW

Withdrawals by Major Public Supplier (Mgal/d)

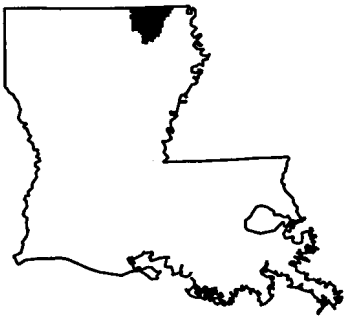
Public Supplier	GW	SW
Delta Water System	0.02	
People's Water Service	1.22	
Walnut Bayou Water Assoc.	.53	



WITHDRAWAL TRENDS SINCE 1960

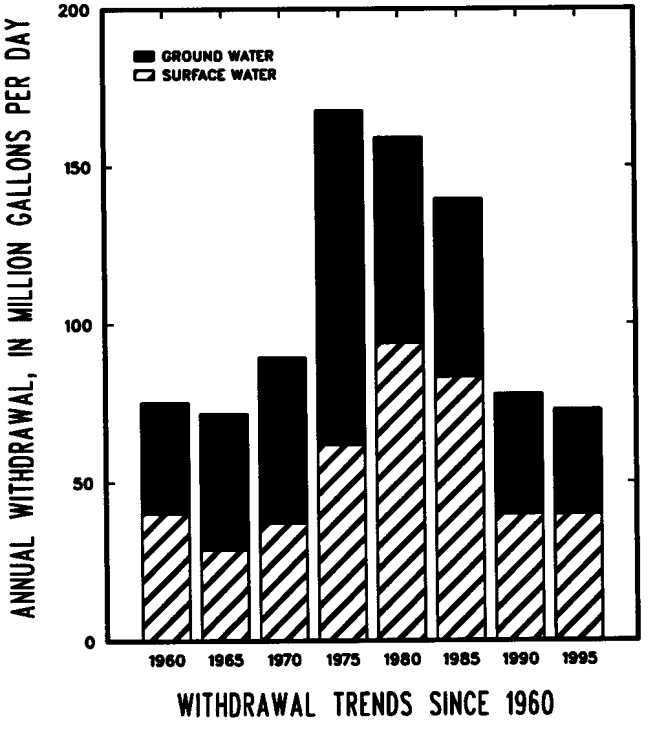
MOREHOUSE

Population: 31,989
Population served by public supply: 29,615
Per capita withdrawals (gal/d): 2,275
Acres irrigated: 86,886
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	3.84	0.00	3.84
Industrial	7.41	26.86	34.26
Power generation	.00	.00	.00
Rural domestic	.19	.00	.19
Livestock	.04	.01	.05
Rice irrigation	10.27	11.20	21.47
General irrigation	11.09	1.66	12.75
Aquaculture	.22	.00	.22
TOTALS	33.07	39.73	72.80



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

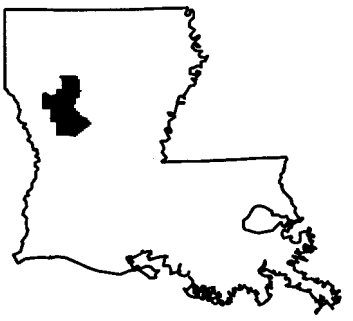
Standard Industrial Classification	GW	SW
26 Paper products	7.41	26.86

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Bayou Bonne Idee Water Sys.	0.09	
Beekman Water System	.05	
Bonita Water System	.04	
Collinston Water System	.03	
Jones-McGinty Water System	.13	
Mer Rouge Water System	.12	
Morehouse Central Water Sys.	.07	
Morehouse W.W. Dist. 1	.13	
Morehouse W.W. Dist. 2	.25	
Oak Ridge Water System	.05	
People's Water Service	2.65	
S. Bonne Idee Water System	.02	
Ward 3 Water System	.18	

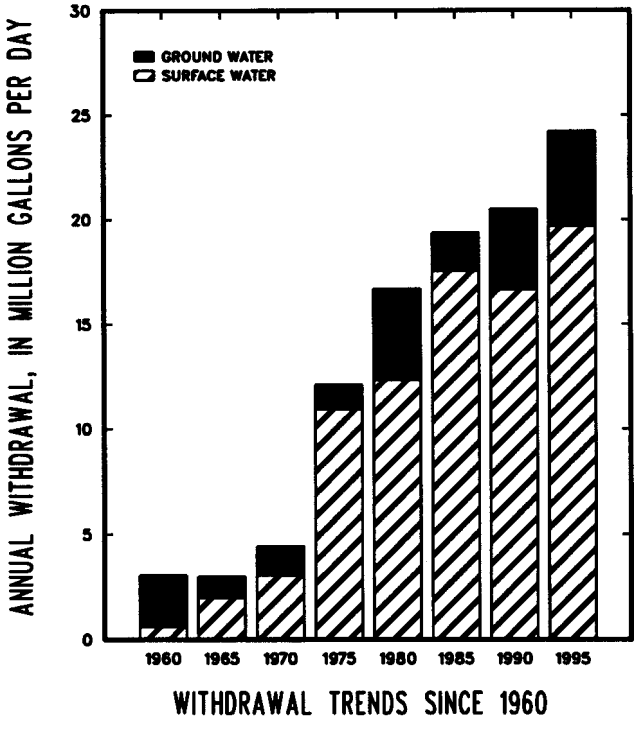
NATCHITOCHES

Population: 37,046
Population served by public supply: 31,190
Per capita withdrawals (gal/d): 653
Acres irrigated: 11,647
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.74	5.44	6.18
Industrial	.00	9.06	9.06
Power generation	.00	.00	.00
Rural domestic	.48	.00	.48
Livestock	.08	.34	.43
Rice irrigation	.43	2.35	2.77
General irrigation	.51	.08	.59
Aquaculture	2.30	2.41	4.71
TOTALS	4.54	19.68	24.22



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
26 Paper products		9.06

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Campti Water System	0.10	
Chee Chee Bay Water System	.02	
Chestnut-Readhimer W.S.	.04	
Clarence Water System	.08	
Creston Water System	.03	
Goldonna Water System	.05	
Hagewood Water System	.03	
Natchitoches Water System		5.40
Natchitoches W.W. Dist. 2	.22	
Powhatan Water System	.05	
Provencal Water System	.03	
Robeline-Marthaville Water	.07	
Sandy Point 480 Water System		.03

ORLEANS

Population: 488,582
Population served by public supply: 485,751
Per capita withdrawals (gal/d): 1,300
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

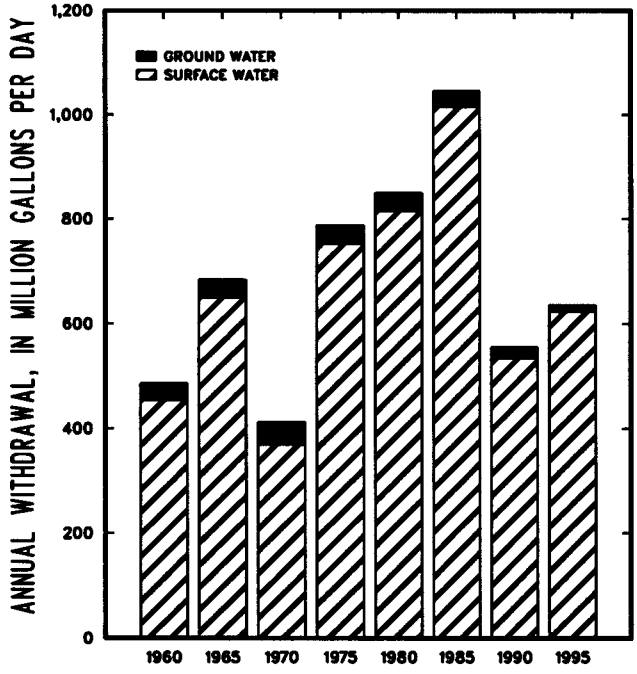
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.07	125.18	125.25
Industrial	2.20	.00	2.20
Power generation	10.36	497.47	507.84
Rural domestic	.23	.00	.23
Livestock	.00	.00	.00
Rice irrigation	.00	.00	.00
General irrigation	.02	.00	.02
Aquaculture	.00	.00	.00
TOTALS	12.89	622.65	635.54

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products	1.08	
28 Chemicals	.90	
32 Glass, clay, and concrete	.22	

Withdrawals by Major Public Supplier (Mgal/d)

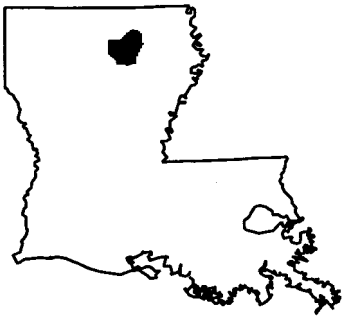
Public Supplier	GW	SW
New Orleans Sewage & Water		125.18



WITHDRAWAL TRENDS SINCE 1960

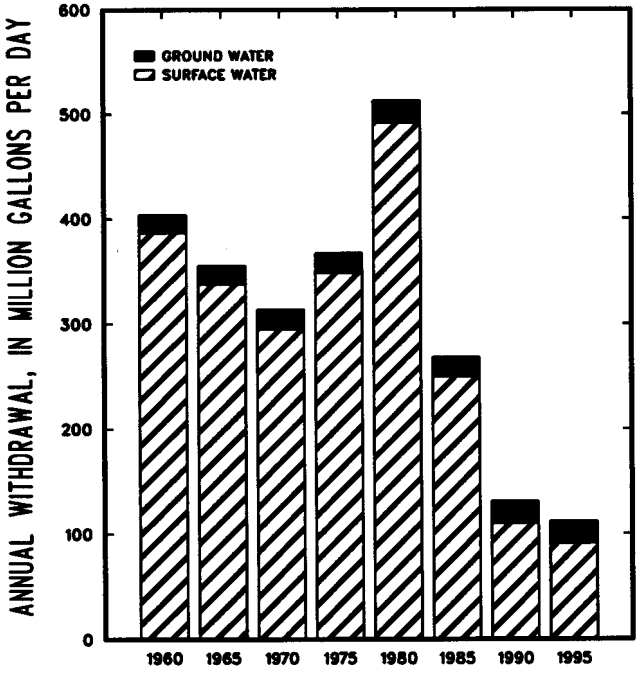
OUACHITA

Population: 146,427
Population served by public supply: 141,145
Per capita withdrawals (gal/d): 764
Acres irrigated: 5,360
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	8.49	13.14	21.63
Industrial	10.66	22.16	32.82
Power generation	.18	52.85	53.03
Rural domestic	.42	.00	.42
Livestock	.00	.03	.03
Rice irrigation	.32	1.27	1.59
General irrigation	.07	.22	.29
Aquaculture	1.07	1.07	2.14
TOTALS	21.22	90.74	111.96



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
13 Oil and gas extraction	0.02	
14 Non-fuels/non-metals mining		0.08
26 Paper products	10.55	14.80
28 Chemicals	.09	7.28

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Better Water Works	0.19	
Cadeville Water Dist.	.19	
Calhoun Water System	.03	
Cheniere-Drew Water System	.71	
D'Arbonne Hills Subd.	.29	
Frost Town Water System	.09	
Greater Ouachita Water Co.	2.27	
Greenacres Water System	.02	
Hickory Bend Water System	.02	
Hillside Park Subdivision	.07	
Indian Village Water System	.09	
L & R Utilities	.11	
McClendon Water System	.05	
Monroe Water System		13.14
Pine Bayou-Tanglewood Water	.16	
Prairie Road Water System	.25	
S.W. Ouachita Water Dist.	.48	
Tidwell Enterprises	.17	
W. Monroe Water System	3.16	
Western Utilities Inc.	.04	

PLAQUEMINES

Population: 25,626
Population served by public supply: 25,031
Per capita withdrawals (gal/d): 4,514
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

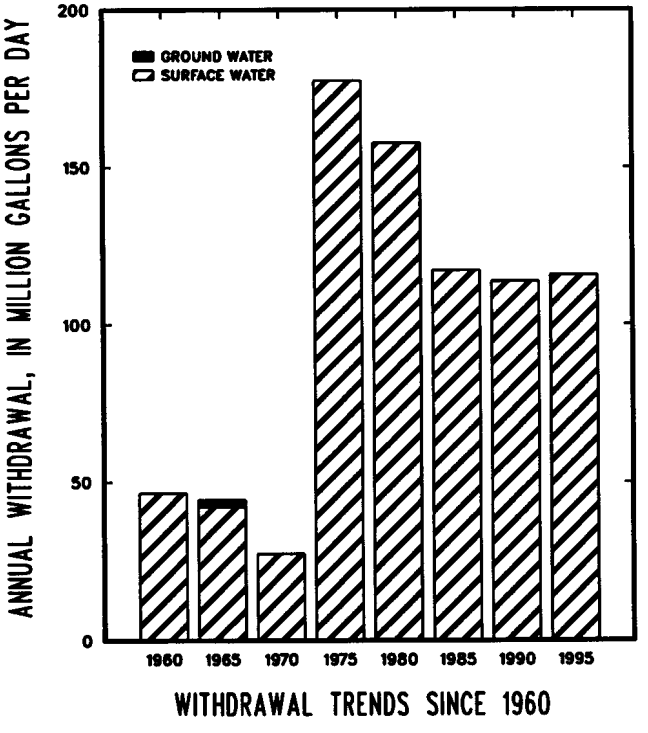
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.00	6.68	6.68
Industrial	.00	108.09	108.09
Power generation	.00	.00	.00
Rural domestic	.05	.00	.05
Livestock	.00	.08	.08
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.00	.80	.80
TOTALS	.05	115.65	115.69

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
28 Chemicals		7.20
29 Petroleum refining		99.64
33 Primary metals		1.25

Withdrawals by Major Public Supplier (Mgal/d)

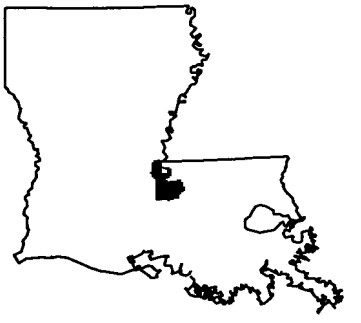
Public Supplier	GW	SW
Plaquemines Parish W.W.		6.68



WITHDRAWAL TRENDS SINCE 1960

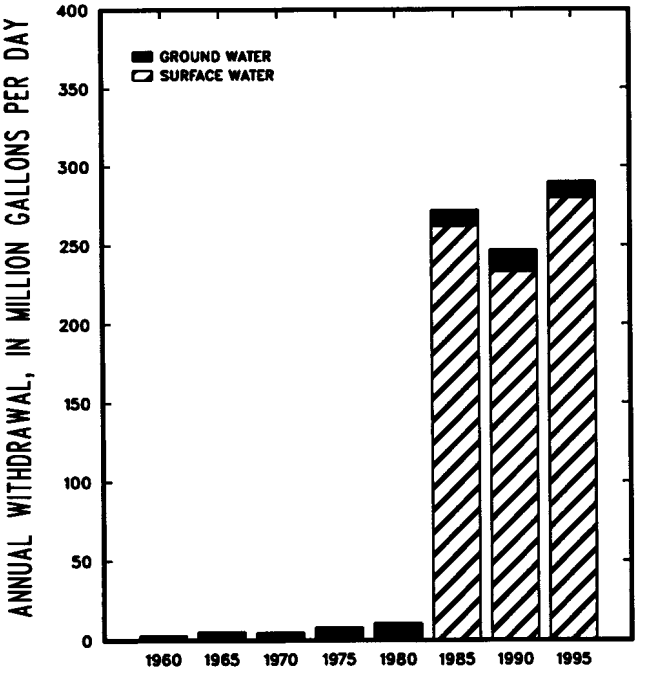
POINTE COUPEE

Population: 23,152
Population served by public supply: 20,260
Per capita withdrawals (gal/d): 12,529
Acres irrigated: 1,230
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	3.15	0.00	3.15
Industrial	4.48	.00	4.48
Power generation	1.26	277.59	278.85
Rural domestic	.23	.00	.23
Livestock	.12	.05	.16
Rice irrigation	.64	.05	.69
General irrigation	.00	.00	.00
Aquaculture	.45	2.08	2.53
TOTALS	10.32	279.77	290.09



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products	3.39	
24 Lumber	.07	
32 Glass, clay, and concrete	1.02	

Withdrawals by Major Public Supplier (Mgal/d)

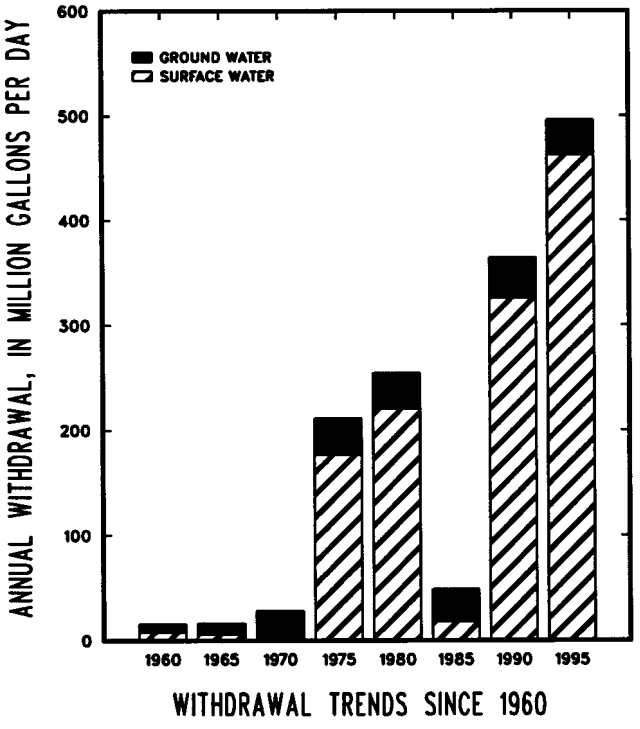
Public Supplier	GW	SW
Brownview Comm. Water System	0.04	
False River W.W. Corp.	.30	
Fordoche Water System	.11	
Innis Water Works	.14	
John Lefeaux Water System	.02	
Livonia Water System	.15	
Lottie Water Works	.02	
M & S Water System	.16	
Morganza Water System	.07	
New Roads Water System	1.49	
Old River Water System	.03	
Pointe Coupee Area Water	.03	
Pointe Coupee Water Dist. 1	.21	
Pointe Coupee W.W. Corp.	.08	
Pointe Coupee W.W. Dist. 2	.19	
Torbert-Frisco Water System	.05	
Waterloo Water Service	.04	

RAPIDES

Population: 127,774
Population served by public supply: 121,552
Per capita withdrawals (gal/d): 3,881
Acres irrigated: 6,286
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	29.29	0.00	29.29
Industrial	.04	.00	.04
Power generation	.12	453.25	453.37
Rural domestic	.49	.00	.49
Livestock	.06	.26	.32
Rice irrigation	2.00	7.15	9.15
General irrigation	.00	.00	.00
Aquaculture	1.74	1.56	3.30
TOTALS	33.75	462.22	495.97



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

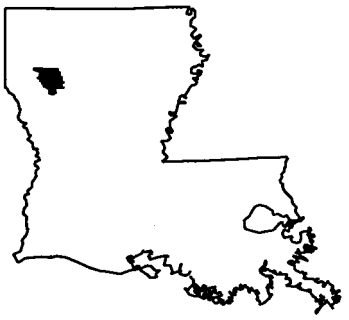
Standard Industrial Classification	GW	SW
20 Food products	0.03	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Alexandria Water System	22.91	
Boyce Water System	.15	
Buckeye Water Dist. 50	.56	
Bunkie Water System	.71	
Cheneyville Water System	.10	
Elmer-Melder-Cal Water Sys.	.20	
Forest Hill Water System	.26	
Gardner Comm. Water System	.24	
Glenmora Water System	.16	
Hammock Water System	.06	
Hineston Water System	.07	
Kolin-Ruby-Wise Water Dist.	.29	
Lecompte Water System	.22	
Lena Water System	.19	
McNary Water System	.05	
Pineville Water System	1.76	
Pollock Area Water System	.07	
Rapides Island Water Assoc.	.33	
Rapides W.W. Dist. 3	.62	
Sieper Area Water System	.05	
Ward 1 Water System	.10	
Woodworth Water System	.11	

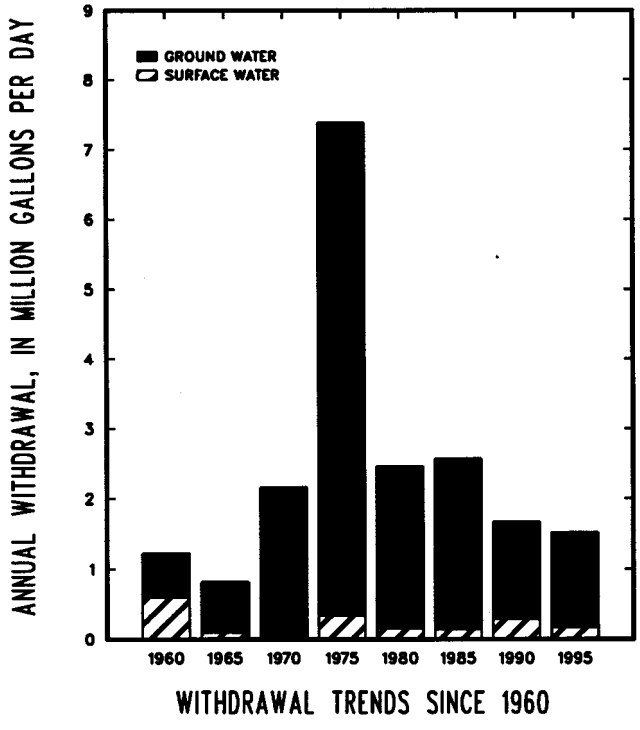
RED RIVER

Population: 9,577
Population served by public supply: 6,833
Per capita withdrawals (gal/d): 158
Acres irrigated: 1,960
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.71	0.00	0.71
Industrial	.00	.00	.00
Power generation	.00	.00	.00
Rural domestic	.21	.00	.21
Livestock	.07	.11	.18
Rice irrigation	.17	.02	.19
General irrigation	.18	.05	.22
Aquaculture	.00	.00	.00
TOTALS	1.35	.17	1.52



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

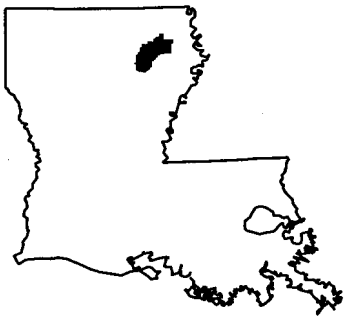
Standard Industrial Classification	GW	SW

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Coushatta Water System	0.36	
E. Cross Water System	.03	
Edgefield Water System	.03	
Halfway-Carroll Water System	.05	
Hall Summit Water System	.07	
Hickory Grove Water System	.04	
Martin Water System	.10	
Social Springs Water System	.02	

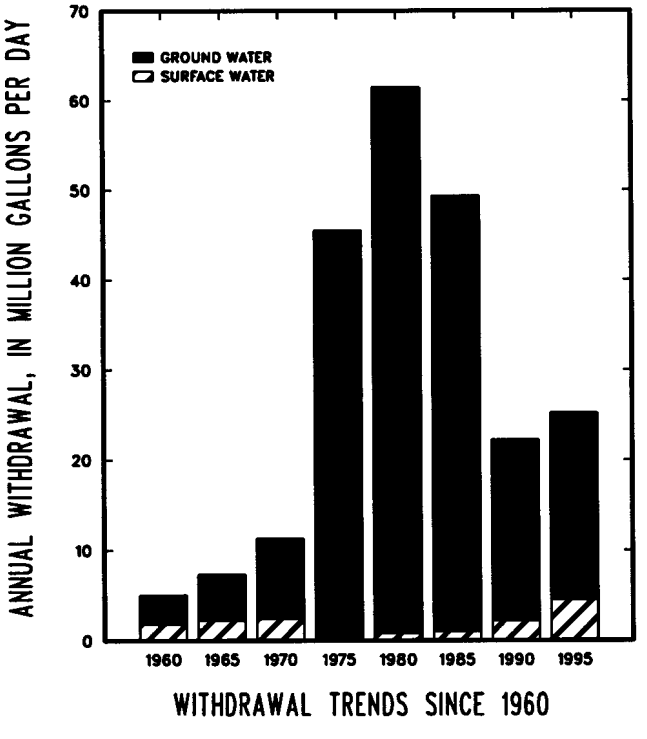
RICHLAND

Population: 20,268
Population served by public supply: 14,468
Per capita withdrawals (gal/d): 1,243
Acres irrigated: 27,876
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	2.70	0.00	2.70
Industrial	.00	.00	.00
Power generation	.00	.00	.00
Rural domestic	.47	.00	.47
Livestock	.03	.06	.09
Rice irrigation	14.64	3.66	18.30
General irrigation	2.28	.78	3.07
Aquaculture	.57	.00	.57
TOTALS	20.69	4.51	25.20



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

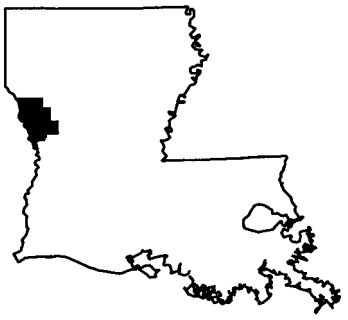
Standard Industrial Classification	GW	SW

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Archibald Water System	0.11	
Delhi Water System	.82	
Liddieville Water System	.06	
Mangham Water System	.18	
N. Franklin Water Works	.62	
Rayville Water System	.53	
River Road W.W. Inc.	.16	
Start Water System	.20	

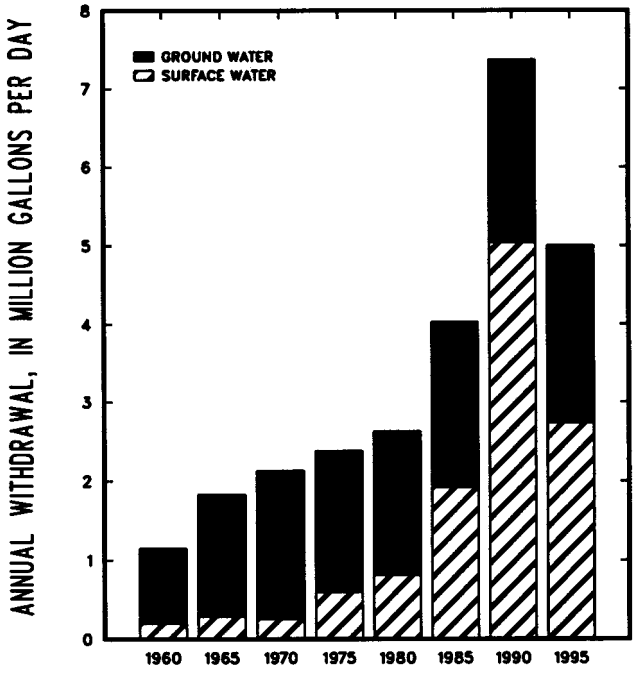
SABINE

Population: 23,221
Population served by public supply: 11,112
Per capita withdrawals (gal/d): 215
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 2,073.24



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.79	1.18	1.98
Industrial	.26	.05	.31
Power generation	.00	1.37	1.37
Rural domestic	.98	.00	.98
Livestock	.25	.08	.33
Rice irrigation	.00	.00	.00
General irrigation	.00	.04	.04
Aquaculture	.00	.00	.00
TOTALS	2.27	2.73	5.01



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
24 Lumber	0.26	0.05

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Belmont Water System	0.24	
Converse Water System	.03	
Ebarb Water Works Dist.		0.26
Fisher Water System	.03	
Many Water System	.05	.85
Noble Water System	.04	
Peg Leg Cove-Allied W.S.	.02	
Pendleton Water Assoc.		.06
Pirates Cove Water Works		.02
Pleasant Hill Water System	.11	
Union Springs Water System	.04	
Zwolle Water System	.18	

ST. BERNARD

Population: 67,369
Population served by public supply: 67,211
Per capita withdrawals (gal/d): 4,536
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

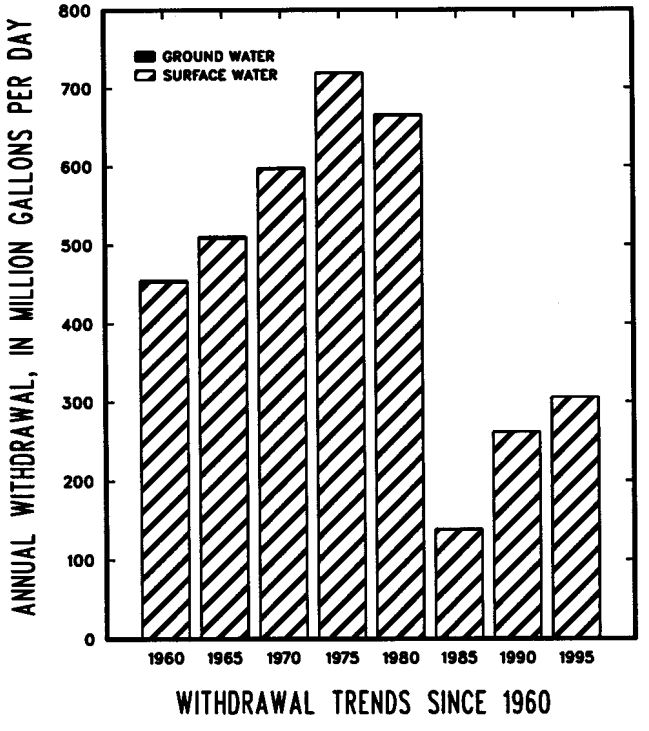
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.00	10.99	10.99
Industrial	.00	294.64	294.64
Power generation	.00	.00	.00
Rural domestic	.01	.00	.01
Livestock	.00	.00	.00
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.01	.00	.01
TOTALS	.02	305.62	305.64

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products		15.65
29 Petroleum refining		278.98

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
St. Bernard Water & Sewage		10.99



WITHDRAWAL TRENDS SINCE 1960

ST. CHARLES

Population: 45,236
Population served by public supply: 44,996
Per capita withdrawals (gal/d): 57,166
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

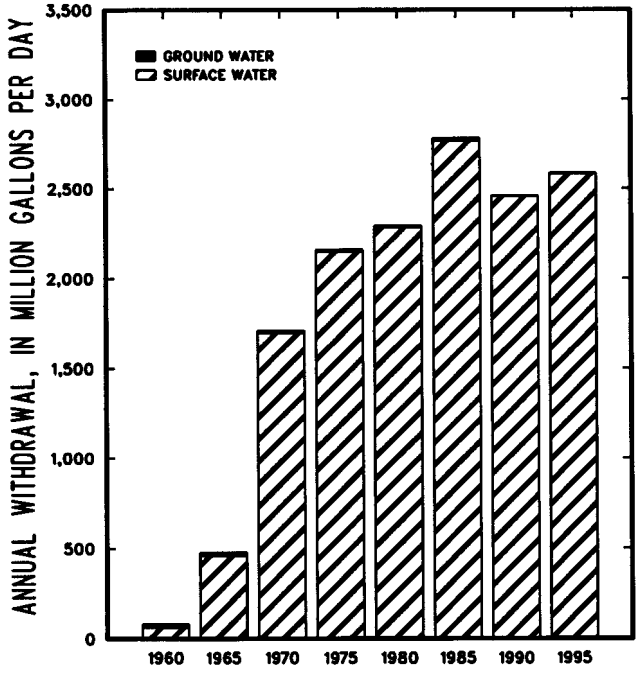
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.00	8.61	8.61
Industrial	4.92	454.82	459.74
Power generation	.00	2,116.81	2,116.81
Rural domestic	.02	.00	.02
Livestock	.03	.03	.05
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.00	.77	.77
TOTALS	4.97	2,581.03	2,585.99

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
28 Chemicals	4.89	448.90
29 Petroleum refining	.04	5.90

Withdrawals by Major Public Supplier (Mgal/d)

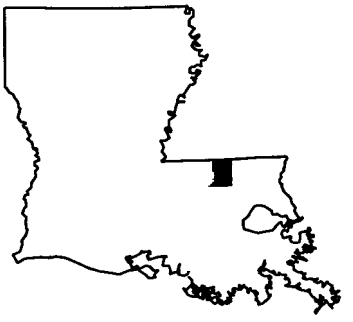
Public Supplier	GW	SW
St. Charles W.W. Dist. 1		4.52
St. Charles W.W. Dist. 2		4.09



WITHDRAWAL TRENDS SINCE 1960

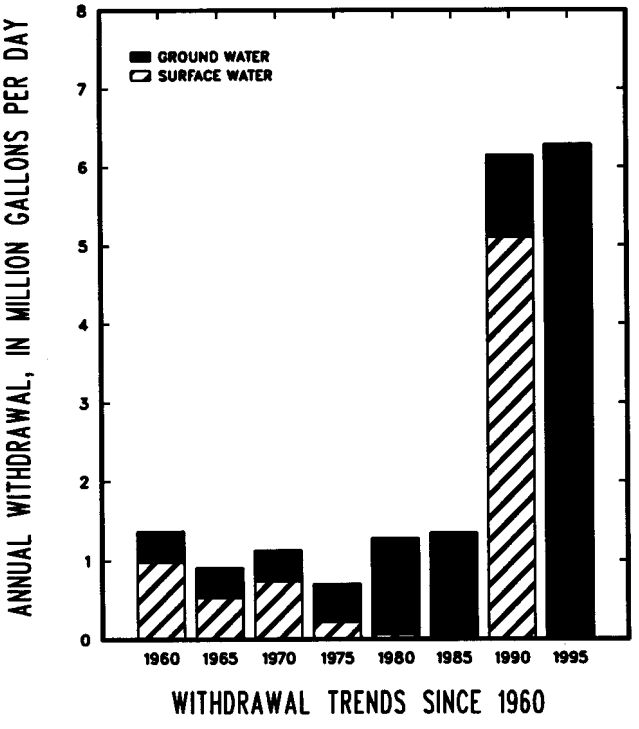
ST. HELENA

Population: 9,923
Population served by public supply: 3,770
Per capita withdrawals (gal/d): 633
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.47	0.00	0.47
Industrial	5.15	.00	5.15
Power generation	.00	.00	.00
Rural domestic	.49	.00	.49
Livestock	.16	.02	.18
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.00	.00	.00
TOTALS	6.27	.02	6.29



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
28 Chemicals	5.15	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Crossroad Water Works	0.05	
Darlington W.W. Assoc.	.03	
Dennis Mills W.W. Assoc.	.05	
Greensburg Water System	.14	
Montpelier Water System	.03	
St. Helena W.W. Dist. 2	.16	

ST. JAMES

Population: 21,518
Population served by public supply: 21,350
Per capita withdrawals (gal/d): 11,363
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

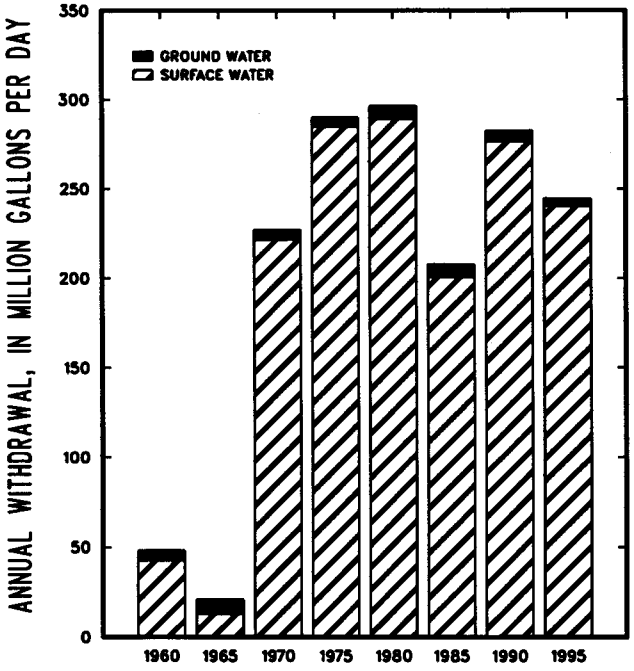
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.00	2.71	2.71
Industrial	4.31	229.47	233.78
Power generation	.00	.00	.00
Rural domestic	.01	.00	.01
Livestock	.00	.00	.00
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.01	8.02	8.03
TOTALS	4.33	240.20	244.53

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products	1.89	0.98
28 Chemicals	2.12	225.02
29 Petroleum refining	.30	3.47

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Gramercy Water System		0.34
Lutcher Water System		.57
St. James W.W. Dist. 1		.90
St. James W.W. Dist. 2		.90



WITHDRAWAL TRENDS SINCE 1960

ST. JOHN THE BAPTIST

Population: 41,452
Population served by public supply: 40,489
Per capita withdrawals (gal/d): 2,420
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

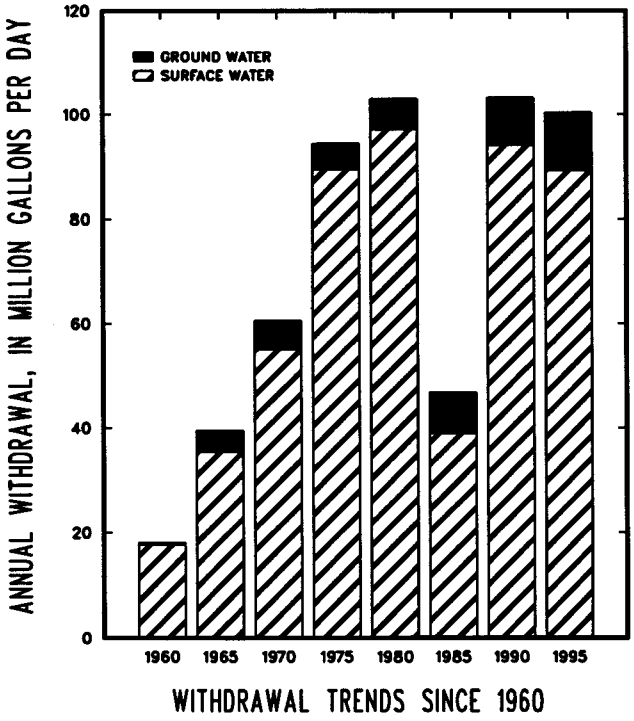
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	3.22	2.23	5.45
Industrial	7.78	84.17	91.95
Power generation	.00	.00	.00
Rural domestic	.08	.00	.08
Livestock	.00	.00	.00
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.00	2.87	2.87
TOTALS	11.07	89.27	100.34

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products	0.17	2.67
28 Chemicals	7.60	45.80
29 Petroleum refining		2.41
33 Primary metals		33.00

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
St. John W.W. Dist. 3	3.22	2.23



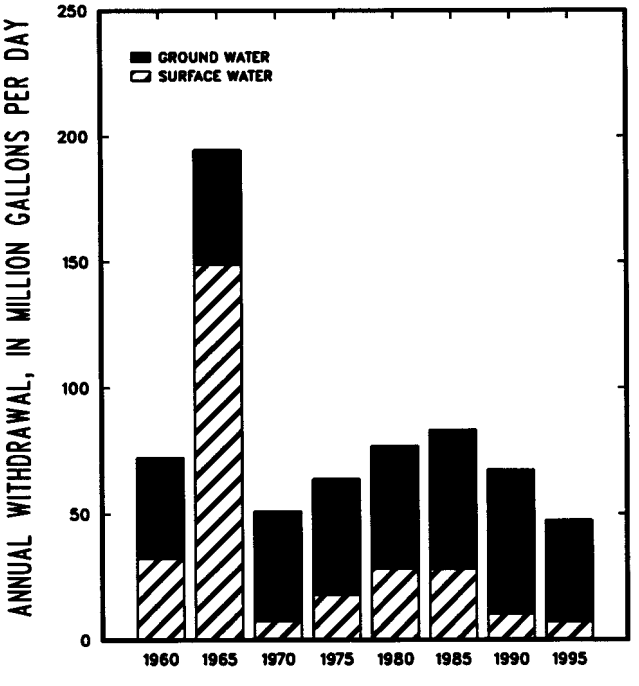
WITHDRAWAL TRENDS SINCE 1960

ST. LANDRY

Population: 81,772
Population served by public supply: 73,037
Per capita withdrawals (gal/d): 580
Acres irrigated: 25,498
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	9.48	0.00	9.48
Industrial	2.61	1.44	4.05
Power generation	.00	.00	.00
Rural domestic	.70	.00	.70
Livestock	.12	.12	.23
Rice irrigation	12.07	1.89	13.96
General irrigation	.00	.00	.00
Aquaculture	15.37	3.64	19.01
TOTALS	40.35	7.09	47.44



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

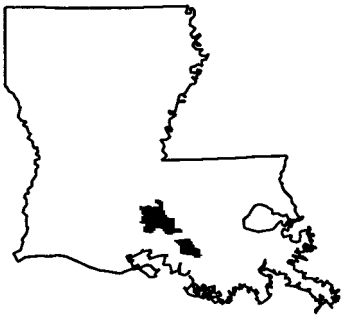
Standard Industrial Classification	GW	SW
13 Oil and gas extraction	0.02	
24 Lumber	.15	
29 Petroleum refining	2.45	1.44

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Arnaudville Water System	0.20	
Cankton Water System	.09	
Eunice Water System	1.62	
Garland-Whiteville Water	.06	
Grand Coteau Water System	.11	
Grand Prairie Water System	.10	
Greenbriar-Prairie Basse W.S.	.11	
K S Water System Inc.	.03	
Krotz Springs Water System	.10	
Lawtell W.W. Dist. 1	.21	
Leonville Water System	.48	
Lewisburg-Bellevue W.S.	.33	
Melville Water System	.18	
Morrow Water System	.06	
Opelousas Water System	4.44	
Palmetto Water System	.13	
Plaisance Water System	.42	
Port Barre Water System	.25	
Prairie Ronde Water System	.19	
Sunset Water System	.19	
Washington Water System	.15	

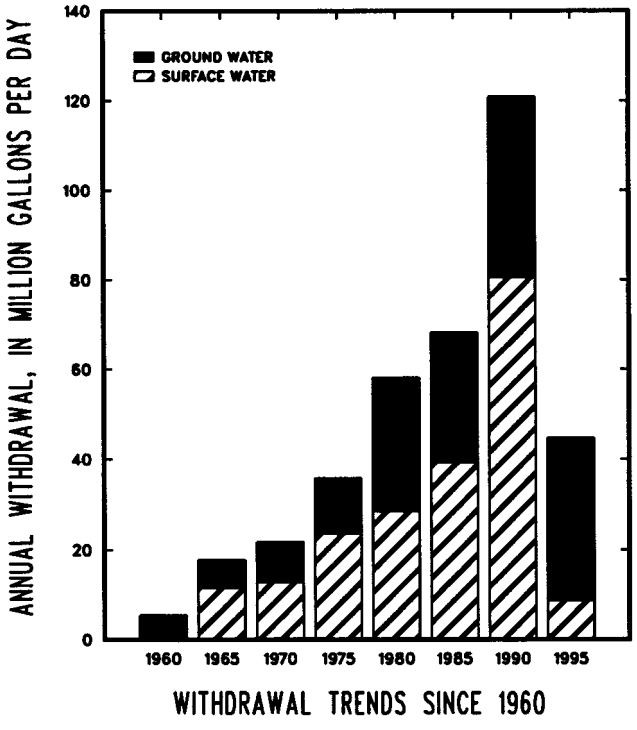
ST. MARTIN

Population: 45,683
Population served by public supply: 36,231
Per capita withdrawals (gal/d): 978
Acres irrigated: 6,407
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	5.32	0.00	5.32
Industrial	.15	.25	.40
Power generation	.00	.00	.00
Rural domestic	.76	.00	.76
Livestock	.05	.01	.05
Rice irrigation	.48	4.28	4.76
General irrigation	.00	.00	.00
Aquaculture	29.23	4.17	33.40
TOTALS	35.98	8.71	44.69



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products		0.25
28 Chemicals	0.15	

Withdrawals by Major Public Supplier (Mgal/d)

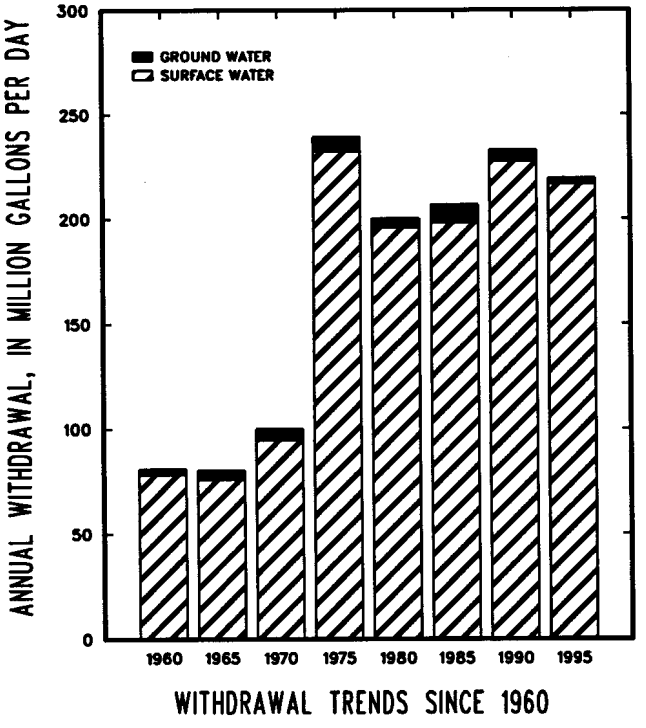
Public Supplier	GW	SW
Breaux Bridge Water System	0.67	
Catahoula Water System	.15	
Cecilia Water System	.54	
Henderson-Nina Water System	.21	
Parks Water System	.80	
St. Martin Parish W. & W.	1.75	
St. Martinville Water System	.98	
United Water System	.21	

ST. MARY

Population: 58,218
Population served by public supply: 56,204
Per capita withdrawals (gal/d): 3,767
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.13	11.25	11.38
Industrial	1.95	58.26	60.20
Power generation	.00	143.19	143.19
Rural domestic	.16	.00	.16
Livestock	.02	.00	.02
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.49	3.93	4.42
TOTALS	2.74	216.62	219.36



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
13 Oil and gas extraction		0.10
20 Food products	0.40	.41
28 Chemicals	1.55	2.61
29 Petroleum refining		42.05
32 Glass, clay, and concrete		12.84

Withdrawals by Major Public Supplier (Mgal/d)

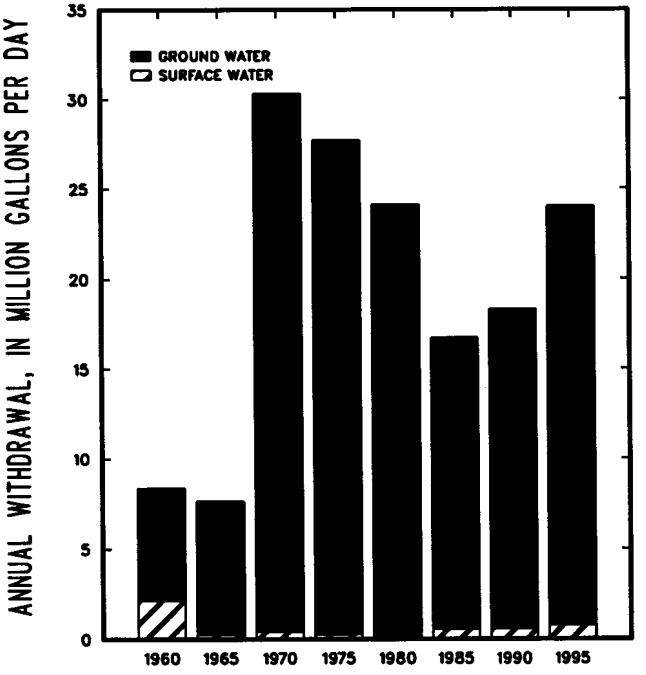
Public Supplier	GW	SW
Berwick-Bayou Vista W.W.		1.19
Franklin Water System		1.20
Glencoe Comm. Water System	0.02	
Morgan City Water System		4.59
Patterson Water System		.99
St. Mary Water Dist. 3		.80
St. Mary Water Dist. 5		1.10
St. Mary Water Dist. 6		1.40
St. Mary W.W. Dist. 7	.11	

ST. TAMMANY

Population: 164,394
Population served by public supply: 102,367
Per capita withdrawals (gal/d): 145
Acres irrigated: 1,200
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	15.30	0.00	15.30
Industrial	.17	.00	.17
Power generation	.00	.00	.00
Rural domestic	5.03	.00	5.03
Livestock	.05	.03	.08
Rice irrigation	.00	.00	.00
General irrigation	.80	.54	1.34
Aquaculture	1.87	.20	2.07
TOTALS	23.23	.77	24.00



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

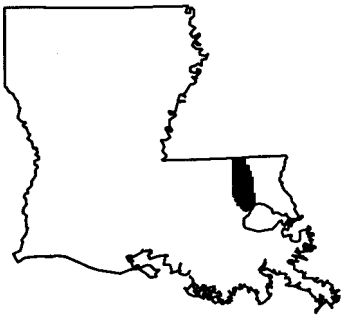
Standard Industrial Classification	GW	SW
20 Food products	0.01	
28 Chemicals	.09	
30 Rubber and plastics	.07	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Abita Springs Water System	0.16	
Alton Water System	.02	
Bayou Liberty Water Co.	.83	
Beau Chene Subdivision	.48	
Ben Thomas Road Water Dist.	.03	
Bleu Lake Water Co. Inc.	.02	
Coast W.W. Inc.	.63	
Covington Water System	1.27	
Cross Gates Utilities Co.	.37	
Folsom Water System	.09	
Greenleaves Utility Corp.	.53	
LA Water Service	2.27	
Lee Road Water Co.	.32	
Madisonville Water System	.13	
Mandeville Water System	1.35	
Northshore Utility Co.	.02	
Resolve Water System	.35	
Royal Gardens Home Assoc.	.03	
Slidell Water System	4.43	
Southeastern LA Water & Sewage	.67	
St. Tammany Water Dist. 2	.30	
St. Tammany Water Dist. 3	.30	
Sun Water System	.05	
Tchefuncte Club Estates	.14	

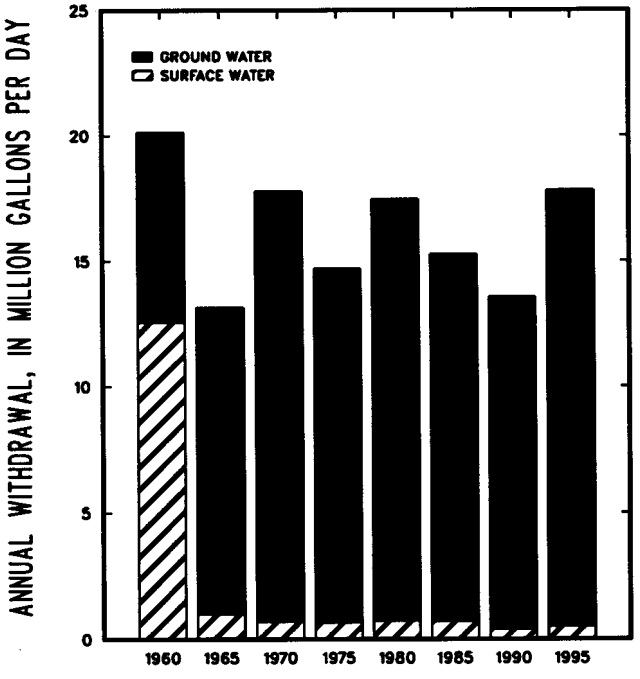
TANGIPAHOA

Population: 90,273
Population served by public supply: 55,200
Per capita withdrawals (gal/d): 197
Acres irrigated: 800
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	9.73	0.00	9.73
Industrial	.95	.00	.95
Power generation	.00	.00	.00
Rural domestic	2.82	.00	2.82
Livestock	.22	.15	.38
Rice irrigation	.00	.00	.00
General irrigation	.30	.00	.30
Aquaculture	3.30	.36	3.66
TOTALS	17.32	.51	17.83



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

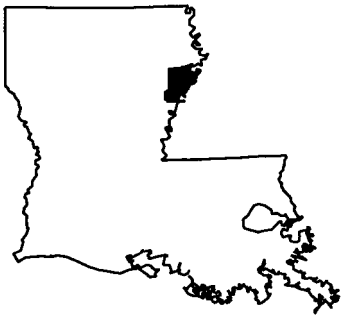
Standard Industrial Classification	GW	SW
20 Food products	0.89	
24 Lumber	.04	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Amite Water System	1.00	
Bon Aire Estates Util. Co.	.03	
Fluker Water Works	.03	
French Settlement Water Co.	.22	
Hammond Heights Water Co.	.16	
Hammond Water System	4.75	
Independence Water System	.21	
Kentwood Water System	.26	
Pine Hill Forest Subd.	.02	
Ponchatoula Water System	.69	
Roseland Water System	.50	
Tangipahoa Water Works	.03	
Tickfaw Water System	.04	
Westview Water Works	.11	
Water Dist. 2	1.23	

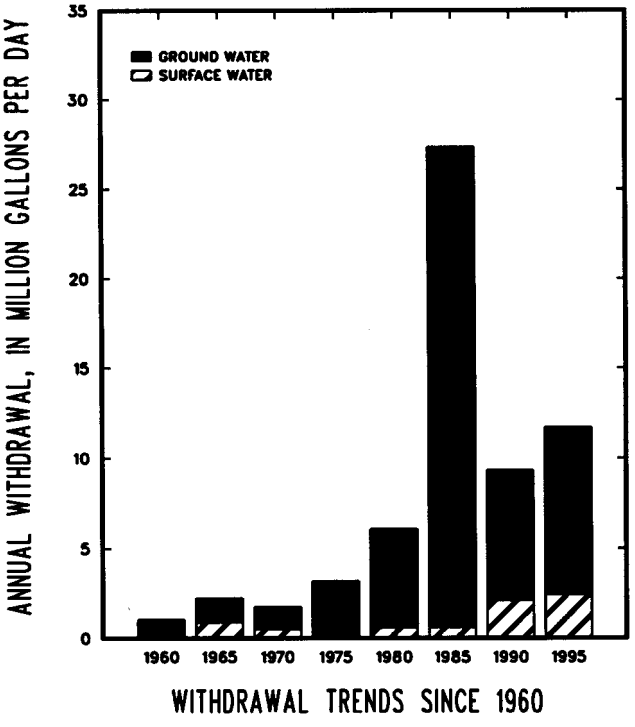
TENSAS

Population: 6,751
Population served by public supply: 6,443
Per capita withdrawals (gal/d): 1,736
Acres irrigated: 16,023
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.46	0.57	1.03
Industrial	.00	.00	.00
Power generation	.00	.00	.00
Rural domestic	.02	.00	.02
Livestock	.01	.03	.03
Rice irrigation	5.72	1.43	7.16
General irrigation	2.68	.41	3.09
Aquaculture	.39	.00	.39
TOTALS	9.28	2.44	11.72



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Lake Bruin Water System		0.04
Newellton Water System		.25
St. Joseph Water System	0.38	
Ts. Water Distribution Assoc.		.28
Waterproof Water System	.09	

TERREBONNE

Population: 99,948
Population served by public supply: 99,827
Per capita withdrawals (gal/d): 246
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

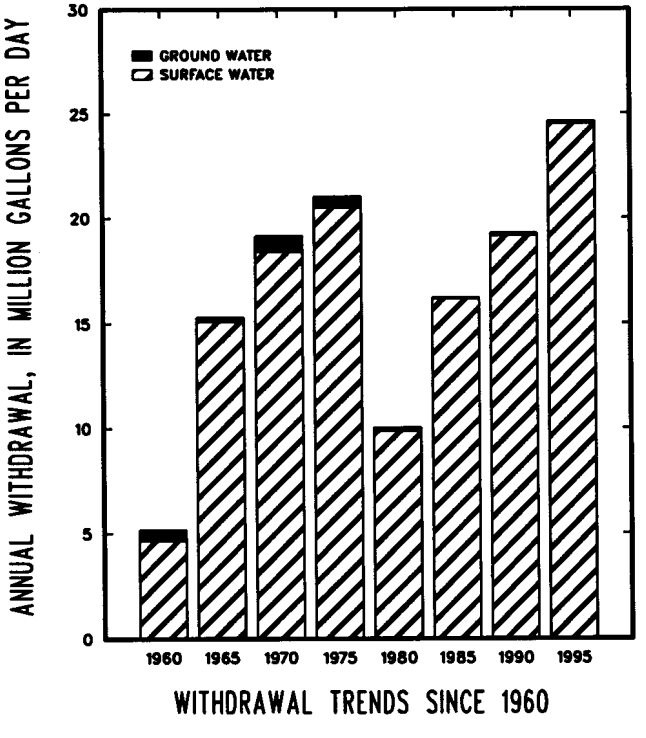
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	0.00	4.75	4.75
Industrial	.05	2.30	2.36
Power generation	.00	.00	.00
Rural domestic	.01	.00	.01
Livestock	.05	.01	.06
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.00	17.44	17.44
TOTALS	.12	24.50	24.62

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
13 Oil and gas extraction		0.06
20 Food products	0.05	2.24

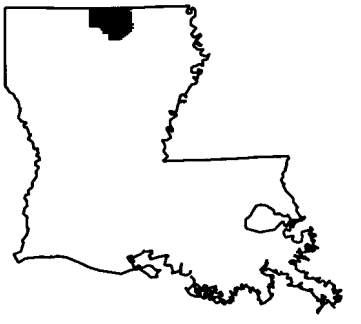
Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Terrebonne W.W. Dist. 1		4.75



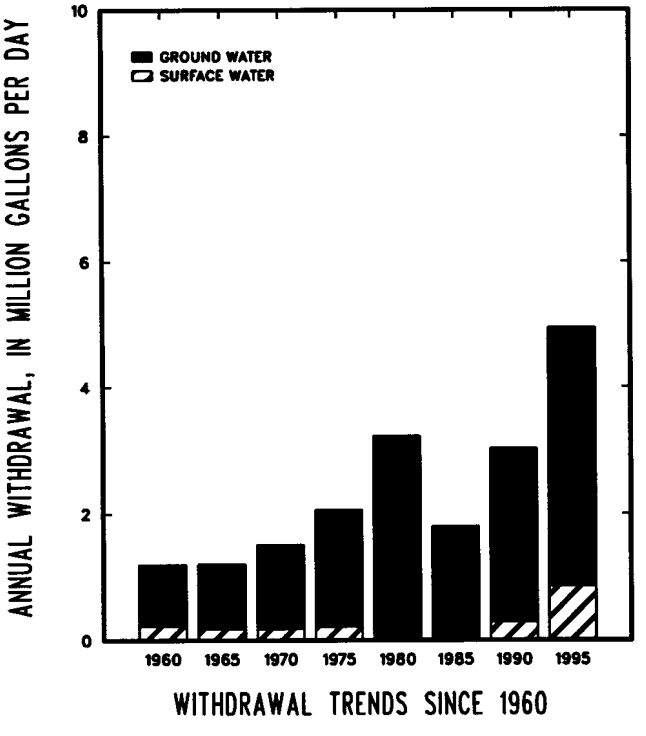
UNION

Population: 21,257
Population served by public supply: 19,000
Per capita withdrawals (gal/d): 232
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	3.48	0.00	3.48
Industrial	.08	.00	.08
Power generation	.00	.00	.00
Rural domestic	.18	.00	.18
Livestock	.11	.46	.57
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.25	.39	.63
TOTALS	4.10	.85	4.95



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

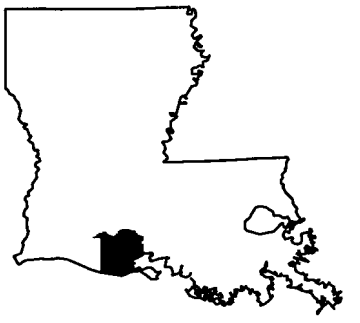
Standard Industrial Classification	GW	SW
24 Lumber	0.08	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Bernice Water System	0.28	
Concord Water System	.03	
Corney Water System	.03	
D'Arbonne Water System	.37	
Downsville Water System	.02	
Farmerville Water System	1.47	
Holmesville Water System	.13	
Linville-Haile Water System	.16	
Litroe Water System	.06	
Marion Water System	.11	
Point-Wilhite Water System	.11	
Randolph Water System	.02	
Rocky Branch W.W. Dist.	.07	
Salem Water System	.03	
Sardis Water System	.08	
Tri-Water System	.21	
Union W.W. Dist. 1	.15	
W. Sterlington Water System	.08	
Wards Chapel Water System	.08	

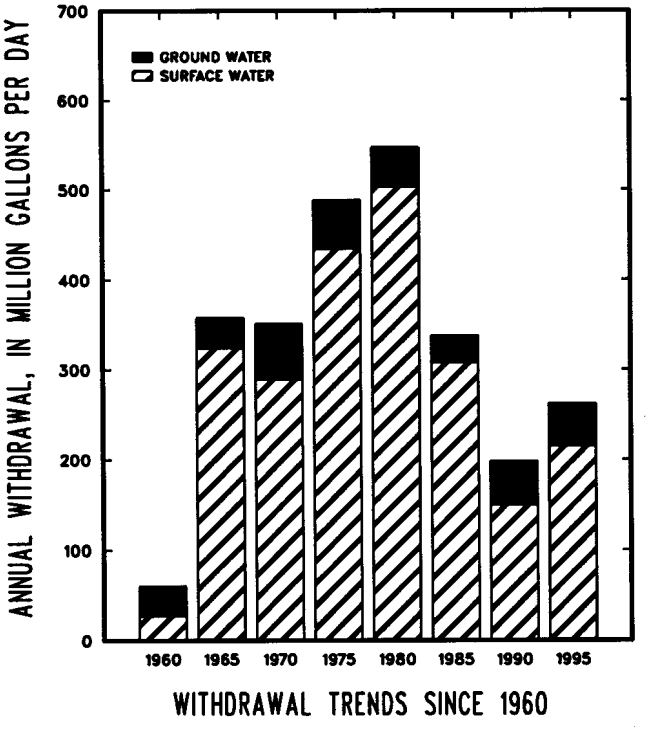
VERMILION

Population: 50,786
Population served by public supply: 24,838
Per capita withdrawals (gal/d): 5,164
Acres irrigated: 98,634
Hydroelectric power instream use (Mgal/d): 0.00



Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	3.98	0.00	3.98
Industrial	2.67	.00	2.67
Power generation	.00	.00	.00
Rural domestic	2.08	.00	2.08
Livestock	.09	.37	.46
Rice irrigation	32.11	149.64	181.75
General irrigation	.00	.00	.00
Aquaculture	6.65	64.70	71.34
TOTALS	47.57	214.70	262.27



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
13 Oil and gas extraction	0.70	
20 Food products	.53	
29 Petroleum refining	1.43	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Abbeville Water System	2.04	
Acadiana Treatment System	.03	
Delcambre Water System	.58	
Erath Water System	.25	
Gueydan Water System	.28	
Kaplan Water System	.64	
Maurice Water System	.07	
Waterworks District 1	.05	

VERNON

Population: 56,083
Population served by public supply: 36,987
Per capita withdrawals (gal/d): 164
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

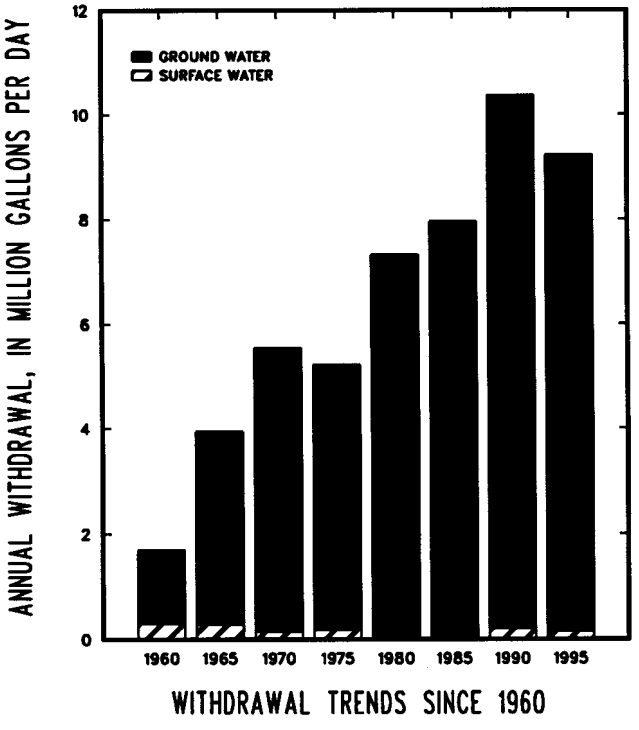
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	7.51	0.00	7.51
Industrial	.00	.00	.00
Power generation	.00	.00	.00
Rural domestic	1.55	.00	1.55
Livestock	.02	.15	.16
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.00	.00	.00
TOTALS	9.08	.15	9.23

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Anacoco Water System	0.08	
E. Central Vernon Water Sys.	.31	
Hornbeck Water System	.05	
Leesville Water System	2.06	
Pitkin Water System	.06	
Rosepine Water System	.14	
Simpson Water System	.04	
Ward 4 Water District	.60	



WITHDRAWAL TRENDS SINCE 1960

WASHINGTON

Population: 43,378
Population served by public supply: 27,351
Per capita withdrawals (gal/d): 728
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

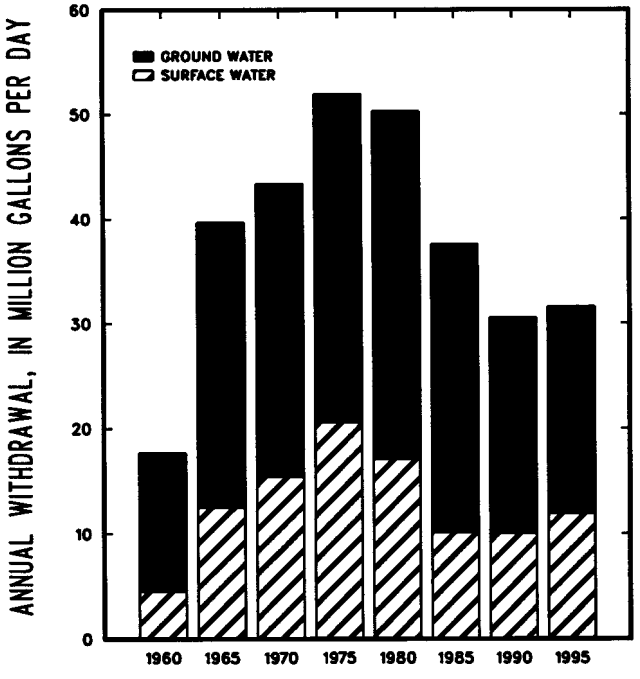
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	6.21	0.00	6.21
Industrial	11.99	11.86	23.85
Power generation	.00	.00	.00
Rural domestic	1.26	.00	1.26
Livestock	.22	.05	.27
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.00	.00	.00
TOTALS	19.68	11.91	31.59

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products	0.13	
26 Paper products	11.85	11.86

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Angie Water System	0.04	
Bogalusa Water System	4.62	
Bogue Lusa W.W. Dist.	.34	
Franklinton Water System	.50	
Rural Franklinton Water Sys.	.27	
Varnado W.W. District	.43	



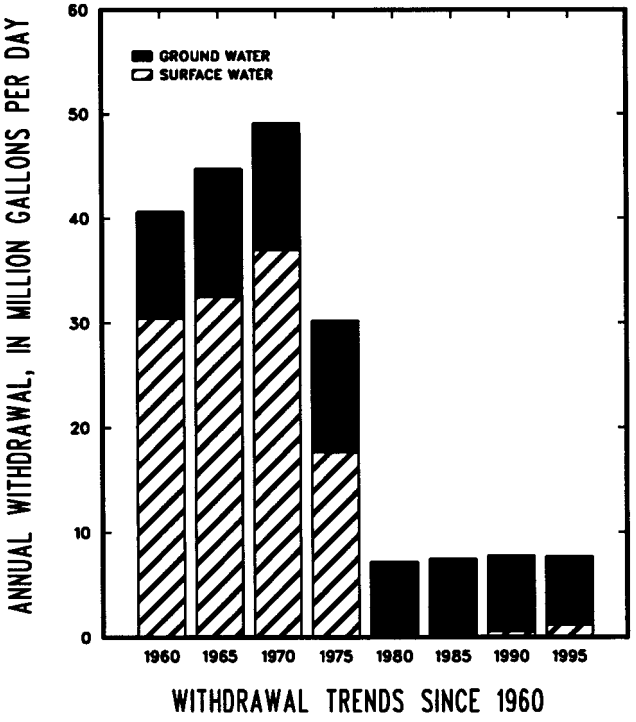
WITHDRAWAL TRENDS SINCE 1960

WEBSTER

Population: 41,866
Population served by public supply: 37,163
Per capita withdrawals (gal/d): 184
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	5.11	0.00	5.11
Industrial	1.00	1.03	2.03
Power generation	.00	.00	.00
Rural domestic	.38	.00	.38
Livestock	.02	.16	.18
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.01	.00	.01
TOTALS	6.51	1.20	7.71



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
24 Lumber	0.55	
28 Chemicals	.01	0.39
29 Petroleum refining	.35	
34 Metal products		.73

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Bistineau Water System	0.05	
Blocker W.W. Corp.	.08	
Central Water System	.11	
Cotton Valley Water System	.06	
Cullen Water Corp.	.19	
Dixie Inn Water System	.03	
Dixie Overland Water Works	.11	
Dorcheat Acres Water System	.04	
Doyline Water System	.08	
Dubberly Water System	.08	
Germantown Water System	.14	
Gilark Water System	.03	
Gilgal Water System	.08	
Heflin Water System	.02	
Jenkins Comm. Water System	.11	
Leton Water System	.06	
McIntyre Water System	.02	
Midway Water Works	.03	
Minden Water System	2.06	
Pleasant Valley Water System	.05	
Salt Works Water System	.04	
Sarepta Water System	.14	
Shongaloo Water System	.13	
Sibley Water System	.22	
Simmons Water Works	.14	
Springhill Water System	.69	
State Line Water System	.03	
Thomasville Water System	.05	
Union Grove Water System	.03	
Village Water System	.18	

WEST BATON ROUGE

Population: 19,977
Population served by public supply: 19,539
Per capita withdrawals (gal/d): 611
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

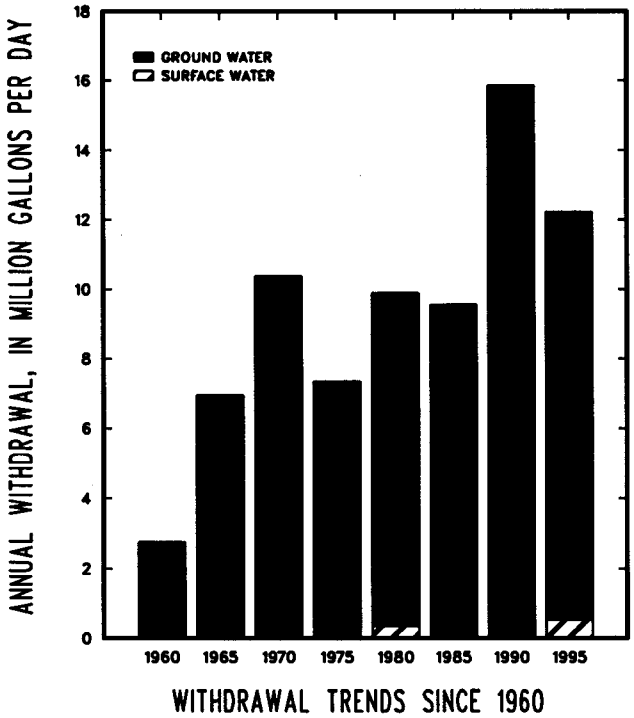
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	5.46	0.00	5.46
Industrial	4.71	.00	4.71
Power generation	.00	.00	.00
Rural domestic	.03	.00	.03
Livestock	.02	.01	.03
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	1.47	.52	1.98
TOTALS	11.69	.53	12.22

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products	1.56	
28 Chemicals	2.81	
29 Petroleum refining	.15	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Plaquemine Water System	1.55	
Port Allen Water System	.63	
W. Baton Rouge Gas and Water	1.71	
W. Baton Rouge Water Dist. 2	.59	
W. Baton Rouge Water Dist. 4	.61	
W. Baton Rouge W.W. Dist. 1	.23	
Westport Properties	.14	



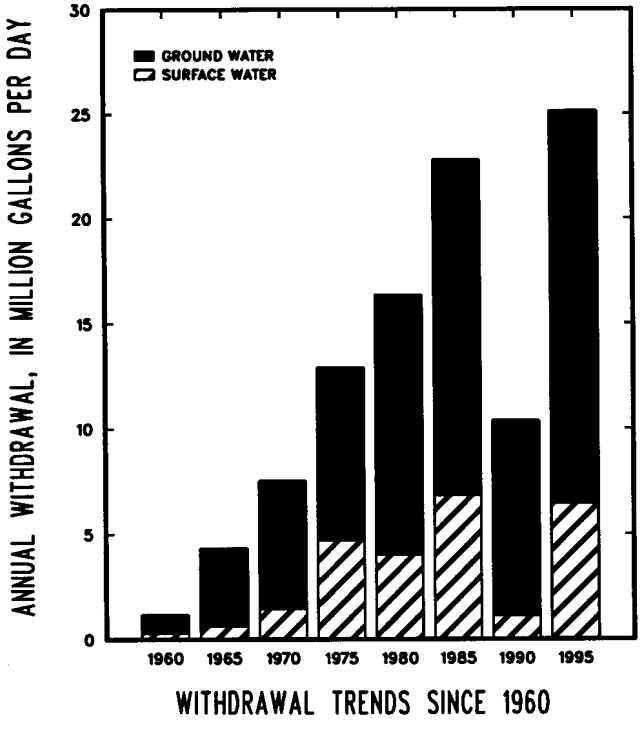
WITHDRAWAL TRENDS SINCE 1960

WEST CARROLL

Population: 11,937
Population served by public supply: 11,008
Per capita withdrawals (gal/d): 2,107
Acres irrigated: 39,931
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.52	0.00	1.52
Industrial	.16	.00	.16
Power generation	.00	.00	.00
Rural domestic	.08	.00	.08
Livestock	.05	.04	.09
Rice irrigation	7.25	5.70	12.95
General irrigation	9.58	.71	10.29
Aquaculture	.06	.00	.06
TOTALS	18.70	6.45	25.15



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products	0.16	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Epps Water System	0.05	
Fiske Union Water System	.14	
Forest Water System	.11	
Goodwill Water System	.07	
Monticello Water System	.15	
NEW Carroll Water System	.50	
Oak Grove Water System	.33	
Pioneer-Darnell Water System	.18	

WEST FELICIANA

Population: 13,130
Population served by public supply: 12,677
Per capita withdrawals (gal/d): 3,616
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

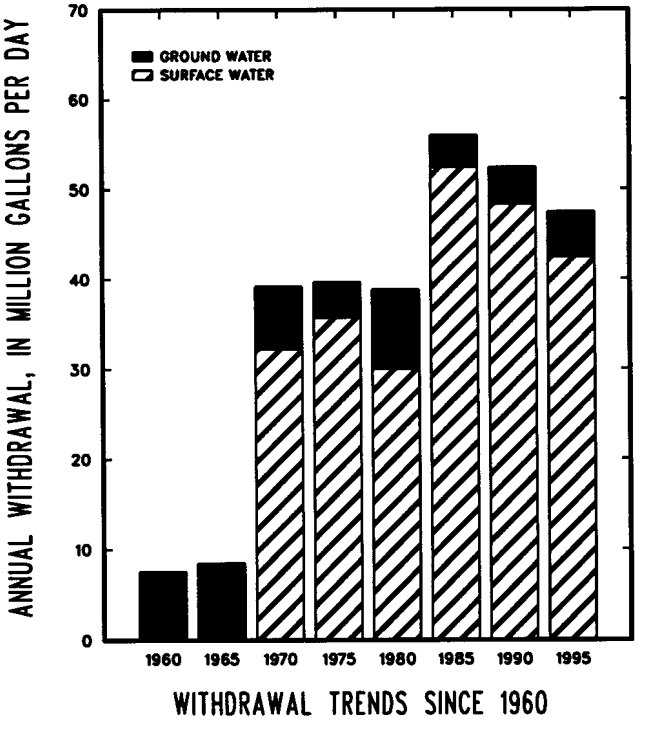
	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	3.29	0.00	3.29
Industrial	1.48	28.99	30.46
Power generation	.07	13.21	13.28
Rural domestic	.04	.00	.04
Livestock	.02	.08	.10
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.12	.18	.31
TOTALS	5.02	42.46	47.48

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
20 Food products	0.01	
26 Paper products	1.47	28.99

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
St. Francisville Water Sys.	0.64	
W. Feliciana Water Dist. 13	.90	
W. Feliciana W.W. Dist. 2	.05	



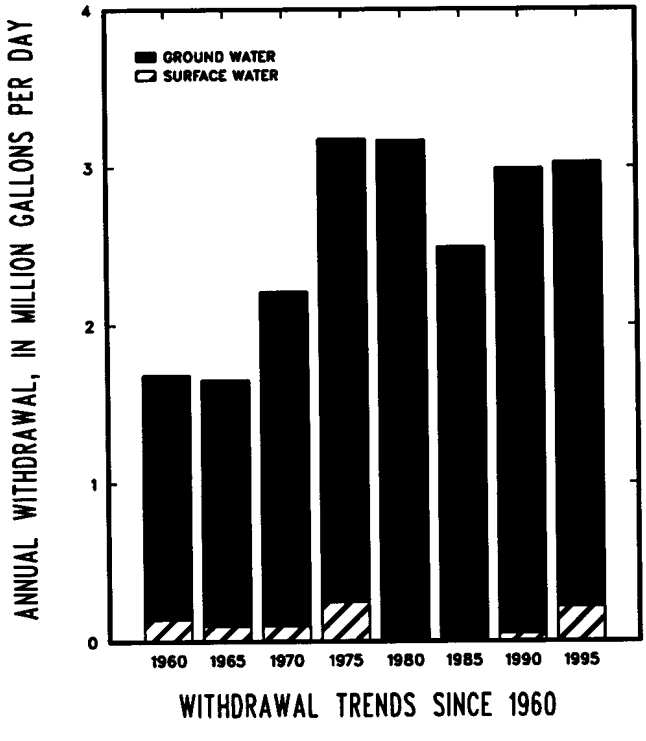
WITHDRAWAL TRENDS SINCE 1960

WINN

Population: 16,863
Population served by public supply: 14,013
Per capita withdrawals (gal/d): 179
Acres irrigated: 0
Hydroelectric power instream use (Mgal/d): 0.00

Withdrawals, in million gallons per day (Mgal/d)

	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	1.65	0.00	1.65
Industrial	.93	.00	.93
Power generation	.00	.00	.00
Rural domestic	.23	.00	.23
Livestock	.01	.03	.04
Rice irrigation	.00	.00	.00
General irrigation	.00	.00	.00
Aquaculture	.00	.19	.19
TOTALS	2.81	.22	3.03



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)

Standard Industrial Classification	GW	SW
24 Lumber	0.71	
28 Chemicals	.22	

Withdrawals by Major Public Supplier (Mgal/d)

Public Supplier	GW	SW
Atlanta Water System	0.05	
Backwood Village	.04	
Calvin Water System	.03	
Dodson Water System	.05	
Hudson-Gaars Mill Water Sys.	.03	
Hwy. 84 West Water System	.05	
Joyce Water System	.03	
Pleasant Hill-Crossroads W.S.	.03	
Red Hill Water Works	.06	
St. Maurice Water System	.05	
Tannehill Water System	.15	
W. Winn Water System	.07	
Wheeling Water System	.04	
Winnfield Water System	.95	

Table 2. Water withdrawals in Louisiana
[In million gallons per day; gw, ground
of numbers in columns may differ

PARISH	PUBLIC SUPPLY		INDUSTRIAL		POWER GENERATION		RURAL		
							DOMESTIC	LIVESTOCK	
	GW	SW	GW	SW	GW	SW	GW	GW	SW
ACADIA	4.71		0.37				1.26	0.13	
ALLEN	2.68		.37				.23	.08	0.02
ASCENSION	2.62	1.64	9.05	209.05			2.41	.11	.02
ASSUMPTION		3.14	10.74	13.15			.03		
AVOYELLES	3.44		.44				.18	.14	.03
BEAUREGARD	3.64		21.39				.71	.04	.15
BIENVILLE	1.17		15.42	.03			.37	.06	.04
BOSSIER	1.57	8.66	.36	.01			1.10	.10	.07
CADDO	1.48	31.85	.03	.41		50.37	1.60	.07	.16
CALCASIEU	21.74	.25	68.60	170.74	7.75	8.61	2.06	.13	.20
CALDWELL	1.13						.06	.02	.02
CAMERON	1.52		.22	1.33			.09	.09	.29
CATAHOULA	1.18			.02			.11	.03	.04
CLAIBORNE	2.27		.35				.18		
CONCORDIA	1.92	.92				3.28	.06	.06	.01
DE SOTO	1.32	1.43		9.25			.59	.02	.14
E BATON ROUGE	55.05		69.79	19.89	5.04		.26	.14	.01
E CARROLL	1.23						.02	.01	.03
E FELICIANA	2.57		.03				.26	.04	.17
EVANGELINE	4.62		1.99			107.40	.34	.13	.01
FRANKLIN	1.89		1.12				.70	.20	
GRANT	1.67	2.69	.13	2.14			.21	.03	.04
IBERIA	7.39		2.29	6.44			1.11	.06	.01
IBERVILLE	1.81	1.04	16.97	492.45	1.68	692.82	.14	.06	.01
JACKSON	1.79		3.69				.15	.01	.14
JEFFERSON		79.45	6.07	14.69	3.40	1,036.07	.04		
JEFF DAVIS	3.46						.38	.15	
LAFAYETTE	19.20		.03		1.32		2.70	.10	
LAFOURCHE		19.94	1.20	5.34			.02	.19	.05
LA SALLE	1.43		.10	.15			.05	.02	.04
LINCOLN	6.99		.50				.17	.03	.24
LIVINGSTON	7.19		.02				1.84	.11	.01
MADISON	1.78						.02	.01	.01
MOREHOUSE	3.84		7.41	26.86			.19	.04	.01
NATCHITOCHES	.74	5.44		9.06			.48	.08	.34
ORLEANS	.07	125.18	2.20		10.36	497.47	.23		
OUACHITA	8.49	13.14	10.66	22.16	.18	52.85	.42		.03
PLAQUEMINES		6.68		108.09			.05		.08
POINTE COUPEE	3.15		4.48		1.26	277.59	.23	.12	.05
RAPIDES	29.29		.04		.12	453.25	.49	.06	.26
RED RIVER	.71						.21	.07	.11
RICHLAND	2.70						.47	.03	.06
SABINE	.79	1.18	.26	.05		1.37	.98	.25	.08
ST BERNARD		10.99		294.64			.01		
ST CHARLES		8.61	4.92	454.82		2,116.81	.02	.03	.03
ST HELENA	.47		5.15				.49	.16	.02
ST JAMES		2.71	4.31	229.47			.01		
ST JOHN THE BAPTIST	3.22	2.23	7.78	84.17			.08		
ST LANDRY	9.48		2.61	1.44			.70	.12	.12
ST MARTIN	5.32		.15	.25			.76	.05	.01
ST MARY	.13	11.25	1.95	58.26		143.19	.16	.02	
ST TAMMANY	15.30		.17				5.03	.05	.03
TANGIPAHOA	9.73		.95				2.82	.22	.15
TENSAS	.46	.57					.02	.01	.03
TERREBONNE		4.75	.05	2.30			.01	.05	.01
UNION	3.48		.08				.18	.11	.46
VERMILION	3.98		2.67				2.08	.09	.37
VERNON	7.51						1.55	.02	.15
WASHINGTON	6.21		11.99	11.86			1.26	.22	.05
WEBSTER	5.11		1.00	1.03			.38	.02	.16
W BATON ROUGE	5.46		4.71				.03	.02	.01
W CARROLL	1.52		.16				.08	.05	.04
W FELICIANA	3.29		1.48	28.99	.07	13.21	.04	.02	.08
WINN	1.65		.93				.23	.01	.03
SUBTOTALS	302.56	343.72	307.36	2,278.53	31.17	5,454.31	39.12	4.28	4.70
TOTALS	646.28		2,585.89		5,485.48		39.12	8.97	

by parish, source, and principal use, 1995
water; sw, surface water. Summation
slightly from totals due to rounding]

IRRIGATION				AQUACULTURE		TOTAL USE			PARISH
RICE		GENERAL							
GW	SW	GW	SW	GW	SW	GW	SW	TOTAL	
86.87	6.20			7.81	2.68	101.14	8.88	110.02	ACADIA
18.64	1.62			.39	.06	22.39	1.70	24.09	ALLEN
		0.03		.08	2.10	14.29	212.81	227.10	ASCENSION
					1.89	10.77	18.18	28.95	ASSUMPTION
8.47	1.73	.01		1.46	.83	14.13	2.59	16.73	AVOYELLES
3.54				.07		29.39	.15	29.54	BEAUREGARD
						17.02	.07	17.09	BIENVILLE
.09				.10		3.32	8.74	12.06	BOSSIER
.04		.49				3.71	82.80	86.50	CADDO
10.94	12.82			2.87	5.28	114.10	197.89	311.99	CALCASIEU
.54	1.25	.03	0.08			1.78	1.35	3.13	CALDWELL
.83	16.43			.12	6.57	2.87	24.62	27.49	CAMERON
3.42	1.14	2.19	2.24	7.09		14.01	3.43	17.45	CATAHOULA
						2.80		2.80	CLAIBORNE
18.28	.62	2.22	.16	7.27	.02	29.82	4.99	34.81	CONCORDIA
		.01	.08			1.94	10.89	12.82	DE SOTO
		.09		.76		131.13	19.90	151.04	E BATON ROUGE
22.41	2.49	9.58	1.58	.66		33.90	4.10	38.01	E CARROLL
		.22			.01	3.13	.18	3.31	E FELICIANA
44.83	3.90			16.97	8.36	68.88	119.67	188.55	EVANGELINE
1.10	4.97	2.20	.05	14.36		21.56	5.02	26.59	FRANKLIN
						2.04	4.87	6.91	GRANT
1.53	.38	.11		.63	10.70	13.13	17.53	30.66	IBERIA
				.50	7.87	21.16	1,194.19	1,215.35	IBERVILLE
				.06		5.68	.14	5.82	JACKSON
		.04			.09	9.55	1,130.31	1,139.85	JEFFERSON
100.17	40.96	.29	.16	3.08	2.88	107.53	43.99	151.53	JEFF DAVIS
6.79	1.20			1.61	.11	31.75	1.31	33.06	LAFAYETTE
				.11	11.18	1.52	36.52	38.04	LAFOURCHE
			.22	.05		1.66	.41	2.07	LA SALLE
		.09		.07	.14	7.84	.38	8.23	LINCOLN
		.05		7.02		16.23	.01	16.24	LIVINGSTON
8.09	.70	7.20	.04	.74		17.85	.75	18.60	MADISON
10.27	11.20	11.09	1.66	.22		33.07	39.73	72.80	MOREHOUSE
.43	2.35	.51	.08	2.30	2.41	4.54	19.68	24.22	NATCHITOCHES
		.02				12.89	622.65	635.54	ORLEANS
.32	1.27	.07	.22	1.07	1.07	21.22	90.74	111.96	OUACHITA
					.80	.05	115.65	115.69	PLAQUEMINES
.64	.05			.45	2.08	10.32	279.77	290.09	POINTE COUPEE
2.00	7.15			1.74	1.56	33.75	462.22	495.97	RAPIDES
.17	.02	.18	.05			1.35	.17	1.52	RED RIVER
14.64	3.66	2.28	.78	.57		20.69	4.51	25.20	RICHLAND
			.04			2.27	2.73	5.01	SABINE
				.01		.02	305.62	305.64	ST BERNARD
					.77	4.97	2,581.03	2,585.99	ST CHARLES
						6.27	.02	6.29	ST HELENA
				.01	8.02	4.33	240.20	244.53	ST JAMES
					2.87	11.07	89.27	100.34	ST JOHN THE BAPTIST
12.07	1.89			15.37	3.64	40.35	7.09	47.44	ST LANDRY
.48	4.28			29.23	4.17	35.98	8.71	44.69	ST MARTIN
				.49	3.93	2.74	216.62	219.36	ST MARY
		.80	.54	1.87	.20	23.23	.77	24.00	ST TAMMANY
		.30		3.30	.36	17.32	.51	17.83	TANGIPAHOA
5.72	1.43	2.68	.41	.39		9.28	2.44	11.72	TENSAS
					17.44	.12	24.50	24.62	TERREBONNE
				.25	.39	4.10	.85	4.95	UNION
32.11	149.64			6.65	64.70	47.57	214.70	262.27	VERMILION
						9.08	.15	9.23	VERNON
						19.68	11.91	31.59	WASHINGTON
				.01		6.51	1.20	7.71	WEBSTER
				1.47	.52	11.69	.53	12.22	W BATON ROUGE
7.25	5.70	9.58	.71	.06		18.70	6.45	25.15	W CARROLL
				.12	.18	5.02	42.46	47.48	W FELICIANA
					.19	2.81	.22	3.03	WINN
422.67	285.05	52.38	9.12	139.48	176.06	1,299.03	8,551.46	9,850.49	SUBTOTALS
707.72		61.50		315.55		9,850.49			TOTALS

WATER USE BY AQUIFER

The water use by aquifer section lists information on ground-water withdrawals by aquifer or aquifer system. The one-page summary for each aquifer includes a table of withdrawals by category of use and a list of withdrawals by parish for the aquifer. A location map depicts the areal extent of freshwater in the aquifer within the State. Table 3 summarizes water withdrawals by parish and aquifer or aquifer system.

RED RIVER ALLUVIAL AQUIFER

Withdrawals by Parish

Parish	Mgal/d
Avoyelles	0.86
Bossier	.22
Caddo	.51
Grant	.01
Natchitoches	2.49
Rapides	1.20
Red River	.30

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	0.13
Industry	.04
Power generation	.00
Rural domestic	.36
Livestock	.26
Rice irrigation	1.72
General irrigation	.53
Aquaculture	2.57
TOTAL	5.61

MISSISSIPPI RIVER ALLUVIAL AQUIFER

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	7.80
Industry	33.57
Power generation	1.68
Rural domestic	3.40
Livestock	.99
Rice irrigation	102.50
General irrigation	48.38
Aquaculture	47.12
TOTAL	245.44

Withdrawals by Parish

Parish	Mgal/d
Ascension	5.43
Assumption	7.20
Avoyelles	8.77
Caldwell	.59
Catahoula	5.85
Concordia	24.30
East Baton Rouge	.49
East Carroll	32.17
Franklin	21.56
Iberia	.29
Iberville	15.06
Lafayette	.02
Lafourche	1.52
Madison	17.69
Morehouse	20.99
Ouachita	.62
Pointe Coupee	2.66
Rapides	.04
Richland	19.46
St. Landry	3.35
St. Martin	25.87
St. Mary	.61
Tensas	9.28
Terrebonne	.12
West Baton Rouge	4.62
West Carroll	16.86

UPLAND TERRACE AQUIFER (NORTHERN LOUISIANA)

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	14.26
Industry	3.97
Power generation	.00
Rural domestic	.79
Livestock	.03
Rice irrigation	1.13
General irrigation	.35
Aquaculture	.19
TOTAL	20.73

Withdrawals by Parish

Parish	Mgal/d
Avoyelles	0.18
Bienville	.05
Bossier	.94
Caddo	.09
De Soto	.12
Grant	.70
La Salle	.47
Madison	.15
Morehouse	6.63
Natchitoches	.09
Ouachita	.08
Rapides	10.06
Red River	.17
Sabine	.02
Union	.01
Vernon	.22
Webster	.23
West Carroll	.45
Winn	.05

CHICOT AQUIFER SYSTEM

Withdrawals by Parish

Parish	Mgal/d
Acadia	100.97
Allen	19.43
Beauregard	11.96
Calcasieu	112.93
Cameron	2.87
Evangeline	65.24
Iberia	12.83
Jefferson Davis	107.53
Lafayette	31.73
Rapides	.09
St. Landry	33.50
St. Martin	5.26
St. Mary	2.13
Vermilion	47.44
Vernon	.60

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	79.10
Industry	83.51
Power generation	9.07
Rural domestic	11.63
Livestock	1.04
Rice irrigation	314.52
General irrigation	.41
Aquaculture	55.25
TOTAL	554.53

CHICOT EQUIVALENT AQUIFER SYSTEM (SOUTHEAST LOUISIANA)

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	9.60
Industry	63.24
Power generation	13.76
Rural domestic	8.86
Livestock	.62
Rice irrigation	.00
General irrigation	1.01
Aquaculture	8.74
TOTAL	105.84

Withdrawals by Parish

Parish	Mgal/d
Ascension	8.83
Assumption	3.57
East Baton Rouge	20.24
East Feliciana	.20
Iberville	4.85
Jefferson	9.55
Livingston	8.03
Orleans	12.88
Pointe Coupee	1.34
St. Bernard	.01
St. Charles	4.96
St. Helena	5.84
St. James	4.33
St. John The Baptist	7.85
St. Tammany	4.53
Tangipahoa	4.19
Washington	4.60
West Baton Rouge	.01
West Feliciana	.02

EVANGELINE AQUIFER

Withdrawals by Parish

Parish	Mgal/d
Allen	2.96
Avoyelles	1.42
Beauregard	2.79
Calcasieu	.79
Evangeline	3.64
Rapides	.02
St. Landry	3.49
Vernon	.14

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	9.36
Industry	4.43
Power generation	.00
Rural domestic	.62
Livestock	.04
Rice irrigation	.80
General irrigation	.00
Aquaculture	.00
TOTAL	15.25

EVANGELINE EQUIVALENT AQUIFER SYSTEM (SOUTHEAST LOUISIANA)

Withdrawals by Parish

Parish	Mgal/d
Ascension	0.03
East Baton Rouge	37.57
East Feliciana	1.25
Livingston	2.28
Pointe Coupee	2.22
St. John The Baptist	3.22
St. Tammany	17.19
Tangipahoa	3.56
Washington	.88
West Baton Rouge	7.06
West Feliciana	2.93

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	55.88
Industry	10.99
Power generation	1.33
Rural domestic	4.08
Livestock	.36
Rice irrigation	.00
General irrigation	.53
Aquaculture	5.02
TOTAL	78.20

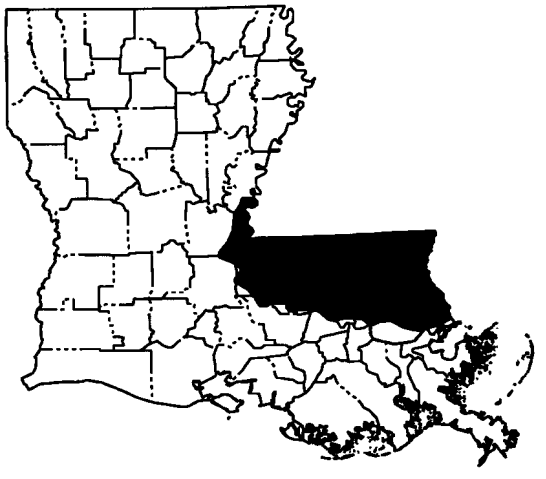
JASPER AQUIFER SYSTEM

Withdrawals by Parish

Parish	Mgal/d
Avoyelles	0.47
Beauregard	14.56
Concordia	5.15
Grant	.31
La Salle	.01
Rapides	18.20
Vernon	7.62

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	26.66
Industry	14.56
Power generation	.10
Rural domestic	.72
Livestock	.05
Rice irrigation	.27
General irrigation	.00
Aquaculture	3.98
TOTAL	46.34

JASPER EQUIVALENT AQUIFER SYSTEM (SOUTHEAST LOUISIANA)



Withdrawals by Parish

Parish	Mgal/d
East Baton Rouge	72.83
East Feliciana	1.67
Iberville	1.25
Livingston	5.92
Pointe Coupee	4.10
St. Helena	.43
St. Tammany	1.50
Tangipahoa	9.56
Washington	14.15
West Feliciana	2.07

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	49.67
Industry	56.44
Power generation	5.04
Rural domestic	1.43
Livestock	.09
Rice irrigation	.00
General irrigation	.01
Aquaculture	.82
TOTAL	113.50

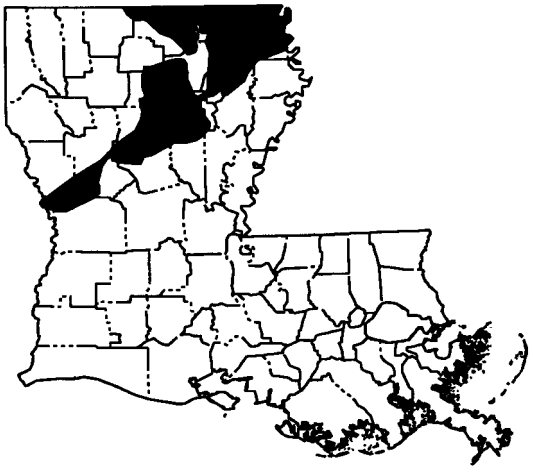
CATAHOULA AQUIFER

Withdrawals by Parish

Parish	Mgal/d
Catahoula	8.16
Concordia	.36
Grant	.15
La Salle	.13
Natchitoches	.12
Rapides	.41
Sabine	.04
Vernon	.14

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	1.99
Industry	.00
Power generation	.00
Rural domestic	.28
Livestock	.05
Rice irrigation	.00
General irrigation	.00
Aquaculture	7.19
TOTAL	9.51

COCKFIELD AQUIFER



Withdrawals by Parish

Parish	Mgal/d
Caldwell	1.15
East Carroll	1.73
Grant	.13
Jackson	.01
La Salle	.38
Lincoln	.01
Morehouse	.33
Natchitoches	.02
Ouachita	.02
Richland	1.22
Sabine	.14
Union	.05
Vernon	.02
West Carroll	1.19
Winn	.19

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	5.25
Industry	.00
Power generation	.00
Rural domestic	.46
Livestock	.05
Rice irrigation	.26
General irrigation	.22
Aquaculture	.35
TOTAL	6.58

SPARTA AQUIFER

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	30.86
Industry	36.56
Power generation	.18
Rural domestic	1.64
Livestock	.27
Rice irrigation	.34
General irrigation	.39
Aquaculture	1.06
TOTAL	71.32

Withdrawals by Parish

Parish	Mgal/d
Bienville	16.38
Bossier	.08
Caddo	.02
Caldwell	.04
Claiborne	2.76
Jackson	5.67
La Salle	.10
Lincoln	7.81
Morehouse	5.04
Natchitoches	.51
Ouachita	20.47
Richland	.01
Sabine	.43
Union	3.92
Webster	5.56
Winn	2.52

CARRIZO–WILCOX AQUIFER

Withdrawals by Parish

Parish	Mgal/d
Bienville	0.53
Bossier	2.03
Caddo	3.04
De Soto	1.78
Natchitoches	1.24
Red River	.87
Sabine	1.62
Webster	.72

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	6.29
Industry	.31
Power generation	.00
Rural domestic	3.90
Livestock	.30
Rice irrigation	.31
General irrigation	.50
Aquaculture	.22
TOTAL	11.84

Table 3. Ground-water withdrawals in
[In million gallons per day;
may differ slightly from

PARISH	RED RIVER ALLUVIAL AQUIFER	MISSISSIPPI RIVER ALLUVIAL AQUIFER	UPLAND TERRACE AQUIFER (NORTHERN LOUISIANA)	CHICOT AQUIFER SYSTEM	CHICOT EQUIVALENT AQUIFER SYSTEM (SOUTHEAST LOUISIANA)	EVANGELINE AQUIFER	EVANGELINE EQUIVALENT AQUIFER SYSTEM (SOUTHEAST LOUISIANA)
ACADIA				100.97			
ALLEN				19.43		2.96	
ASCENSION		5.43			8.83		0.03
ASSUMPTION		7.20			3.57		
AVOYELLES	0.86	8.77	0.18			1.42	
BEAUREGARD				11.96		2.79	
BIENVILLE			.05				
BOSSIER	.22		.94				
CADDO	.51		.09				
CALCASIEU				112.93		.79	
CALDWELL		.59					
CAMERON				2.87			
CATAHOULA		5.85					
CLAIBORNE							
CONCORDIA		24.30					
DE SOTO			.12				
E BATON ROUGE		.49			20.24		37.57
E CARROLL		32.17					
E FELICIANA					.20		1.25
EVANGELINE				65.24		3.64	
FRANKLIN		21.56					
GRANT	.01		.70				
IBERIA		.29		12.83			
IBERVILLE		15.06			4.85		
JACKSON							
JEFFERSON					9.55		
JEFF DAVIS				107.53			
LAFAYETTE		.02		31.73			
LAFOURCHE		1.52					
LA SALLE			.47				
LINCOLN							
LIVINGSTON					8.03		2.28
MADISON		17.69	.15				
MOREHOUSE		20.99	6.63				
NATCHITOCHES	2.49		.09				
ORLEANS					12.88		
OUACHITA		.62	.08				
PLAQUEMINES							
POINTE COUPEE		2.66			1.34		2.22
RAPIDES	1.20	.04	10.06	.09		.02	
RED RIVER	.30		.17				
RICHLAND		19.46					
SABINE			.02				
ST BERNARD					.01		
ST CHARLES					4.96		
ST HELENA					5.84		
ST JAMES					4.33		
ST JOHN THE BAPTIST					7.85		3.22
ST LANDRY		3.35		33.50		3.49	
ST MARTIN		25.87		5.26			
ST MARY		.61		2.13			
ST TAMMANY					4.53		17.19
TANGIPAHOA					4.19		3.56
TENSAS		9.28					
TERREBONNE		.12					
UNION			.01				
VERMILION				47.44			
VERNON			.22	.60		.14	
WASHINGTON					4.60		.88
WEBSTER			.23				
W BATON ROUGE		4.62			.01		7.06
W CARROLL		16.86	.45				
W FELICIANA					.02		2.93
WINN			.05				
TOTAL	5.61	245.44	20.73	554.53	105.84	15.25	78.20

Summation of numbers in columns totals due to rounding]

JASPER AQUIFER SYSTEM	JASPER EQUIVALENT AQUIFER SYSTEM (SOUTHEAST LOUISIANA)	CATAHOULA AQUIFER	COCKFIELD AQUIFER	SPARTA AQUIFER	CARRIZO–WILCOX AQUIFER	OTHER	PARISH
						0.17	ACADIA
							ALLEN
							ASCENSION
							ASSUMPTION
0.47						2.42	AVOYELLES
14.56						.08	BEAUREGARD
				16.38	0.53	.06	BIENVILLE
				.08	2.03	.05	BOSSIER
				.02	3.04	.04	CADDO
						.37	CALCASIEU
			1.15	.04			CALDWELL
							CAMERON
		8.16					CATAHOULA
				2.76		.04	CLAIBORNE
5.15		.36					CONCORDIA
					1.78	.03	DE SOTO
	72.83						E BATON ROUGE
			1.73				E CARROLL
	1.67						E FELICIANA
							EVANGELINE
							FRANKLIN
.31		.15	.13			.73	GRANT
							IBERIA
	1.25						IBERVILLE
			.01	5.67			JACKSON
							JEFFERSON
							JEFF DAVIS
							LAFAYETTE
							LAFOURCHE
.01		.13	.38	.10		.56	LA SALLE
			.01	7.81		.02	LINCOLN
	5.92						LIVINGSTON
							MADISON
			.33	5.04		.08	MOREHOUSE
		.12	.02	.51	1.24	.07	NATCHITOCHES
						.01	ORLEANS
			.02	20.47		.02	OUACHITA
						.05	PLAQUEMINES
	4.10						POINTE COUPEE
18.20		.41				3.72	RAPIDES
					.87		RED RIVER
			1.22	.01			RICHLAND
		.04	.14	.43	1.62	.03	SABINE
						.01	ST BERNARD
							ST CHARLES
	.43						ST HELENA
							ST JAMES
							ST JOHN THE BAPTIST
							ST LANDRY
						4.86	ST MARTIN
							ST MARY
	1.50					.01	ST TAMMANY
	9.56						TANGIPAHOA
							TENSAS
							TERREBONNE
			.05	3.92		.12	UNION
						.13	VERMILION
7.62		.14	.02			.35	VERNON
	14.15					.04	WASHINGTON
				5.56	.72		WEBSTER
							W BATON ROUGE
			1.19			.20	W CARROLL
	2.07						W FELICIANA
			.19	2.52		.05	WINN
46.34	113.50	9.51	6.58	71.32	11.84	14.33	TOTAL

WATER USE BY SURFACE-WATER BASIN

Water use by surface-water basin lists information on surface-water withdrawals for the Mississippi River mainstem and the major drainage basins in Louisiana. Each one-page summary for a surface-water basin includes withdrawals by category of use, by parish, and withdrawals from major water bodies in the basin.

Below the name of the basin is a location map showing the areal extent of the basin within Louisiana (Garrison and Covay, 1994). The three tables list withdrawals by category of use and the total withdrawal from surface sources within the basin, withdrawals by parish for the basin, and withdrawals by major water body within the basin. The withdrawals in this last table are from larger water bodies only and may be incomplete because withdrawals made for irrigation and agriculture were estimated from limited data. A large part of surface-water withdrawals for irrigation and aquaculture was input into the data base as miscellaneous streams due to the nature of the information available for these categories. Therefore, some water bodies that may have had substantial withdrawals may not have been included in this table. Also, the total withdrawals in this table may be less than the total withdrawals in the basin as indicated in the table of withdrawals by category.

ATCHAFALAYA–TECHE–VERMILION SURFACE–WATER BASIN

Withdrawals by Parish

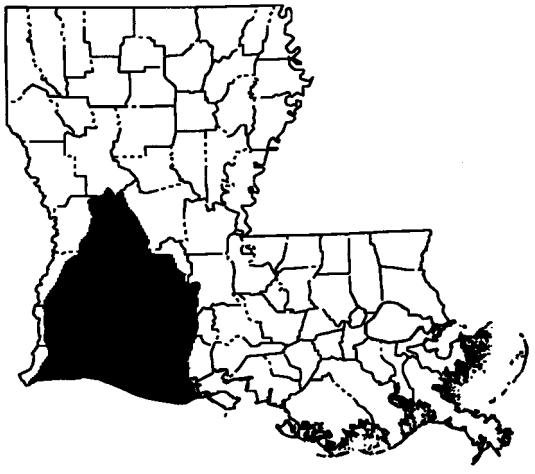
Parish	Mgal/d
Avoyelles	2.56
Evangeline	108.20
Iberia	17.53
Iberville	10.15
Lafayette	.88
Pointe Coupee	2.18
Rapides	8.97
St. Landry	5.21
St. Martin	8.71
St. Mary	202.73
Vermilion	70.73
West Baton Rouge	.53

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	11.49
Industry	54.53
Power generation	250.59
Rural domestic	.00
Livestock	.46
Rice irrigation	65.82
General irrigation	.00
Aquaculture	55.48
TOTAL	438.38

Withdrawals by Major Water Body

Water Body	Mgal/d
Atchafalaya River	7.02
Bayou Blue	1.07
Bayou Boeuf	5.17
Bayou Cocodrie	108.20
Bayou Petite Anse	1.34
Bayou Portage	2.11
Bayou Robert	1.15
Bayou Teche	7.22
Big Wax Bayou	42.05
Cavern Lake	1.23
Charenton Canal	143.19
Chatlin Lake Canal	2.31
Grand Lake	1.40
Intracoastal Waterway	6.98
Lower Grand River	1.04
Six Mile Lake	1.10
Vermilion River	71.16

CALCASIEU–MERMENTAU RIVER SURFACE–WATER BASIN



Withdrawals by Parish

Parish	Mgal/d
Acadia	8.88
Allen	1.70
Beauregard	.15
Calcasieu	197.89
Cameron	24.62
Evangeline	11.48
Jefferson Davis	43.99
Lafayette	.43
St. Landry	1.88
Vermilion	143.97

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	0.00
Industry	172.32
Power generation	8.61
Rural domestic	.00
Livestock	1.03
Rice irrigation	182.42
General irrigation	.16
Aquaculture	70.44
TOTAL	434.99

Withdrawals by Major Water Body

Water Body	Mgal/d
Bayou Chene	12.22
Bayou Lacassine	10.86
Bayou Plaquemine	1.97
Bayou Queue de Tortue	73.59
Calcasieu River	144.01
English Bayou	1.39
Farmers Canal	1.48
Intracoastal Waterway	2.62
Lyons Point Gully	1.13
Mermentau River	17.07
Sabine River Diversion Canal	42.62

LAKE PONTCHARTRAIN–LAKE MAUREPAS SURFACE-WATER BASIN

Withdrawals by Parish

Parish	Mgal/d
Ascension	2.12
East Baton Rouge	.01
East Feliciana	.18
Livingston	.01
St. Helena	.02
St. James	144.16
St. Tammany	.77
Tangipahoa	.51
West Feliciana	.26

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	0.00
Industry	144.16
Power generation	.00
Rural domestic	.00
Livestock	.49
Rice irrigation	.00
General irrigation	.54
Aquaculture	2.85
TOTAL	148.04

Withdrawals by Major Water Body

Water Body	Mgal/d
Mississippi River	144.16

MISSISSIPPI RIVER MAINSTEM

Withdrawals by Parish

Parish	Mgal/d
Ascension	209.05
Concordia	3.28
East Baton Rouge	19.89
Iberville	1,184.04
Jefferson	1,130.21
Orleans	125.18
Plaquemines	114.77
Pointe Coupee	277.59
St. Bernard	305.62
St. Charles	2,574.33
St. James	88.02
St. John The Baptist	83.73
West Feliciana	42.20

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	235.83
Industry	1,782.30
Power generation	4,139.79
Rural domestic	.00
Livestock	.00
Rice irrigation	.00
General irrigation	.00
Aquaculture	.00
TOTAL	6,157.91

Withdrawals by Major Water Body

Water Body	Mgal/d
Mississippi River	6,087.07
Red Pass	2.59
Tante Phine Pass	68.25

MISSISSIPPI RIVER DELTA SURFACE-WATER BASIN

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	30.26
Industry	42.45
Power generation	497.47
Rural domestic	.00
Livestock	.16
Rice irrigation	.00
General irrigation	.00
Aquaculture	43.07
TOTAL	613.43

Withdrawals by Parish

Parish	Mgal/d
Ascension	1.64
Assumption	18.18
Jefferson	.09
Lafourche	36.52
Orleans	497.48
Plaquemines	.88
St. Charles	6.69
St. James	8.02
St. John The Baptist	5.54
St. Mary	13.89
Terrebonne	24.50

Withdrawals by Major Water Body

Water Body	Mgal/d
Bayou Boeuf	13.88
Bayou Lafourche	44.32
Houma Navigation Canal	2.24
Humble Canal	5.90
Intracoastal Waterway	7.86
Lake Verret	3.82
Lac des Allemands	2.67
Mississippi River Gulf Outlet	497.47

OUACHITA RIVER SURFACE-WATER BASIN

Withdrawals by Parish

Parish	Mgal/d
Avoyelles	0.03
Bienville	.03
Caldwell	.02
Catahoula	3.43
Concordia	1.72
Grant	4.87
Jackson	.14
La Salle	.41
Lincoln	.38
Morehouse	32.71
Ouachita	76.51
Union	.85
Winn	.22

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	3.61
Industry	29.19
Power generation	74.93
Rural domestic	.00
Livestock	1.08
Rice irrigation	7.93
General irrigation	2.78
Aquaculture	1.80
TOTAL	121.32

Withdrawals by Major Water Body

Water Body	Mgal/d
Bayou Bartholomew	26.86
Big Creek	2.66
Little River	2.14
Ouachita River	81.16

PEARL RIVER SURFACE-WATER BASIN

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	0.00
Industry	.00
Power generation	.00
Rural domestic	.00
Livestock	11.92
Rice irrigation	.00
General irrigation	.00
Aquaculture	.00
TOTAL	11.92

Withdrawals by Parish

Parish	Mgal/d
Washington	11.92

Withdrawals by Major Water Body

Water Body	Mgal/d
Bogue Lusa Creek	11.86

RED RIVER SURFACE-WATER BASIN

Withdrawals by Parish

Parish	Mgal/d
Bienville	0.04
Bossier	8.74
Caddo	82.80
De Soto	.08
Natchitoches	19.68
Rapides	453.25
Red River	.17
Webster	1.20

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	45.95
Industry	10.51
Power generation	503.63
Rural domestic	.00
Livestock	.88
Rice irrigation	2.37
General irrigation	.20
Aquaculture	2.41
TOTAL	565.95

Withdrawals by Major Water Body

Water Body	Mgal/d
Black Lake	1.02
Caddo Lake	52.22
Cane River Lake	1.09
Cross Lake	30.36
Lake Rodemacher	453.25
Red River	16.73
Sibley Lake	5.40

SABINE RIVER SURFACE-WATER BASIN

Withdrawals by Parish

Parish	Mgal/d
De Soto	10.81
Sabine	2.73
Vernon	.15

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	2.61
Industry	9.24
Power generation	1.43
Rural domestic	.00
Livestock	.37
Rice irrigation	.00
General irrigation	.04
Aquaculture	.00
TOTAL	13.68

Withdrawals by Major Water Body

Water Body	Mgal/d
Toledo Bend Reservoir	13.28

TENSAS RIVER SURFACE-WATER BASIN

Withdrawals by Parish

Parish	Mgal/d
Caldwell	1.33
East Carroll	4.10
Franklin	5.02
Madison	.75
Morehouse	7.01
Ouachita	14.23
Richland	4.51
Tensas	2.44
West Carroll	6.45

Withdrawals, in million gallons per day (Mgal/d)	
Public supply	13.71
Industry	.08
Power generation	.00
Rural domestic	.00
Livestock	.17
Rice irrigation	26.51
General irrigation	5.39
Aquaculture	.00
TOTAL	45.86

Withdrawals by Major Water Body

Water Body	Mgal/d
Bayou de Siard	13.14
Bayou Macon	9.20
Big Cypress Creek	4.64
Boeuf River	5.18
Tensas River	1.45

TOTAL WATER USE

Total withdrawals in 1995 were approximately 9,800 Mgal/d. Of this total, 1,300 Mgal/d were from ground-water sources and 8,600 Mgal/d were from surface-water sources (table 2). Withdrawals for power generation accounted for about 56 percent of the total, industry about 26 percent, irrigation about 7.8 percent, public supply about 6.6 percent, aquaculture about 3.2 percent, and rural domestic and livestock accounted for the other 0.5 percent (figs. 12-15).

Forty-three percent (550 Mgal/d) of all ground water withdrawn was withdrawn from the Chicot aquifer system, and 19 percent (240 Mgal/d) was withdrawn from the Mississippi River alluvial aquifer (table 3). About 72 percent (6,200 Mgal/d) of all surface water withdrawn was from the Mississippi River.

St. Charles Parish had the highest surface-water withdrawals and the highest total withdrawals in the State, almost 2,600 Mgal/d. East Baton Rouge Parish had ground-water withdrawals of 130 Mgal/d, the highest in the State.

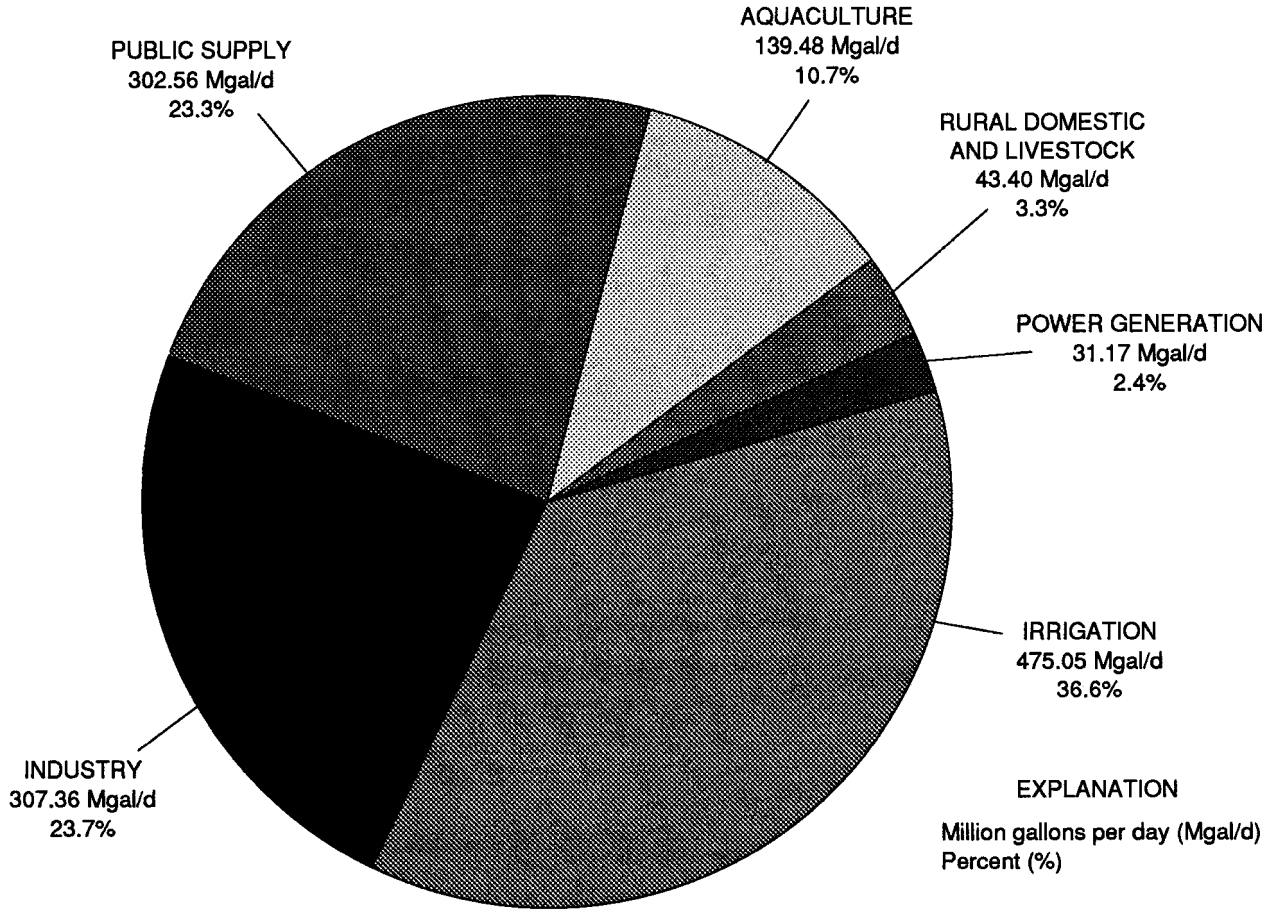


Figure 12. Ground-water withdrawals in Louisiana, 1995.

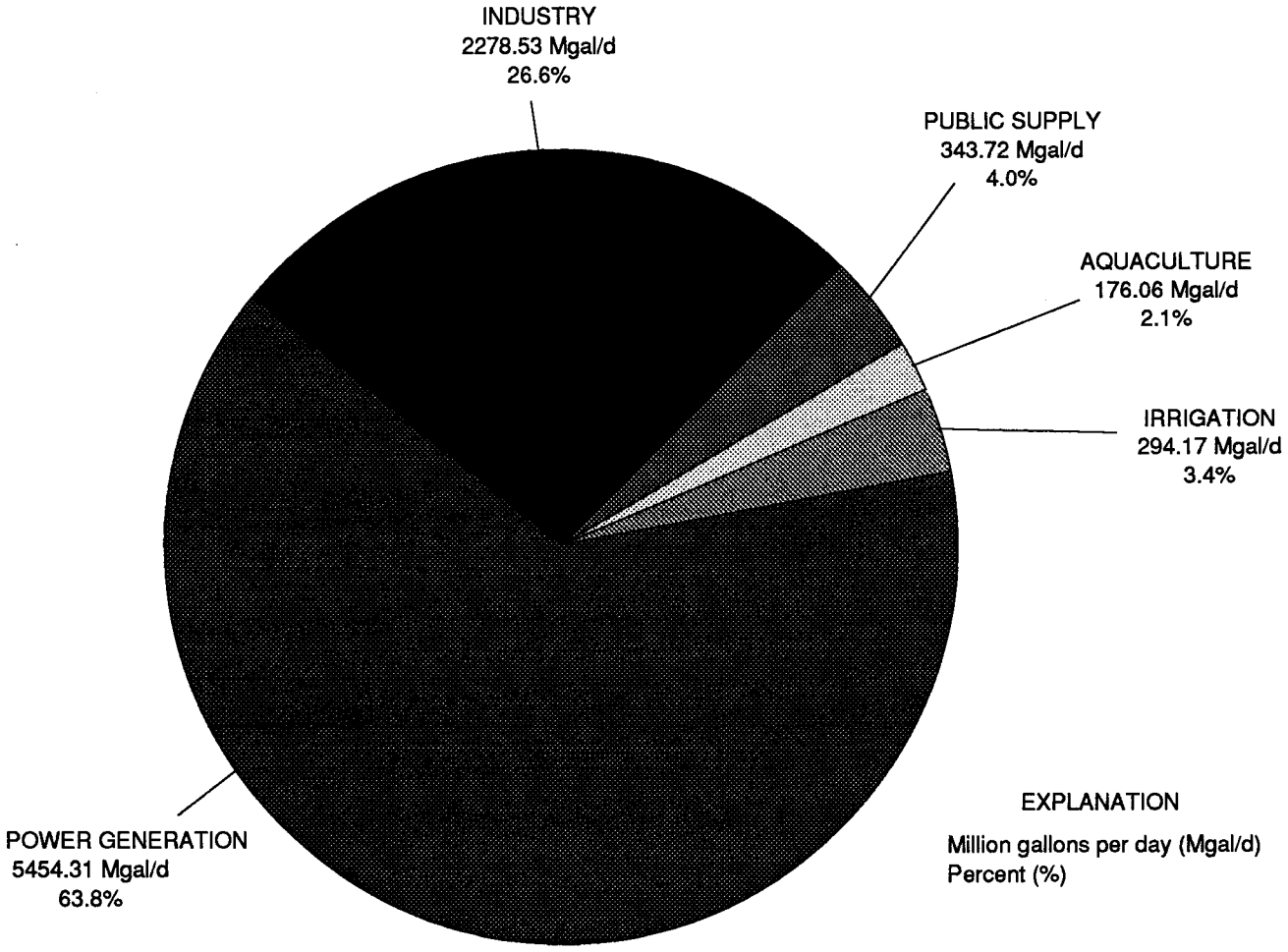


Figure 13. Surface-water withdrawals in Louisiana, 1995.

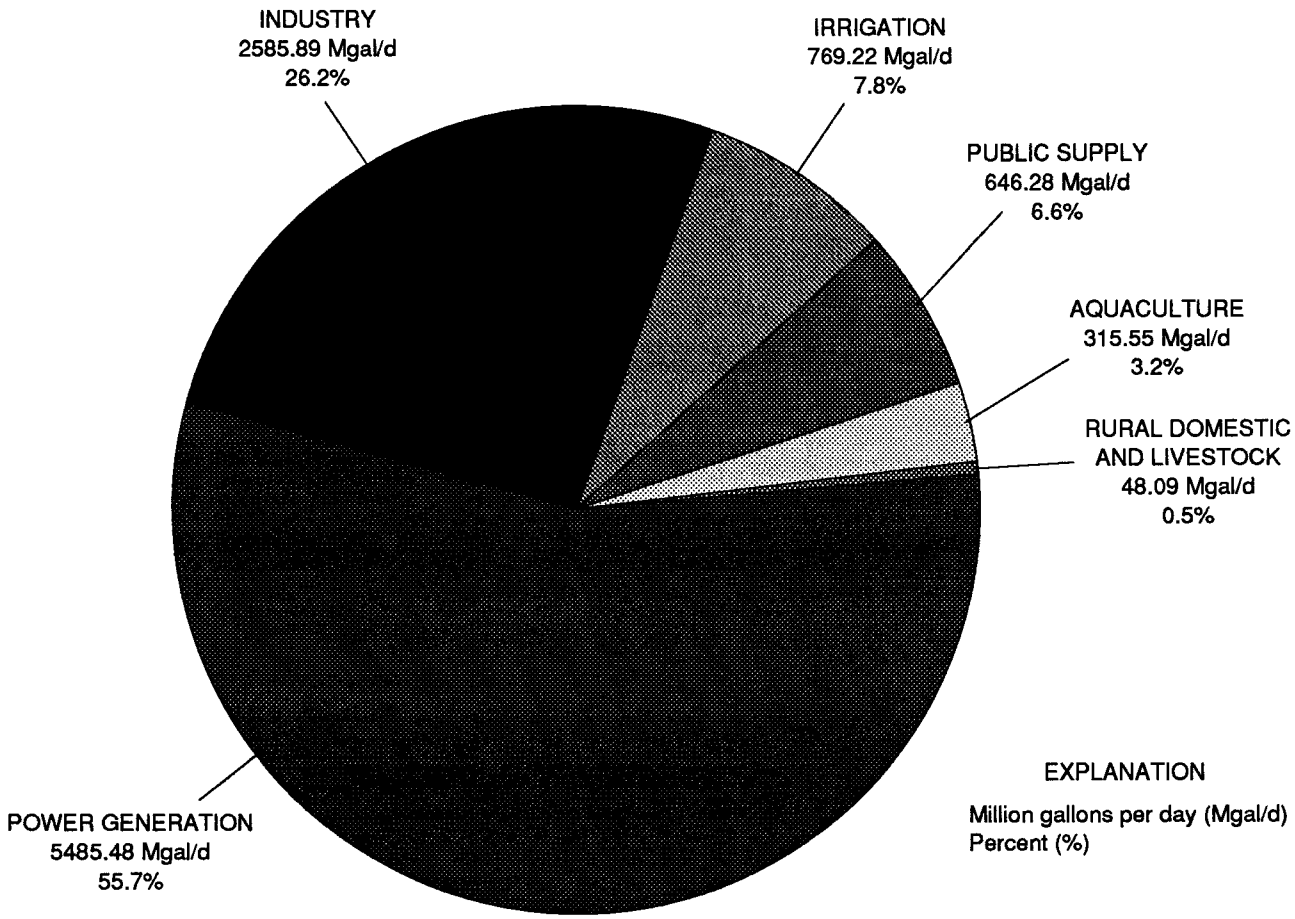


Figure 14. Total water withdrawals in Louisiana, 1995.

LOUISIANA

Population: 4,315,085
Population served by public supply: 3,827,765
Per capita withdrawals (gal/d): 2,282
Acres irrigated: 809,617
Hydroelectric power instream use (Mgal/d): 76,139.22

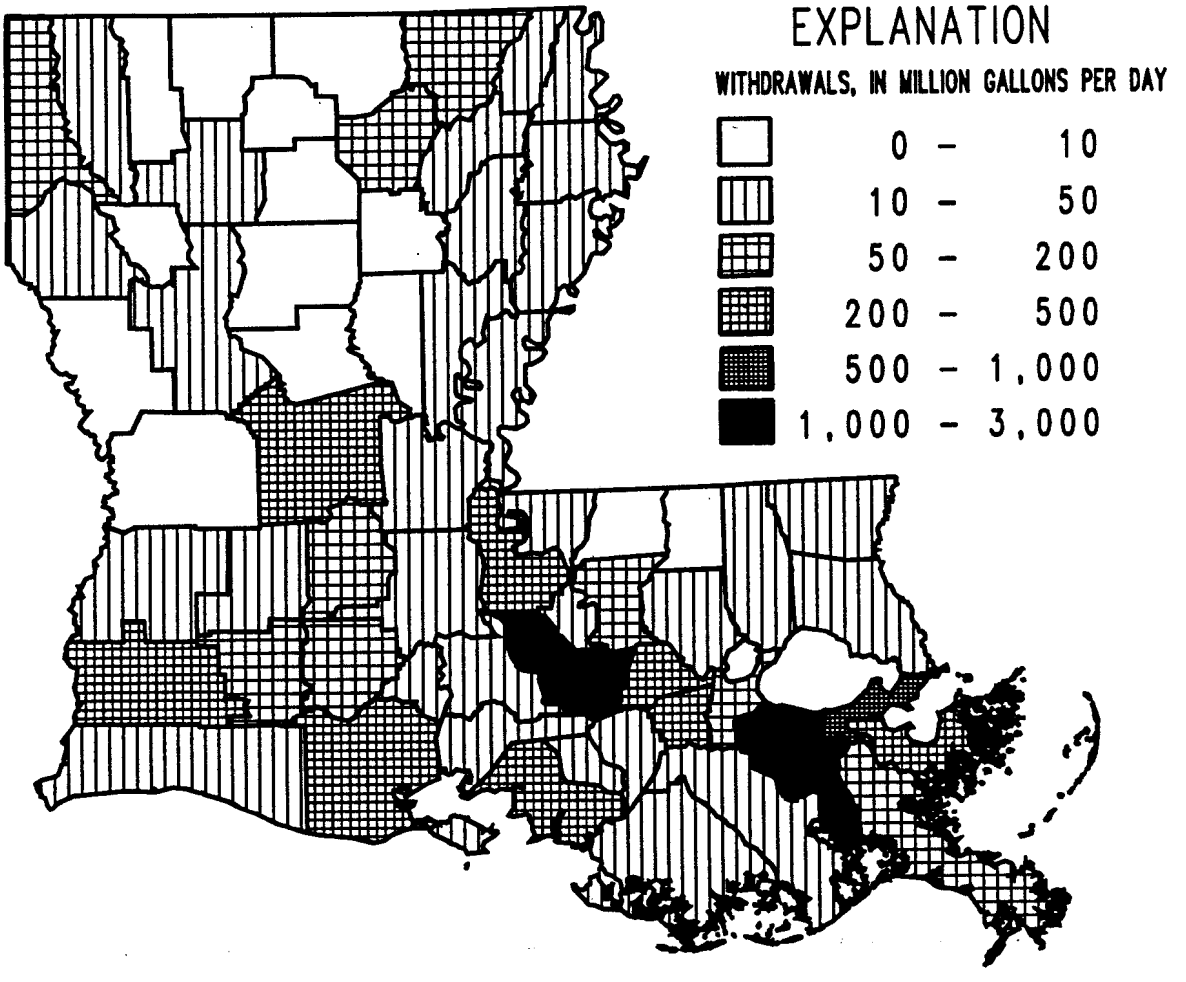
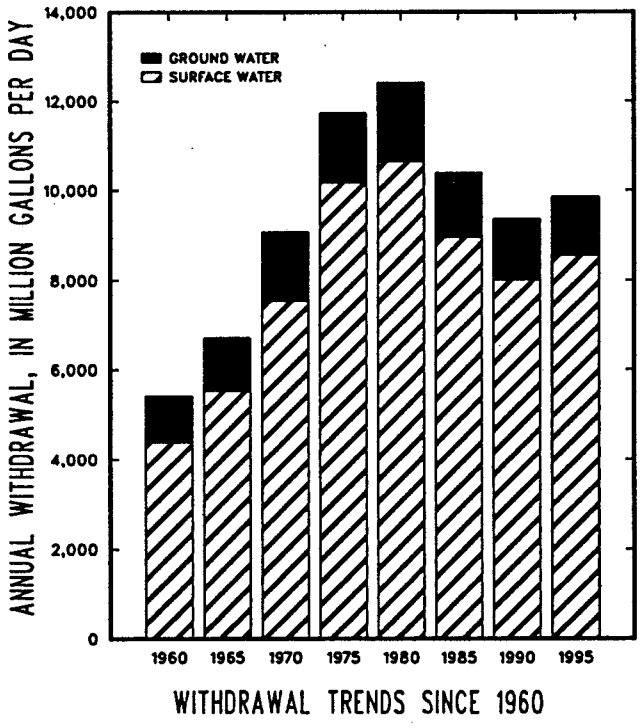


Figure 15. Summary of total water withdrawals, 1995.

Withdrawals, in million gallons per day (Mgal/d)	GROUND WATER (GW)	SURFACE WATER (SW)	TOTALS
Public supply	302.56	343.72	646.28
Industry	307.36	2,278.53	2,585.89
Power generation	31.17	5,454.31	5,485.48
Rural domestic	39.12	.00	39.12
Livestock	4.28	4.70	8.97
Rice irrigation	422.67	285.05	707.72
General irrigation	52.38	9.12	61.50
Aquaculture	139.48	176.06	315.55
TOTALS	1,299.03	8,551.48	9,850.51



WITHDRAWAL TRENDS SINCE 1960

Withdrawals by Major Industrial Group (Mgal/d)		
Standard Industrial Classification	GW	SW
13 Oil and gas extraction	1.50	0.16
14 Non-fuels/non-metals mining	.40	1.44
20 Food products	22.12	39.58
24 Lumber	2.69	.24
26 Paper products	109.36	102.93
28 Chemicals	124.42	1,573.21
29 Petroleum refining	33.15	512.56
30 Rubber and plastics	3.79	.00
32 Glass, clay, and concrete	1.28	12.84
33 Primary metals	1.95	34.25
34 Metal products	.00	.73
37 Transportation equipment	5.12	.00

Withdrawals by Top 25 Public Suppliers (Mgal/d)		
Public Supplier	GW	SW
Alexandria Water System	22.91	
Baton Rouge Water Works	43.46	
Bogalusa Water System	4.62	
Bossier City Water System		8.66
E. Jefferson W.W. Dist. 1		49.09
Gretna Water Works		4.41
Hammond Water System	4.75	
Lafayette Water System	16.48	
Lafourche W.W. Dist. 1		7.94
Lake Charles Water Co.	10.42	
Monroe Water System		13.14
Morgan City Water System		4.59
Natchitoches Water System		5.40
New Iberia Water System	5.02	
New Orleans Sewage & Water		125.18
Opelousas Water System	4.44	
Parish Water Co.	7.81	
Plaquemines Parish W.W.		6.68
Shreveport Water System		30.35
Slidell Water System	4.43	
St. Bernard Water & Sewage		10.99
St. Charles W.W. Dist. 1		4.52
St. John W.W. Dist. 3	3.22	2.23
Terrebonne W.W. Dist. 1		13.25
W. Jefferson W.W. Dist. 2		23.96

WATER USE TRENDS

Public-supply withdrawals increased by approximately 2.8 percent from 1990 to 1995, corresponding to the State's population increase of 2.2 percent from 1990 to 1994 (figs. 16 and 17). The use of ground water increased by 6.3 percent and the use of surface water decreased by about 0.1 percent from 1990 to 1995. Since 1960, public-supply withdrawals have increased by 140 percent and the State population has increased by 32 percent. (U.S. Bureau of Census, 1961; Center for Business and Economic Research, Louisiana Tech University, written commun., 1995).

Industrial ground-water use increased by 5.2 percent and surface-water use increased by 4.8 percent, for an overall increase of 4.8 percent in withdrawals by industry since 1990 (fig. 18). Total industrial withdrawals have decreased by 37 percent since 1960.

Ground-water withdrawals for power generation decreased by 23 percent from 1990 to 1995. However, surface-water withdrawals increased by 11 percent, resulting in an overall increase of 11 percent for power-generation withdrawals from 1990 to 1995 (fig. 19). Since 1965, withdrawals for power generation have increased by 140 percent.

Rural-domestic withdrawals decreased by 22 percent from 1990 to 1995 (fig. 20). This large decrease may be due, in part, to the continued expansion of public suppliers into rural areas and a shift from the use of private domestic wells to public supplies. Overall, rural-domestic withdrawals decreased by 7.5 percent from 1960 to 1995.

Ground water used for livestock increased by 16 percent and surface water used for this purpose decreased by 9.1 percent from 1990 to 1995. Total withdrawals for livestock increased by 1.4 percent from 1990 to 1995. Withdrawals for livestock have decreased by 66 percent since 1960 (fig. 21).

Ground-water withdrawals for rice irrigation increased by 6.2 percent and surface-water withdrawals for rice irrigation increased by 15 percent from 1990 to 1995 (fig. 22). Total withdrawals for rice irrigation increased by 9.5 percent though the rice harvest increased by 25 percent (Louisiana Cooperative Extension Service, 1995). This difference can be attributed to a 12 percent decrease in the average yearly application rate from 1990 to 1995. Total withdrawals for rice irrigation decreased by 27 percent from 1960 to 1995.

Ground-water withdrawals for general irrigation decreased by 2.0 percent and surface-water withdrawals for this purpose increased by 13 percent from 1990 to 1995. Total withdrawals for general irrigation remained unchanged from 1990 to 1995. General irrigation withdrawals have increased by 120 percent since 1960 (fig. 23).

Ground-water withdrawals for aquaculture decreased by 36 percent and surface-water withdrawals for aquaculture decreased by 46 percent from 1990 to 1995. Total withdrawals for aquaculture decreased by 42 percent from 1990 to 1995. Total withdrawals for aquaculture have increased by 110 percent since aquaculture withdrawals were first reported in the 1980 water-use report (fig. 24).

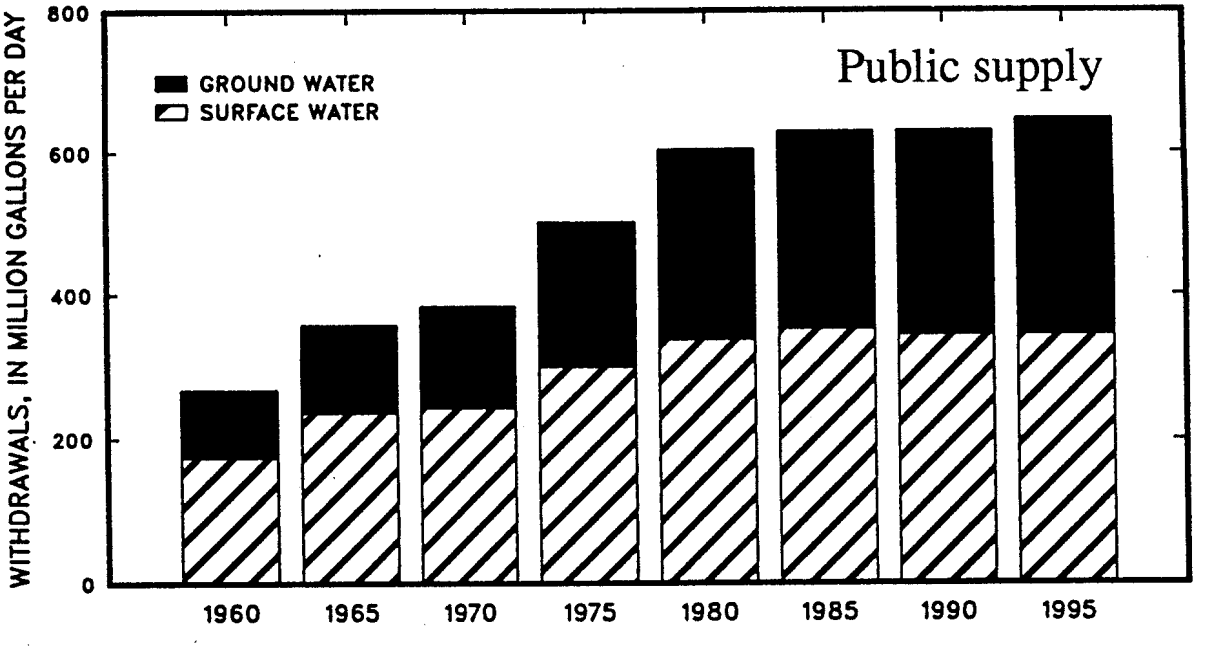


Figure 16. Public-supply water withdrawals in Louisiana, 1960-95.

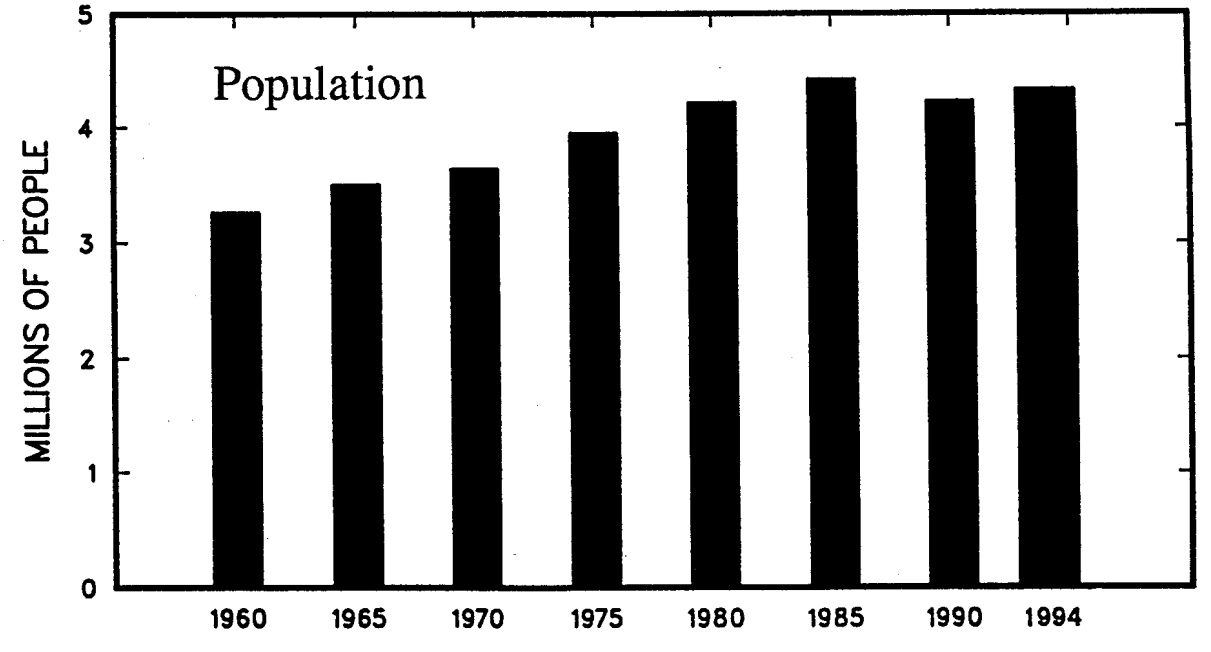


Figure 17. Total population in Louisiana, 1960-94.

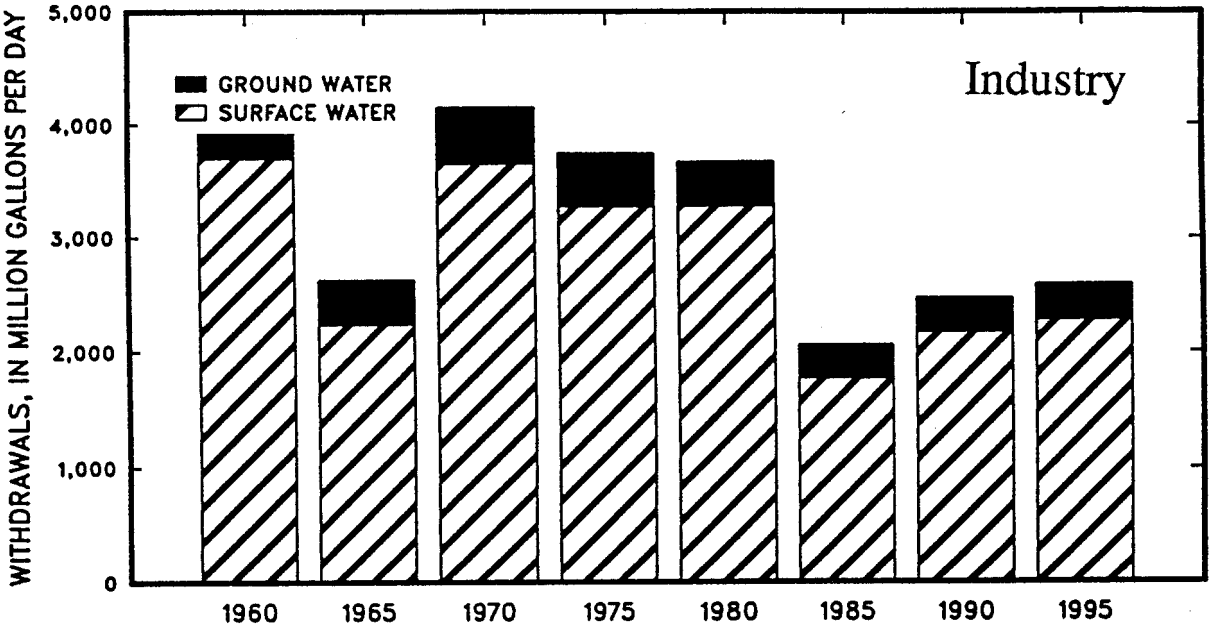


Figure 18. Industrial water withdrawals in Louisiana, 1960-1995.

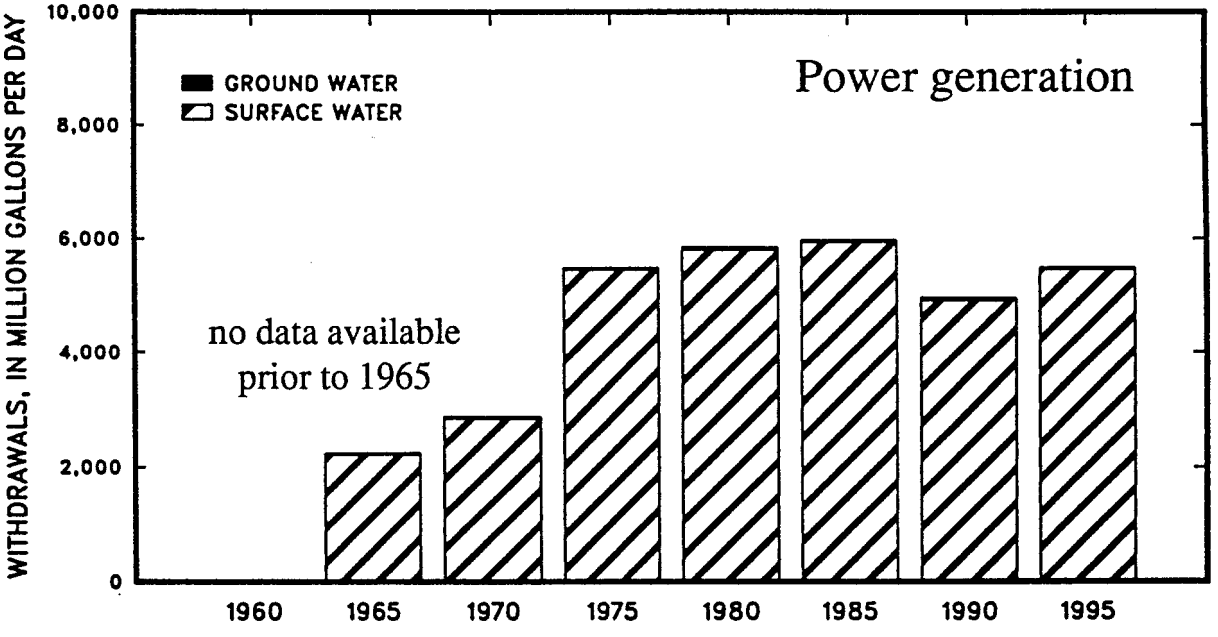


Figure 19. Power-generation water withdrawals in Louisiana, 1965-95.

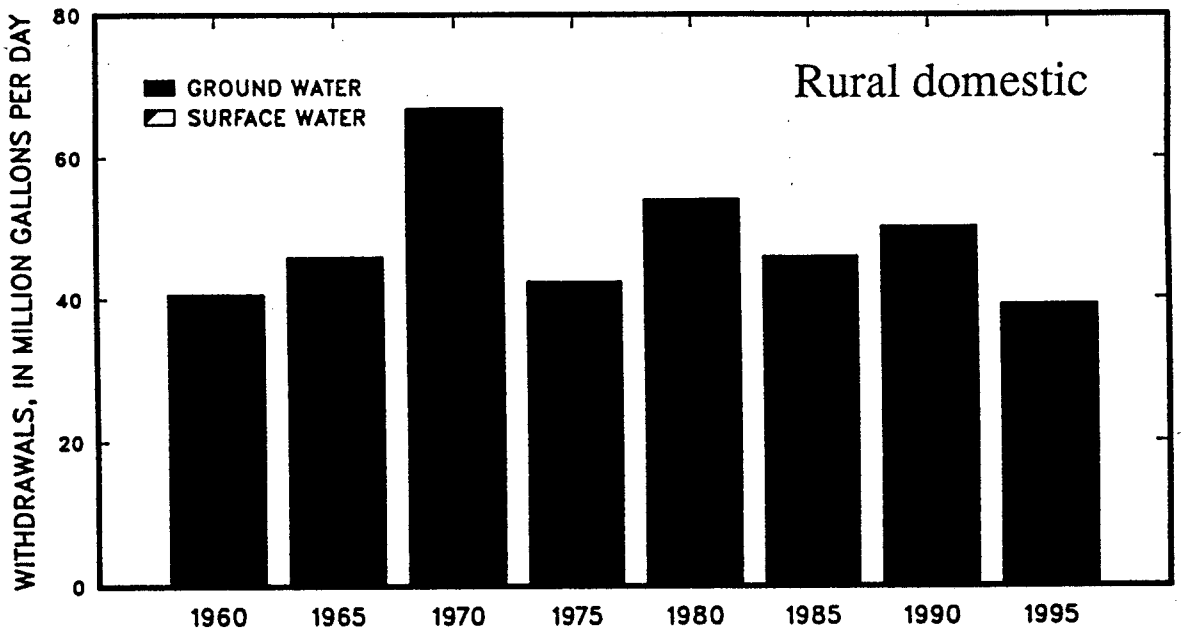


Figure 20. Rural-domestic water withdrawals in Louisiana, 1960-95.

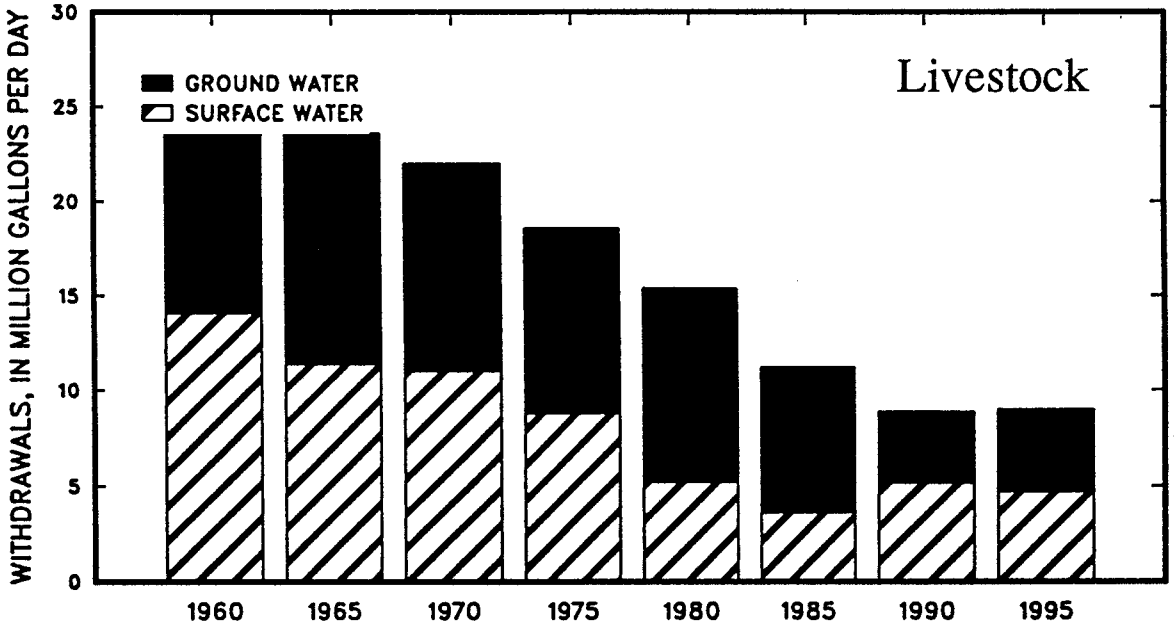


Figure 21. Livestock water withdrawals in Louisiana, 1960-95.

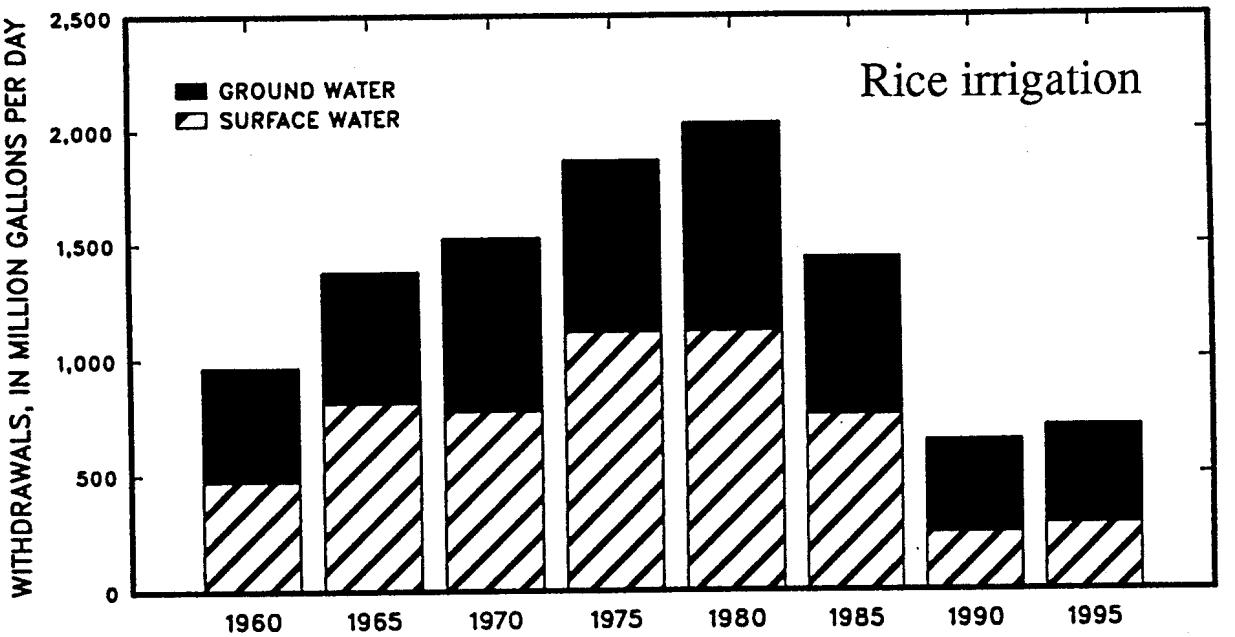


Figure 22. Rice-irrigation water withdrawals in Louisiana, 1960-95.

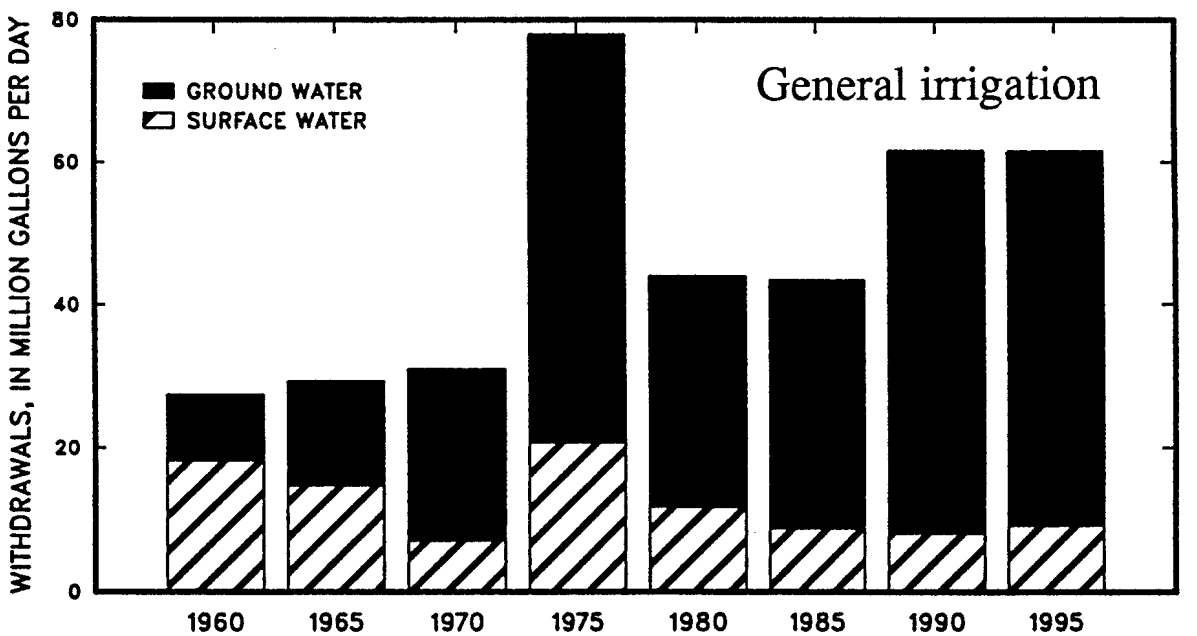


Figure 23. General-irrigation water withdrawals in Louisiana, 1960-95.

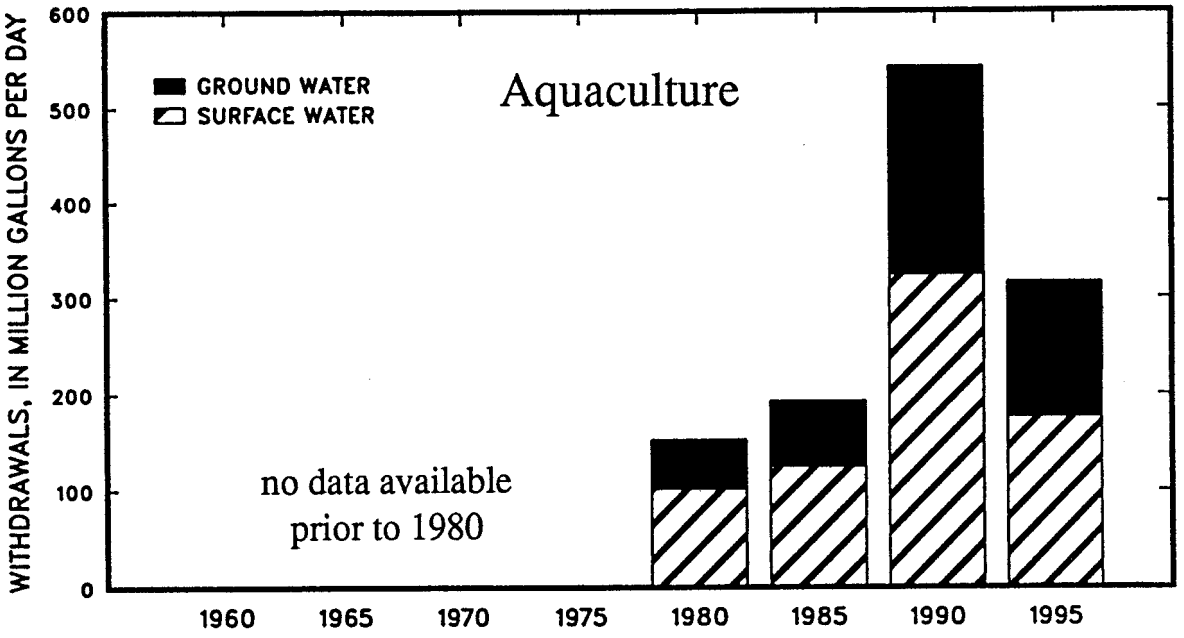


Figure 24. Aquaculture water withdrawals in Louisiana, 1980-95.

Most of this decrease in withdrawals for aquaculture from 1990 to 1995 is the result of large decreases in the per-acre application rates used to estimate water withdrawals for crawfish farming (for the purpose of this report). For the 1990 water-use report (Lovelace, 1991), application rates that ranged from 4 to 6 acre-ft per acre were used to estimate withdrawals by crawfish farmers. These rates were based on conversations with aquaculture specialists, county agents, and crawfish farmers. However, a study of water withdrawals for crawfish farming in south-central Louisiana, during 1992-94, showed that, although some application rates exceeded 10 acre-ft per acre, most rates ranged from 1 to 5 acre-ft per acre during the crawfish growing season (Lovelace, 1994). Because of these findings, the rates used for this report to estimate withdrawals for crawfish farming, were substantially lower than rates used for the 1990 report and ranged from 1 to 6 acre-ft per acre.

Total ground-water withdrawals for all water-use categories decreased by 3.1 percent from 1990 to 1995. Total surface-water withdrawals increased by 6.7 percent. Total withdrawals increased by 5.3 percent (figs. 25-27).

Withdrawals of both ground and surface water increased steadily from 1960 to 1980 but declined after 1980. Total ground-water withdrawals increased by 73 percent from 1960 to 1980 but decreased by 27 percent from 1980 to 1995. Total surface-water withdrawals increased by 140 percent from 1960 to 1980 but decreased by 20 percent from 1980 to 1995. Total water withdrawals in Louisiana increased by 130 percent, from 5,400 Mgal/d to 12,000 Mgal/d from 1960 to 1980. However, from 1980 to 1995, total withdrawals decreased by 21 percent, 9,800 Mgal/d. Overall, since 1960, ground-water withdrawals have increased by 26 percent; surface-water withdrawals have increased by 95 percent; and total withdrawals have increased by 82 percent (figs. 25-27).

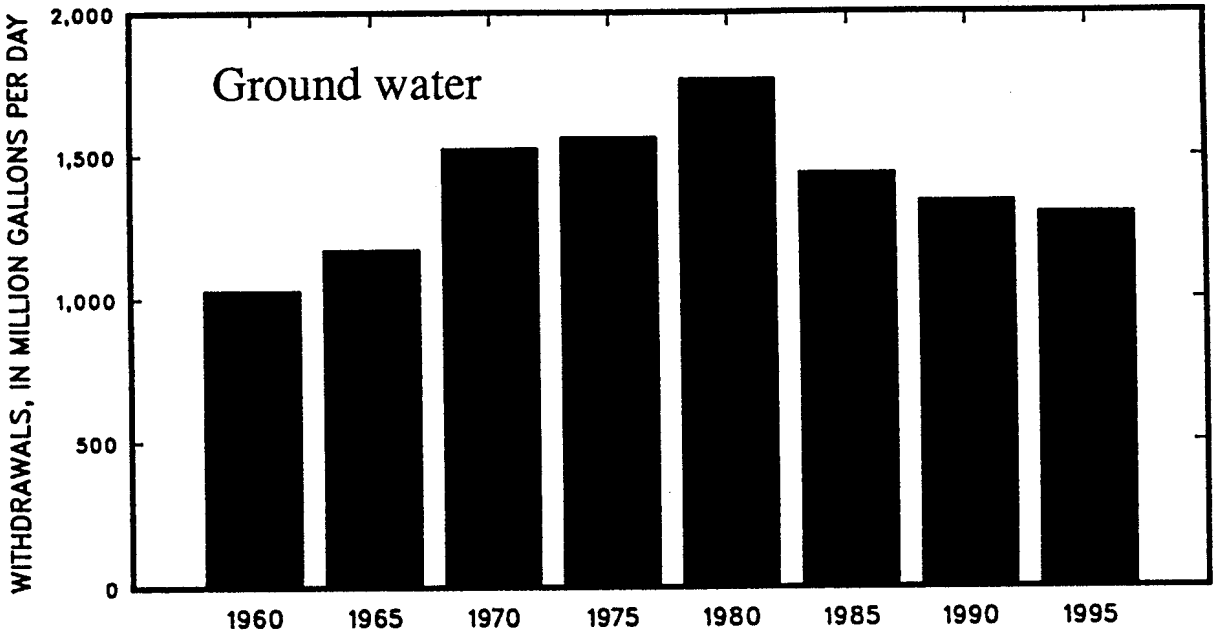


Figure 25. Ground-water withdrawals in Louisiana, 1960-95.

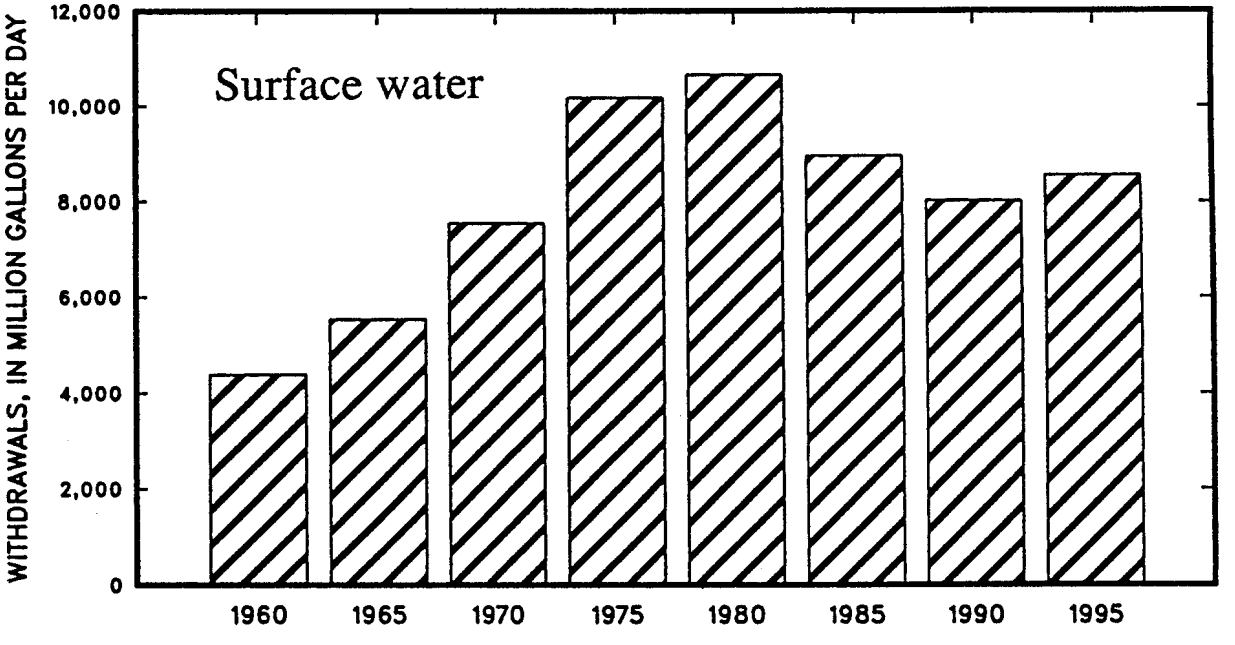


Figure 26. Surface-water withdrawals in Louisiana, 1960-95.

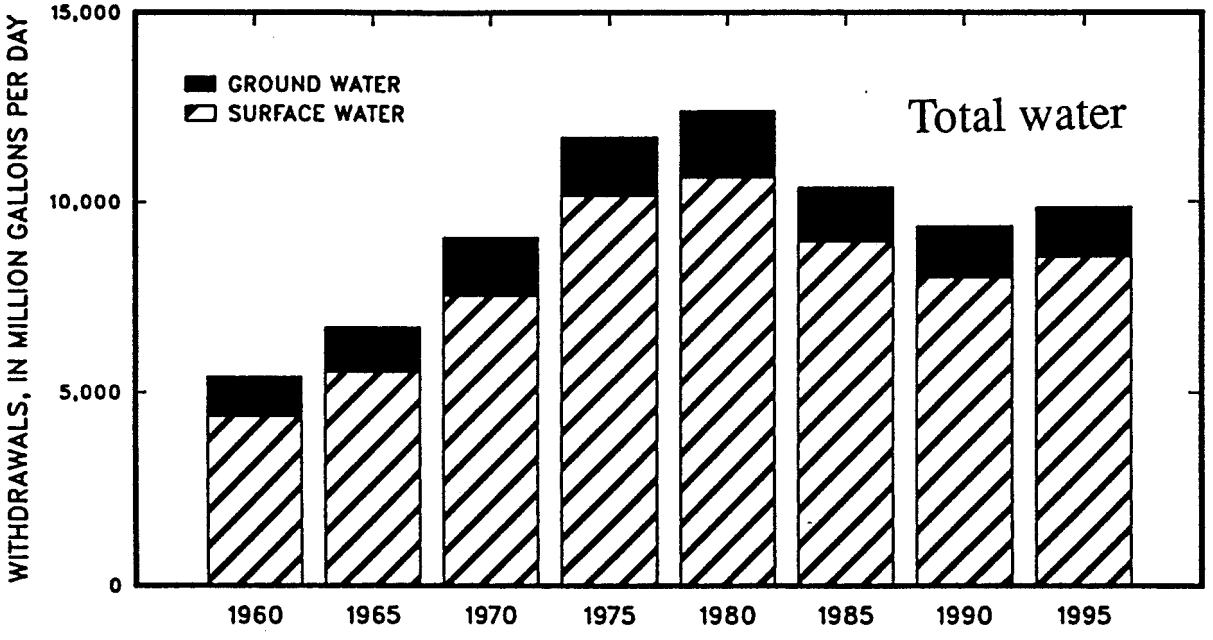


Figure 27. Total water withdrawals in Louisiana, 1960-95.

SUMMARY

In 1995, public suppliers in Louisiana withdrew 650 Mgal/d of water, 300 Mgal/d from ground-water sources and 340 Mgal/d from surface-water sources, to supply approximately 3.8 million Louisiana residents. Ground-water use for public supply increased by 6.3 percent and surface-water use decreased by 0.1 percent for an overall increase of approximately 2.8 percent from 1990 to 1995.

Industry in Louisiana withdrew 2,600 Mgal/d of water, 310 Mgal/d from ground-water sources and 2,300 Mgal/d from surface-water sources. Industrial withdrawals in 1995 accounted for 26 percent of all withdrawals. Industrial ground-water use increased by 5.2 percent and surface-water use increased by 4.8 percent for an overall increase of 4.8 percent in withdrawals since 1990.

Power-generation facilities withdrew approximately 5,500 Mgal/d, which accounted for more than 56 percent of all water withdrawn in 1995. Of this amount, only 31 Mgal/d came from ground-water sources. Seventy-six percent (4,100 Mgal/d) of the surface water withdrawn for power-generation purposes was obtained from the Mississippi River in southeastern Louisiana. Ground-water withdrawals for power generation decreased by 23 percent from 1990 to 1995. However, surface-water withdrawals increased by 11 percent, resulting in an overall increase of 11 percent for power-generation withdrawals from 1990 to 1995.

In 1995, an average of 74,000 Mgal/d of Mississippi River water passed through the turbines of the hydroelectric power plant at the Old River Control Structure near Tarbert Landing, Mississippi. For the hydroelectric power plant at the Toledo Bend Reservoir near Burkeville, Texas, an average of 4,200 Mgal/d of water passed through its turbines, 2,100 Mgal/d of which was counted as power-generation instream use for Louisiana in 1995. Hydroelectric power-generation instream use was not included in surface-water withdrawals (in this report) because the water was not withdrawn.

Approximately 490,000 people in Louisiana, using privately owned domestic wells, withdrew an estimated 39 Mgal/d of ground water for domestic use in 1995. Rural-domestic withdrawals decreased by 22 percent from 1990 to 1995. The large decrease is probably due, in part, to the continued expansion of public suppliers into rural areas and a shift from the use of private domestic wells to public supplies.

Livestock consumed approximately 9.0 Mgal/d of water. Of this total, 4.3 Mgal/d was ground water and 4.7 Mgal/d was surface water. Ground water used for livestock increased by 16 percent and surface water used for this purpose decreased by 9.1 percent from 1990 to 1995.

Based on 1994 data, rice farmers withdrew approximately 710 Mgal/d of water to irrigate their fields in 1995. Of this total, 420 Mgal/d was ground water and 280 Mgal/d was surface water. The Chicot aquifer system in southwestern Louisiana supplied 74 percent of the ground water used for rice irrigation. Ground-water withdrawal for rice irrigation increased by 6.2 percent and surface-water withdrawal increased by 15 percent from 1990 to 1995. Total withdrawal for rice irrigation increased by 9.5 percent though the rice harvest increased by 25 percent.

Farmers also withdrew approximately 52 Mgal/d of ground water and 9.1 Mgal/d of surface water for crops other than rice in 1995 (based on 1994 data). Ground-water withdrawals for these crops decreased by 2.0 percent and surface-water withdrawals increased by 13 percent from 1990 to 1995. Total withdrawals for general irrigation were unchanged from 1990 to 1995.

Water withdrawn for aquaculture in Louisiana was approximately 320 Mgal/d in 1995. Of this total, 140 Mgal/d was ground water and 180 Mgal/d was surface water. Since 1990, ground-water withdrawals decreased by 36 percent and surface-water withdrawals decreased by 46 percent. Total withdrawals for aquaculture decreased by 42 percent. Most of this decrease is the result of large decreases in the per-acre application rates used to estimate crawfish withdrawals (for the purpose of this report).

Total withdrawals in 1995 were approximately 9,800 Mgal/d. Total ground-water withdrawals were 1,300 Mgal/d, and total surface-water withdrawals were 8,600 Mgal/d. Forty-three percent of all ground water withdrawn was from the Chicot aquifer system, and 19 percent was withdrawn from the Mississippi River alluvial aquifer. About 72 percent of all surface water withdrawn was from the Mississippi River.

Total ground- and surface-water withdrawals increased by 5.3 percent from 1990 to 1995. Total ground-water withdrawals in Louisiana decreased by 3.1 percent, and total surface-water withdrawals increased by 6.7 percent during that period.

REFERENCES

Bieber, P.P., and Forbes, M.J., Jr., 1966, Pumpage of water in Louisiana, 1965: Department of Conservation, Louisiana Geological Survey, and Louisiana Department of Public Works Water Resources Pamphlet 20, 8 p.

Cardwell, G.T., and Walter, W.H., 1979, Pumpage of water in Louisiana, 1975: Louisiana Department of Transportation and Development, Office of Public Works Water Resources Special Report no. 2, 15 p.

Dial, D.C., 1970, Pumpage of water in Louisiana, 1970: Department of Conservation, Louisiana Geological Survey, and Louisiana Department of Public Works Water Resources Pamphlet 26, 10 p.

Louisiana Cooperative Extension Service, 1995, Louisiana Summary: Agriculture and natural resources, 1994: Baton Rouge, La., Louisiana State University Agricultural Center, 297 p.

Louisiana Department of Economic Development, Office of Commerce and Industry, 1994, 1994 Directory of Louisiana Manufacturers, 464 p.

Lovelace, J.K., 1991, Water use in Louisiana, 1990: Louisiana Department of Transportation and Development, Water Resources Special Report no. 6, 131 p.

-----1994, Water requirements for crawfish farming at selected sites in south-central Louisiana, 1992-94: Louisiana Department of Transportation and Development Water Resources Special Report no. 8, 12 p.

Lovelace, J.K., and Lovelace, W.M., 1995, Hydrogeologic unit nomenclature and computer codes for aquifers and confining units in Louisiana: Louisiana Department of Transportation and Development Water Resources Special Report no. 9, 12 p.

Lurry, D.L., 1985, Public water supplies in Louisiana, volume 1: Northern Louisiana: Louisiana Department of Transportation and Development Water Resources Basic Records Report no. 13, 119 p.

----- 1987, Pumpage of water in Louisiana, 1985: Louisiana Department of Transportation and Development, Office of Public Works Water Resources Special Report no. 4, 14 p.

Office of Management and Budget, 1987, Standard industrial classification manual: Washington, D.C., Executive Office of the President, U.S. Government Printing Office, 64 p.

Snider, J.L., and Forbes, M.J., Jr., 1961, Pumpage of water in Louisiana, 1960: Louisiana Department of Public Works, Department of Conservation, and Louisiana Geological Survey, 6 p.

Stuart, C.G., and Lurry, D.L., 1988, Public water supplies in Louisiana, volume 2: Southern Louisiana: Louisiana Department of Transportation and Development Water Resources Basic Records Report no. 16, 206 p.

U.S. Bureau of Census, 1961, Current population reports, population estimates: Washington D.C., U.S. Bureau of Census, series P-25, no 227, 8 p.

-----1993, 1990 Census of housing; Detailed housing characteristics, Louisiana: Washington D.C., U.S. Bureau of Census, 337 p.

Walter, W.H., 1982, Pumpage of water in Louisiana, 1980: Louisiana Department of Transportation and Development, Office of Public Works Water Resources Special Report no. 3, 15 p.

CORRECTIONS TO SPECIAL REPORT NO. 11 "WATER USE IN LOUISIANA, 1995," BY JOHN K. LOVELACE AND PENNY M. JOHNSON

CORRECTIONS TO WATER USE BY PARISH AND TABLE 2 [WITHDRAWAL TOTALS IN TABLE 2 AND TEXT WILL CHANGE ACCORDINGLY]

Ascension Parish: Withdrawals for aquaculture use should be 0.07 Mgal/d ground water and 2.07 Mgal/d surface water.

Assumption Parish: Withdrawals for aquaculture use should be 1.43 Mgal/d surface water.

Avoyelles Parish: Withdrawals for aquaculture use should be 0.54 Mgal/d ground water and 0.43 Mgal/d surface water.

Cameron Parish: Withdrawals for aquaculture use should be 0.04 Mgal/d ground water and 2.77 Mgal/d surface water.

Concordia Parish: Withdrawals for aquaculture use should be 6.53 Mgal/d ground water and 0.00 Mgal/d surface water.

East Baton Rouge Parish: Withdrawals for aquaculture use should be 0.02 Mgal/d ground water.

East Feliciana Parish: Withdrawals for aquaculture use should be 0.00 Mgal/d surface water.

Evangeline Parish: Withdrawals for aquaculture use should be 2.18 Mgal/d ground water and 2.02 Mgal/d surface water.

Franklin Parish: Withdrawals for aquaculture use should be 13.68 Mgal/d ground water.

Iberville Parish: Withdrawals for aquaculture use should be 7.80 Mgal/d surface water.

Jefferson Davis Parish: Withdrawals for aquaculture use should be 2.56 Mgal/d ground water and 2.35 Mgal/d surface water.

Lafayette Parish: Withdrawals for aquaculture use should be 1.59 Mgal/d ground water.

Lafourche Parish: Withdrawals for aquaculture use should be 9.66 Mgal/d surface water.

Lincoln Parish: Withdrawals for aquaculture use should be 0.05 Mgal/d ground water and 0.00 Mgal/d surface water.

Livingston Parish: Withdrawals for aquaculture use should be 0.16 Mgal/d ground water.

Natchitoches Parish: Withdrawals for aquaculture use should be 1.32 Mgal/d ground water and 1.17 Mgal/d surface water.

Ouachita Parish: Withdrawals for aquaculture use should be 0.08 Mgal/d ground water and 0.08 Mgal/d surface water.

Plaquemines Parish: Withdrawals for aquaculture use should be 0.74 Mgal/d surface water.

St. Charles Parish: Withdrawals for aquaculture use should be 0.73 Mgal/d surface water.

St. Helena Parish: Withdrawals for industrial use should be 0.01 Mgal/d ground water. Withdrawals for 28 Chemicals should be 0.00 Mgal/d ground water.

St. John the Baptist Parish: Withdrawals for aquaculture use should be 0.10 Mgal/d surface water.

St. Martin Parish: Withdrawals for aquaculture use should be 29.22 Mgal/d ground water and 4.16 Mgal/d surface water.

St. Tammany Parish: Withdrawals for aquaculture use should be 0.09 Mgal/d ground water and 0.00 Mgal/d surface water.

Tangipahoa Parish: Withdrawals for aquaculture use should be 0.14 Mgal/d ground water and 0.00 Mgal/d surface water.

Tensas Parish: Withdrawals for aquaculture use should be 0.08 Mgal/d ground water.

Terrebonne Parish: Withdrawals for aquaculture use should be 3.38 Mgal/d surface water.

Union Parish: Withdrawals for aquaculture use should be 0.08 Mgal/d ground water and 0.00 Mgal/d surface water.

Vermilion Parish: Withdrawals for aquaculture use should be 3.89 Mgal/d ground water and 52.31 Mgal/d surface water.

West Carroll Parish: Withdrawals for aquaculture use should be 0.00 Mgal/d ground water.

CORRECTIONS TO WATER USE BY AQUIFER
[WITHDRAWAL TOTALS IN TABLE 3 AND TEXT WILL CHANGE ACCORDINGLY]

Red River Alluvial Aquifer: Withdrawals for aquaculture use should be 1.74 Mgal/d. Withdrawals by Parish should be as follows: Natchitoches, 1.66 Mgal/d

Mississippi River Alluvial Aquifer: Withdrawals for aquaculture use should be 44.75 Mgal/d. Withdrawals by Parish should be as follows: Avoyelles, 8.46 Mgal/d; Concordia, 23.94 Mgal/d; East Baton Rouge, 0.18 Mgal/d; Franklin, 20.89 Mgal/d; Ouachita, 0.29 Mgal/d; St. Martin, 25.86 Mgal/d; Tensas, 8.97 Mgal/d; and West Carroll, 16.80 Mgal/d.

Upland Terrace Aquifer: Withdrawals for aquaculture use should be 0.17 Mgal/d. Withdrawals by Parish should be as follows: Natchitoches, 0.08 Mgal/d.

Chicot Aquifer System: Withdrawals for aquaculture use should be 36.96 Mgal/d. Withdrawals by Parish should be as follows: Cameron, 2.79 Mgal/d; Evangeline, 50.45 Mgal/d; Iberia, 12.71 Mgal/d; Jefferson Davis, 107.00 Mgal/d; Lafayette, 31.71 Mgal/d; and Vermilion, 44.69 Mgal/d.

Chicot Equivalent Aquifer System: Withdrawals for aquaculture use should be 0.36 Mgal/d. Withdrawals for industrial use should be 58.10. Withdrawals by Parish should be as follows: East Baton Rouge, 19.93 Mgal/d; Livingston, 1.80 Mgal/d; St. Helena, 0.70; St. Tammany, 3.75 Mgal/d; and Tangipahoa, 3.14 Mgal/d.

Evangeline Equivalent Aquifer System: Withdrawals for aquaculture use should be 1.90 Mgal/d. Withdrawals by Parish should be as follows: St. Tammany, 16.18 Mgal/d; and Tangipahoa, 1.45 Mgal/d.

Jasper Aquifer: Withdrawals for aquaculture use should be 3.62 Mgal/d. Withdrawals by Parish should be as follows: Catahoula, 4.78 Mgal/d.

Jasper Equivalent Aquifer System: Withdrawals for aquaculture use should be 0.19 Mgal/d. Withdrawals by Parish should be as follows: Livingston, 5.29 Mgal/d.

Catahoula Aquifer: Withdrawals for aquaculture use should be 7.17 Mgal/d. Withdrawals by Parish should be as follows: Catahoula, 8.15 Mgal/d; and Natchitoches, 0.10 Mgal/d.

Cockfield Aquifer: Withdrawals for aquaculture use should be 0.34 Mgal/d.

Sparta Aquifer: Withdrawals for aquaculture use should be 0.25 Mgal/d. Withdrawals by Parish should be as follows: Lincoln, 7.78 Mgal/d; Natchitoches, 0.49 Mgal/d; Ouachita, 19.81 Mgal/d; and Union, 3.79 Mgal/d.

Carrizo-Wilcox Aquifer: Withdrawals for aquaculture use should be 0.14 Mgal/d. Withdrawals by Parish should be as follows: Natchitoches, 1.15 Mgal/d.

Other aquifers (Table 3): Withdrawals by Parish should be as follows: Avoyelles, 1.81 Mgal/d; Natchitoches, 0.05 Mgal/d; St. Martin, 4.85 Mgal/d; and Union, 0.08 Mgal/d.

CORRECTIONS TO WATER USE BY SURFACE-WATER BASIN [WITHDRAWAL TOTALS IN TABLES AND TEXT WILL CHANGE ACCORDINGLY]

Atchafalaya-Teche Vermilion Surface-Water Basin: Withdrawals for aquaculture use should be 48.09 Mgal/d. Withdrawals by Parish should be as follows: Avoyelles, 2.16 Mgal/d; Iberia, 14.63 Mgal/d; and Vermilion, 66.64 Mgal/d. Withdrawals by source should be as follows: Bayou Beouf, 5.08 Mgal/d; Bayou Teche, 7.21 Mgal/d; Bayou Cocodrie, 107.40 Mgal/d; Vermilion River, 67.07 Mgal/d.

Calcasieu-Mermentau River Surface-Water Basin: Withdrawals for aquaculture use should be 51.47 Mgal/d. Withdrawals by Parish should be as follows: Cameron, 20.82 Mgal/d; Evangeline, 5.14 Mgal/d; Jefferson Davis, 43.46 Mgal/d; and Vermilion, 135.67 Mgal/d. Withdrawals by source should be as follows: Bayou Chene, 12.07 Mgal/d; Bayou Lacassine, 10.64 Mgal/d; Bayou Queue de Tortue, 69.51 Mgal/d; Mermentau River, 15.08 Mgal/d.

Lake Pontchartrain-Lake Maurepas Surface-Water Basin: Withdrawals for aquaculture use should be 2.26 Mgal/d. Withdrawals by Parish should be as follows: East Feliciana, 0.17 Mgal/d; St. Tammany, 0.58 Mgal/d; and Tangipahoa, 0.16 Mgal/d.

Mississippi River Delta Surface-Water Basin: Withdrawals for aquaculture use should be 24.15 Mgal/d. Withdrawals by Parish should be as follows: Assumption, 17.72 Mgal/d; Lafourche, 35.00 Mgal/d; Plaquemines, 0.82 Mgal/d; St. Charles, 6.66 Mgal/d; St. John the Baptist, 2.77 Mgal/d; and Terrebonne, 10.44 Mgal/d. Withdrawals by source should be as follows: Bayou Lafourche, 43.67 Mgal/d; Intracoastal Waterway, 7.36 Mgal/d; and Lake Verret, 3.20 Mgal/d.

Ouachita River Surface-Water Basin: Withdrawals for aquaculture use should be 0.28 Mgal/d. Withdrawals by Parish should be as follows: Concordia, 1.70 Mgal/d; Lincoln, 0.24 Mgal/d; Ouachita, 75.52 Mgal/d; and Union, 0.46 Mgal/d.

Pearl River Surface-Water Basin: Withdrawals for industrial use should be 11.86 Mgal/d and withdrawals for livestock use should be 0.05 Mgal/d.

Red River Surface-Water Basin: Withdrawals for aquaculture use should be 1.17 Mgal/d. Withdrawals by Parish should be as follows: Natchitoches, 18.44 Mgal/d.

CORRECTIONS TO WATER USE TOTALS
[WITHDRAWAL TOTALS IN TABLES AND TEXT WILL CHANGE ACCORDINGLY]

Industrial Use: Withdrawals should be 302.23 ground water and 2,580.76 total.

Aquaculture Use: Withdrawals should be 103.87 ground water, 127.99 surface water, and 231.86 total.

Total Use: Withdrawals should be 1,258.28 ground water, 8,503.42 surface water, and 9,761.70 total.