WATER WITHDRAWALS IN THE BLACK WARRIOR-TOMBIGBEE BASIN AND ALCORN COUNTY, MISSISSIPPI, 1985-87

by Nancy L. Barber

U.S. GEOLOGICAL SURVEY
Water-Resources Investigations Report 90-4061

Prepared in cooperation with the
U.S. ARMY CORPS OF ENGINEERS
MOBILE DISTRICT

Jackson, Mississippi
1991

U.S. DEPARTMENT OF THE INTERIOR
MANUEL LUJAN, JR., Secretary

U.S. GEOLOGICAL SURVEY
Dallas L. Peck, Director

For additional information
write to:

District Chief
U.S. Geological Survey
100 W. Capitol Street
Suite 710, Federal Building
Jackson, Mississippi 39269

Copies of this report can be
purchased from:

U.S. Geological Survey
Books and Open-File Reports
Building 810
Federal Center, Box 25425
Denver, Colorado 80225

CONTENTS

ILLUSTRATIONS

TABLES

CONVERSION FACTORS

For readers who prefer to use metric (International System) units, rather than the inch-pound units used in this report, the following conversion factors may be used:

Multiply inch-pound units	By	To obtain metric units
foot (ft)	0.3048	meter (m)
square mile (mi^2)	2.590	square kilometer (km^2)
gallon per minute (gal/min)	0.06308	liter per second (L/s)
foot squared per day (ft^2/d)	0.09290	meter squared per day (m^2/d)
million gallons per day (Mgal/d)	0.04381	cubic meter per second (m^3/s)

WATER WITHDRAWALS IN THE BLACK WARRIOR-TOMBIGBEE BASIN AND ALCORN COUNTY, MISSISSIPPI, 1985-87

By Nancy L. Barber

ABSTRACT

Public-supply and industrial water withdrawals were inventoried for the Mississippi part of the Black Warrior-Tombigbee Basin and for Alcorn County, Mississippi. The study area, located in the northeastern part of the State, is largely forested or agricultural land, with some industries near the larger towns. A water-resource capacity analysis was done to determine a risk rating for each inventoried facility, evaluating the likelihood of the facility exceeding the capacity of its current source of water at the existing level of use. Published reports and potentiometric maps were used in this analysis to determine the source capacity and the effects withdrawals have had on each water source.

The public-supply and industrial water withdrawals in the basin are from ground water, with the exception of the city of Columbus. About 97 percent of the total withdrawal of 80 million gallons per day is from ground water. Water-supply systems in three areas were determined to have a high risk of exceeding the water-resource capacity: the Tupelo-Lee County area, the West Point (Clay County) area, and the Starkville (Oktibbeha County) area.

INTRODUCTION

This report and a companion report for Alabama, "Water withdrawals in the Black Warrior-Tombigbee Basin in Alabama, 1985-87" (Mooty, 1990), are the result of a project conducted by the U.S. Geological Survey and funded by the U.S. Army Corps of Engineers. The study area in Mississippi includes all or part of 18 counties within the Black Warrior-Tombigbee Basin, and Alcorn County (fig. 1).

This report presents an inventory of the amount, source, and location of water withdrawals for public-supply and industrial purposes within the study area. Each public-supply and industrial facility is rated as having a "high", "medium", or "low" risk of exceeding the water-resource capacity at the current (1985-87) level of withdrawal. Estimates of other types of water withdrawals such as self-supplied domestic and irrigation also are included.

DESCRIPTION OF STUDY AREA

The Black Warrior-Tombigbee Basin in Mississippi is located in the northeastern part of the State, and has a drainage area of about 6,175 mi^2 (square miles). Approximately 28 percent of the Black Warrior-Tombigbee Basin is in Mississippi. Because of increasing public interest, the study area also includes Alcorn County, which has an area of 409 mi^2 and is located in the Middle Tennessee-Elk, the Lower Tennessee, and the Lower Mississippi-Hatchie Basins (Seaber and others, 1984).

The larger towns in the study area are Columbus (1984 population 28,658), Tupelo (25,488), Starkville (16,719), Corinth (12,560), West Point (9,022), Amory (7,340), and Aberdeen (7,159) (U.S. Bureau of the Census, 1986). Much of the area is forested or is used for agriculture, although some small industries are located near these larger towns.

The study area encompasses parts of five physiographic provinces: the Fall Line Hills, the Black Belt, Pontotoc Ridge, the Flatwoods, and the North-Central Plateau (Thornbury, 1965, p. 53-55). The upper reaches of the Tombigbee River flow through the Fall Line Hills, an area of generally poor soils with local relief as much as 300 ft (feet). In Monroe County and areas farther south, the river closely follows the boundary between the Fall Line Hills province and the Black Belt, an area of gently rolling topography and very rich soils. Farther west, the Black Warrior-Tombigbee basin includes part of Pontotoc Ridge, an escarpment which stands up to 200 ft higher in elevation than the Black Belt, and the Flatwoods province, an area of low to moderate relief and clayey soils. The southern part of the basin is in the North-Central Plateau, also an area of low relief.

HYDROGEOLOGY

Major streams in the study area are the Tombigbee River and its tributaries, Mackeys Creek, Bull Mountain Creek, Buttahatchee River, Luxapallila Creek, and the Noxubee River (fig. 2). The Tennessee-Tombigbee Waterway, completed in 1984, provides a more direct route for barge traffic from the Tennessee River in Tishomingo County to the Gulf of Mexico by way of the Tombigbee River. Because of the ready availability of ground water in much of the basin, the only entity in the study area obtaining part of its water supply from surface-water sources is the City of Columbus water system.

Ground water is available in all parts of the basin. The underlying sedimentary rocks contain a number of aquifers that are used for water supply. The rocks generally dip to the west and southwest in this area. Outcrop areas of the water-bearing formations are recharge zones, and the freshest water occurs in or near the outcrop area in all of the aquifers.

Paleozoic Aquifer

The Paleozoic aquifer, which occurs primarily in the upper, weathered zone in rocks of Paleozoic age (Darden, 1984b), is present in the extreme northeastern part of the study area. The Paleozoic rocks outcrop in Tishomingo County. In most of the study area, the Paleozoic rocks are overlain by the Gordo Formation (table 1). In Alcorn and Tippah Counties, where the Gordo is not present, the Paleozoic rocks are directly overlain by the McShan Formation or the Eutaw Formation where the McShan is not present (Boswell, 1977). The overlying units are in good hydraulic contact with the Paleozoic rocks in places (Wasson, 1986, p. 102). The Paleozoic aquifer is composed of weathered limestone, chert, and sandstone, and averages about 100 ft in thickness. Productivity of the aquifer varies, but can be high [yield of 1,000 gal/min (gallons per minute)]. Average transmissivity is about 4,000 ft^2/d (feet squared per day)].

Large withdrawals from the Paleozoic aquifer are occurring at Corinth, in Alcorn County, where the aquifer is confined. Water-level declines of as much as 15 ft/yr (feet per year) were observed in the 1970's, indicating that withdrawals were exceeding the rate of recharge (Wasson and Tharpe, 1975). Since that time, the pumpage has been distributed over a wider area around Corinth, and the cone of depression has become shallower but more extensive areally. The lowest water-levels at Corinth were measured during 1974 (Darden, 1984b).

Tuscaloosa Aquifer System

The Tuscaloosa aquifer system, in rocks of the Tuscaloosa Group of Late Cretaceous age, is composed of the combined Coker and Gordo aquifers (Boswell, 1963). Wells are designated as being completed in the Tuscaloosa aquifer system when an exact formational designation is not known.

Coker Aquifer

The Coker aquifer is composed of the massive basal sand of the Coker Formation of Late Cretaceous age (Boswell, 1978) which is present in the subsurface of the southern two-thirds of the study area and outcrops in western Alabama. The Coker Formation is underlain by rocks of Paleozoic age in northern Mississippi and by Lower Cretaceous rocks in the southern part of the study area, and is overlain by the Gordo Formation (table 1). Both underlying and overlying units are hydraulically connected to the Coker Formation to some degree. Upper units of the underlying Lower Cretaceous rocks may be included in the Coker aquifer where they contain freshwater. The Coker aquifer generally is 400 to 600 ft thick in the areas where it is used, although in Monroe County it is thinner and the effects of pumpage are more pronounced. The aquifer is very productive, with yields of 1,500 to 1,800 gal/min from large wells (Boswell, 1978).

The Coker aquifer was not developed in the study area until recently, because the overlying Gordo aquifer provided a shallower source of water. Declining water levels in the Gordo are leading to increased development of the Coker.

Gordo Aquifer

The Gordo aquifer is composed of sand and gravel in the lower part of the Gordo Formation (table 1). The Gordo Formation is of Late Cretaceous age and is present in much of the study area (Boswell, 1963). The aquifer is underlain by rocks of Paleozoic age in the northern part of the study area, and elsewhere by the Coker Formation. A thick clay bed in the upper part of the Coker Formation serves as a confining unit (Wasson, 1986). The Gordo aquifer is overlain and partially confined by an upper clay unit in the Gordo Formation. Yields from large wells in the Gordo aquifer range from 500 to 1,000 gal/min, and the transmissivity of the aquifer ranges from 500 to 21,000 ft^2/d (Boswell, 1963).

The Gordo aquifer is pumped heavily in the study area. Three cones of depression in the potentiometric surface are centered around pumping in the Tupelo area in Lee County, Lowndes County, and the Starkville-West Point-Aberdeen area. Water levels in an observation well in the Tupelo area declined at a rate of about 5 ft/yr during the period 1966 to 1978 (Wasson, 1980a). Between 1978 and 1988, the cone of depression did not deepen, but expanded areally (Goldsmith, 1988). The cone of depression in Lowndes County became shallower between 1978 and 1988 because of decreased pumping in the area. Water levels in areas near Starkville and West Point declined more than 3 ft/yr between 1978 and 1988.

Eutaw-McShan Aquifer

The Eutaw-McShan aquifer is composed of the permeable parts of the Eutaw Formation and the underlying McShan Formation, both of which are Late Cretaceous in age. The Gordo Formation underlies the McShan Formation (table 1), and the Eutaw Formation is overlain by the Coffee Sand in the northern part of the study area and by the Mooreville Chalk in the southern part. Clays in the upper Gordo Formation separate the Gordo aquifer from the Eutaw-McShan aquifer in the southern part of the study area. In the northern part of the study area, some hydraulic connection exists between the Eutaw-McShan aquifer and the underlying Gordo aquifer where present, or between the Eutaw-McShan and the Paleozoic aquifer. The Eutaw-McShan aquifer is in some hydraulic connection to the overlying Coffee Sand aquifer. Where the Mooreville Chalk is present, it acts as an overlying confining unit (Boswell, 1977). The Eutaw-McShan is composed of thin beds of fine- to medium-grained sand, and clay. Irregular lenses of sand are more extensive in the Eutaw Formation. The Tombigbee Sand Member of the Eutaw Formation is a massive, fine-grained sand (Boswell, 1977). The Eutaw-McShan aquifer ranges in thickness from 100 ft in the northern part of the basin, to about 420 ft in the southern part. The aquifer is the least productive of the major aquifers in Mississippi, with well yields ranging from 100 to 770 gal/min, and transmissivity values between 200 and 4,900 ft^2/d (Gandl, 1982, p. 3).

The Eutaw-McShan aquifer is widely used because it is the shallowest source of ground water in many parts of the study area. During 1988, cones of depression in the potentiometric surface were present in Lee County (the Tupelo area) and in Clay County (West Point). The water levels near Tupelo declined more than 4 ft/yr between 1982 and 1988. The cone of depression near West Point did not deepen, but spread areally into Lowndes County during the same period (Goldsmith, 1988).

Coffee Sand Aquifer

The Coffee Sand aquifer, in rocks of the Coffee Sand, is part of the Selma Group of Late Cretaceous age (table 1). The aquifer is present in the northern part of the study area, but in Lee County the unit grades into the Mooreville Chalk (Boswell, 1979). The Coffee Sand crops out in eastern Alcorn, Prentiss, and northern Lee Counties. The aquifer is overlain and confined by the Demopolis Chalk of Late Cretaceous age, and is underlain by the Eutaw Formation and rocks of Paleozoic age. Some hydraulic connection exists between the Coffee Sand and the Eutaw-McShan aquifer. The Coffee Sand aquifer is composed of thin beds of fine- to medium-grained sand and clay, and is about 200 ft thick (Boswell, 1963). Wells in the Coffee Sand yield from 50 to 600 gal/min; transmissivity values range from 930 to 1,200 ft^2/d (Gandl, 1982, p. 3).

The Coffee Sand is not widely used in the study area, because much of the Black Warrior-Tombigbee Basin is in the outcrop area. In the confined zones, the aquifer is used by small public-supply systems as a source of water.

Lower Wilcox Aquifer

The lower Wilcox aquifer occurs in the extreme southern part of the study area in Kemper, Lauderdale, and Clarke Counties. It consists of the lower sand beds of the Wilcox Group, of Tertiary (Paleocene and Eocene) age and, in places, sand beds in the upper part of the underlying Midway Group of Paleocene age (Boswell, 1975). The lower Wilcox aquifer is underlain and confined by thick clays in the Midway Group, and is overlain and confined by clays in the middle part of the Wilcox Group (Wasson, 1966, p. 66). The majority of the lower Wilcox aquifer occurrence in the study area consists of the aquifer outcrop area. In the outcrop area, the aquifer may be as much as 1,200 ft thick, but in the confined zone the lower Wilcox aquifer averages about 200 ft in thickness. The aquifer is very productive in the study area (Wasson, 1980), with some wells yielding more than 2,000 gal/min.

Water-level measurements made in the lower Wilcox aquifer during 1979 and 1982 have shown little or no change in water levels in and near the outcrop area. The highest water levels are in the aquifer outcrop area in Winston County (Darden, 1986).

METHODOLOGY

Data Collection

Water-use information was collected from several sources. When available, information on public-supply system withdrawals was assembled from pumpage records supplied by the system operator. Billing records were used when pumpage data were not available. When neither of these records was available, water withdrawal rates were estimated using information about the capacity of the system and the number of customers served. The number of service connections was supplied by the system operator and the population served was estimated by assuming that each household (customer) consisted of 3.2 persons, the 1970 average for the State (U.S. Bureau of the Census, 1981). Some population-served values were supplied by the system operators.

Industrial withdrawals were compiled from information supplied by the industries. Industries generally were contacted by phone, and detailed withdrawal records were obtained when available. If the industrial facility's withdrawals were not metered, the withdrawal rate was estimated using information on the well capacity and hours of operation. The number of employees was obtained from the industry; the Standard Industrial Classification (SIC) Codes were obtained from the 1986 Mississippi Manufacturer's Directory (Vallados, 1986).

Aquifer and location information for both public-supply and industrial wells was obtained from the U.S. Geological Survey's Ground-Water Site Inventory data base, and was verified by plotting the reported locations using a geographic information system.

Aggregated data, such as livestock, irrigation, and self-supplied domestic water use, were estimated for 1985 as part of the National Water Use Information Program of the U.S. Geological Survey. These data were retrieved from the Mississippi Aggregated Water Use Data System for the counties in the study area.

Water-Resource Capacity Analysis

Water-supply problems may arise because of the hydraulic characteristics of the water source, or as the result of human activities. Aquifer characteristics, such as low transmissivity, may limit the amount of water that can be obtained from wells without causing excessive drawdowns.

Most of the identified problem areas in Mississippi result from human activities. When pumping begins in an area, the water levels near the well or well field will decline. If there is a sufficient supply of water in the aquifer, and the aquifer is able

to transmit that water readily, the water level will stabilize until the pumping rate changes or the supply of water in the aquifer changes (such as a reduction in recharge during a drought). Conversely, if the supply of water in the aquifer is not adequate or if the aquifer is not able to readily transmit the water as quickly as it is being withdrawn, the water levels will continue to decline. Although the rates of ground-water withdrawals may exceed the recharge rate for many years, dewatering of the aquifer will occur eventually. Long-term water-level trends give an indication as to whether the aquifer is being pumped at a rate greater than the recharge rate.

Each public-supply and industrial water source was evaluated as to the risk of its capacity being exceeded if the 1985-87 level of usage were maintained. The risk rating for each ground-water user was based on aquifer characteristics, water quality, and the trend in water levels near the withdrawal point. The rate of water withdrawal also was considered, because lower pumping rates can be sustained longer than higher ones under the same conditions. Most of the identified high- and moderate-risk areas in Mississippi result from water-quantity problems, as indicated by long-term water-level declines. The risk assessments were made based on published reports and on available potentiometric maps. No new geologic or hydrologic data were collected for these analyses. The ratings for entities using ground water are subjective and were determined from generalized information about the aquifers. Detailed analysis of a specific well or well field might result in a different risk rating.

Ground-water users with a "low" risk of water-supply problems generally are in areas where available evidence indicates little or no long-term decline in water levels in the aquifer being used and the user has a low or moderate water demand.

Water users with a "moderate" risk of water-supply problems may:

- have a large withdrawal rate with little or no evidence of water-level declines (less than 1 ft/yr),
- be located in an area of general water-level declines but have a smaller withdrawal than other users in that area,
- be withdrawing water from an aquifer in or near the outcrop area (more susceptible to drought),
- be withdrawing water from an aquifer with lower transmissivity, or
- be withdrawing water from an area where water with objectionable water-quality characteristics (such as high concentrations of dissolved solids) is close to the withdrawal point, and the supply is therefore more susceptible to water-quality problems.

Water users with a "high" risk of water supply problems are those in an area where water levels are declining more than 2 ft/yr, or in an area where the declines are less than 2 ft/yr but the user withdraws more water than other users in the area.

Because of differences in geologic setting and data availability, the risk analysis for ground-water users in the companion report for Alabama was based more on water quality and aquifer characteristics.

The analysis of the risk of water-supply problems for the system using surface water, the City of Columbus, was made by comparing the 1985 rate of withdrawal with the 7-day, 10-year low flow for Luxapallila Creek at the withdrawal point. The risk analysis for systems using

surface water described in the companion report for Alabama also compared the current (1985-87) withdrawal rate to the 7-day, 10-year low flow for each site.

WATER WITHDRAWALS AND RESOURCE CAPACITY ASSESSMENTS

Water withdrawals for public suppliers and industries are shown in tables 2 and 4. All information for public suppliers is for 1985; information for industrial facilities is for 1985, 1986, or 1987. Industrial facilities are listed in table 4 by Standard Industrial Classification category. The withdrawal locations in each county are shown in figures 3-19. Locations are plotted on a map of the county where the water system or facility is located. Some points are shown outside the county boundary because some water systems own wells in adjacent counties. Withdrawal locations are numbered sequentially on each map. These numbers refer to tables 3 and 5.

About 97 percent of the 80 million gallons per day (Mgal/d) of water withdrawn by public suppliers and industries was from ground-water sources. The Gordo aquifer supplied about one-half of this water. The City of Columbus is the only entity that uses surface water.

The largest withdrawals for public supply in the study area during 1985 were for: the city of Tupelo in Lee County (6.274 Mgal/d from the Gordo and Eutaw-McShan aquifers), the city of Columbus in Lowndes County (5.518 Mgal/d from the Coker aquifer and Luxapallila Creek), and the city of Corinth in Alcorn County (3.617 Mgal/d from the Paleozoic aquifer). About 95 percent of the 43.84 Mgal/d withdrawn for public supply was from ground water.

Few industries in the study area supply their own water; most purchase water from a public-supply system. However, the industries which require the largest volumes of water generally are the ones that are self-supplied. The largest withdrawals for industrial use are in Monroe County (from the Gordo aquifer), and in Lowndes County (from the Coker and Gordo aquifers). All of the 35.74 Mgal/d of self-supplied industrial water was from ground water.

Agricultural water withdrawals for irrigation and livestock watering are small (table 6). Irrigation withdrawals for the 19 counties which are wholly or partially in the study area were 1.12 Mgal/d during 1985, 41 percent from ground water. Livestock withdrawals were estimated to be 7.85 Mgal/d during 1985, about 68 percent from ground water.

Self-supplied domestic water use in the study area is relatively small because the percentage of the population in the study area that supplies their own water is small (table 7). In 10 of the 19 counties in the study area, less than 5 percent of the population supplies its own water. Many of the public supply systems are rural water associations that serve customers who formerly used private wells. Noxubee County has the largest percentage of people who supply their own water (39 percent).

Three areas where water withdrawers may have a high risk of water-supply problems were identified: the Tupelo area, including most of Lee County; the West Point area in Clay County; and the Starkville area in Oktibbeha County. Major water-level declines have occurred in both the Gordo and the Eutaw-McShan aquifers in Lee County. These aquifers also are experiencing water-level declines near West Point, as is the Gordo aquifer in the Starkville area. Facilities which withdraw moderate-to-large volumes of water in these areas have a high risk of experiencing water-supply problems.

SUMMARY

The amount, source, and location of water withdrawals for public-supply and industrial purposes during the period 1985-87 were inventoried for the Black Warrior-Tombigbee Basin and Alcorn

County in northeastern Mississippi. A water-resource capacity analysis was done to determine a risk rating for each inventoried facility, evaluating the likelihood of the facility exceeding the capacity of its current source of water at the existing level of use.

The public-supply and industrial water withdrawals in the basin are from ground water, with the exception of the City of Columbus. About 97 percent of the total withdrawal of 80 Mgal/d is from ground water. Three areas were found to have a relatively high risk of exceeding the water-resource capacity: the Tupelo-Lee County area, the West Point (Clay County) area, and the Starkville (Oktibbeha County) area.

REFERENCES

Boswell, E. H., 1963, Cretaceous aquifers of northeastern Mississippi: Mississippi Board of Water Commissioners Bulletin 63-10, 202 p.

----- 1975, The lower Wilcox aquifer in Mississippi: U.S. Geological Survey Water-Resources Investigations 60-75, 3 sheets.

----- 1977, The Eutaw-McShan aquifer in Mississippi: U.S. Geological Survey Water-Resources Investigations 76-134, 2 sheets.

----- 1978, The Tuscaloosa aquifer system in Mississippi: U.S. Geological Survey Water-Resources Investigations 78-98, 3 sheets.

----- 1979, The Coffee Sand and Ripley aquifers in Mississippi: U.S. Geological Survey Water-Resources Investigations 78-114, 1 sheet.

Darden, Daphne, 1984a, Potentiometric map of the Gordo aquifer in northeastern Mississippi, November and December 1982: U.S. Geological Survey Water-Resources Investigations Report 83-4254, 1 sheet.

----- 1984b, Potentiometric map of the Paleozoic aquifer in northeastern Mississippi, November and December 1982: U.S. Geological Survey Water-Resources Investigations Report 83-4243, 1 sheet.

----- 1986, Potentiometric map of the lower Wilcox aquifer in Mississippi, fall 1982: U.S. Geological Survey Water-Resources Investigations Report 85-4059, 1 sheet.

Gandl, L.A., 1982, Characterization of aquifers designated as potential drinking water sources in Mississippi: U.S. Geological Survey Open-File Report 81-550, 90 p.

Goldsmith, G.D.S., 1988, Declining water levels in the Gordo and Eutaw-McShan aquifers *in* Mississippi Water Resources Conference, Eighteenth, Jackson, Mississippi, 1988, Proceedings: Mississippi State, Mississippi, Water Resources Research Institute, p. 34-37.

Mooty, W.S., 1990, Water withdrawals in the Black Warrior-Tombigbee basin in Alabama, 1985-87: U.S. Geological Survey Water-Resources Investigations Report 90-4112, 46 p.

Seaber, P.R., Kapinos, F.P., and Knapp, G.L.,1984, State hydrologic unit maps: U.S. Geological Survey Open-File Report 84-708.

Slack, L.J., and Darden, Daphne, 1991, Summary of aquifer tests in Mississippi, June 1942 through May 1988: U.S. Geological Survey Water-Resources Investigations Report 90-4155, 40 p.

Thornbury, W.D., 1965, Regional geomorphology of the United States: New York, John Wiley and Sons, Inc., p. 53-56.

U.S. Bureau of the Census, 1981, 1980 Census of population and housing--Mississippi--Final population and housing unit counts: U.S. Census Bureau Publication Number PHC80-V-26, 20 p.

U.S. Bureau of the Census, 1986, Current population reports--Local population estimates--South 1984 population and 1983 per capita income, estimates for counties and incorporated places: U.S. Census Bureau ser. P-26, no. 84-S-SC, 117 p.

Vallados, Lorraine, compiler, 1986, 1986 Mississippi manufacturers directory: Jackson, Mississippi Research and Development Center, 308 p.

Wasson, B.E., 1980a, Potentiometric map of the Gordo aquifer in northeastern Mississippi, November and December 1978: U.S. Geological Survey Open-File Report 79-1586, 1 sheet.

----- 1980b, Potentiometric map of the Sparta aquifer system in Mississippi, fall 1980: U.S. Geological Survey Open-File Report 81-1051, 1 sheet.

----- 1986, Sources for water supplies in Mississippi: Mississippi Research and Development Center Bulletin, 113 p.

Wasson, B.E., and Tharpe, E.J., 1975, Water for industrial development in Alcorn, Itawamba, Prentiss, and Tishomingo Counties, Mississippi: Mississippi Research and Development Center Bulletin, 60 p.

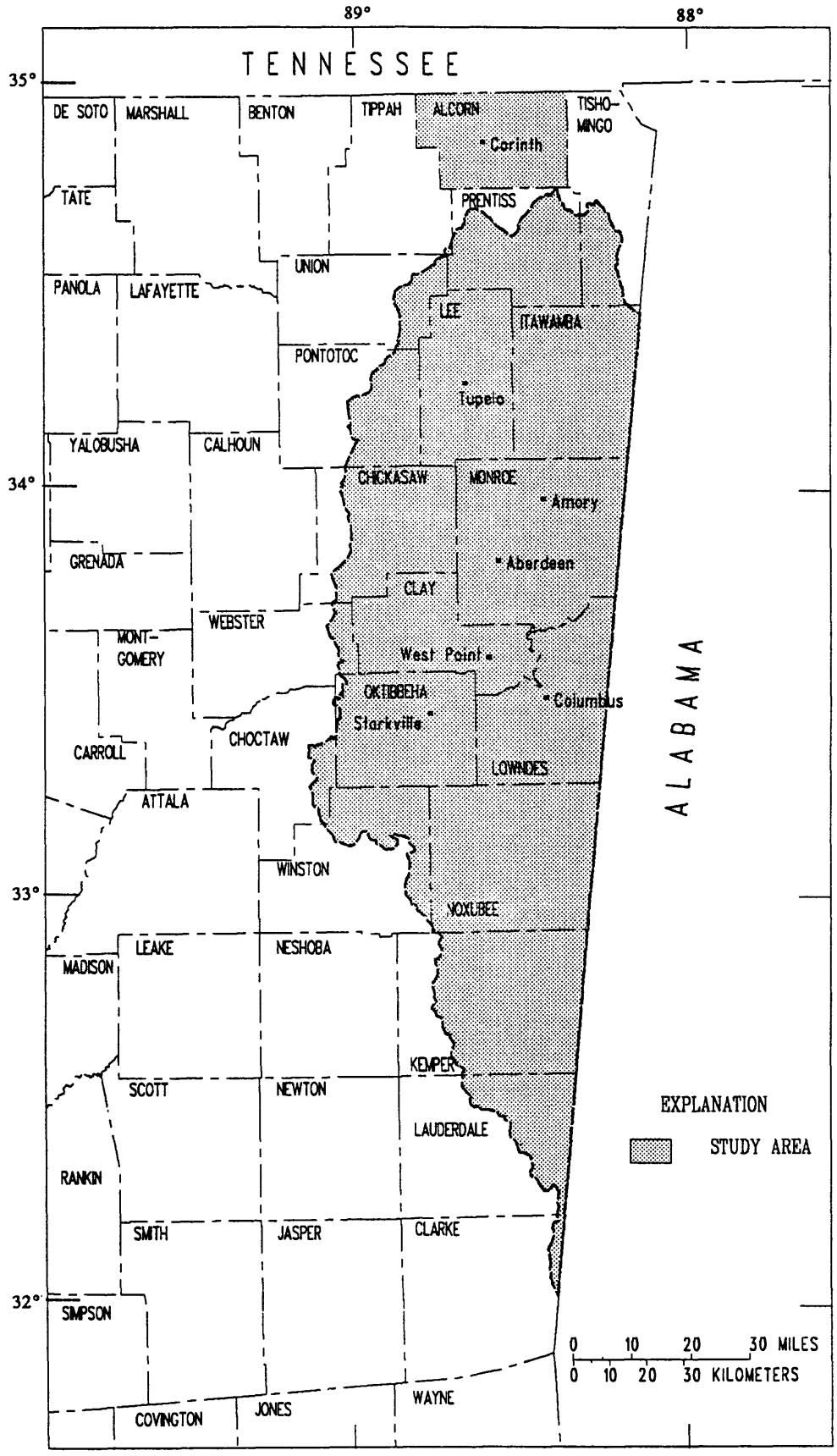

Figure 1.--Location of study area in Mississippi.

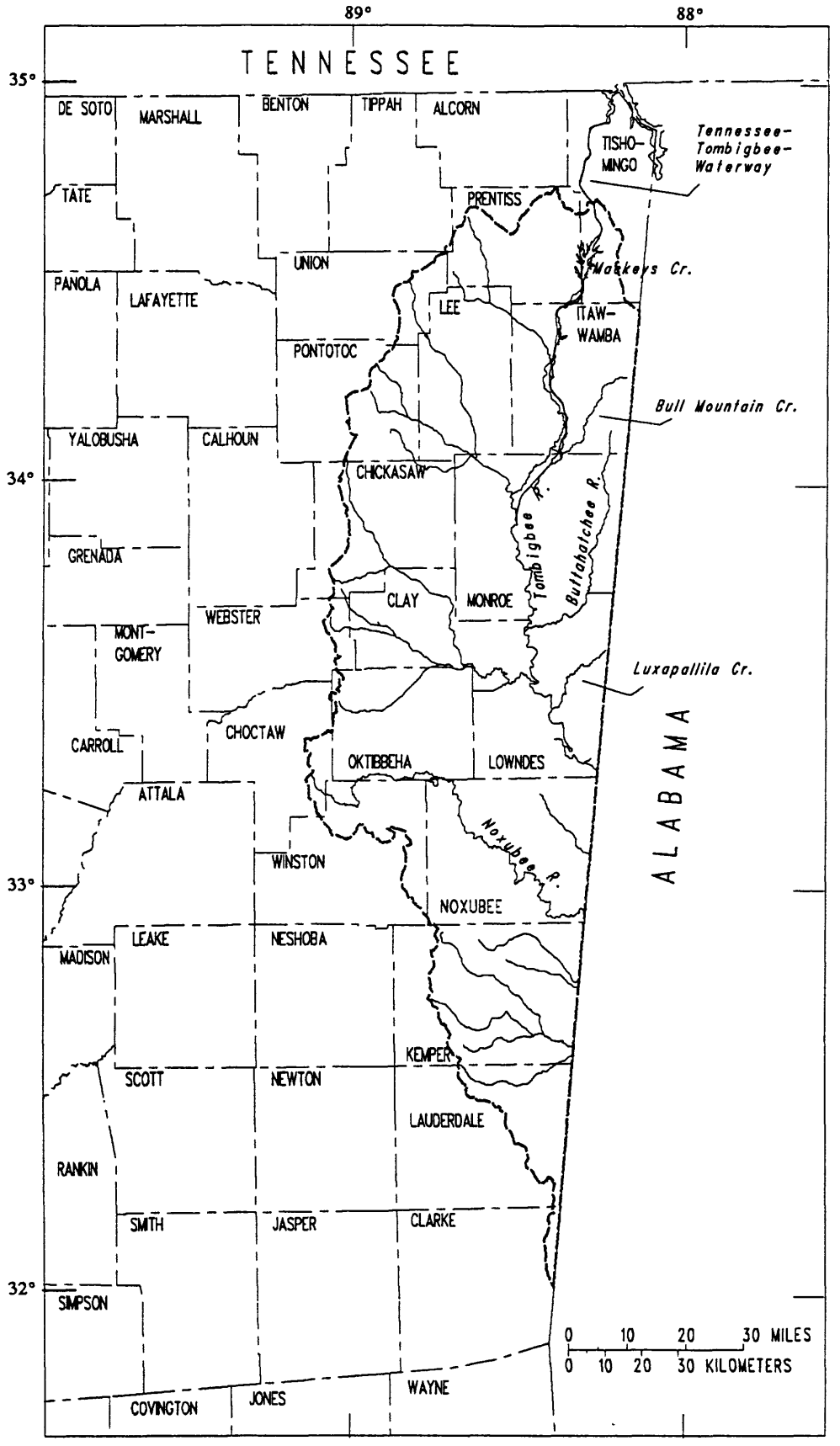

Figure 2.--Major streams in the study area.

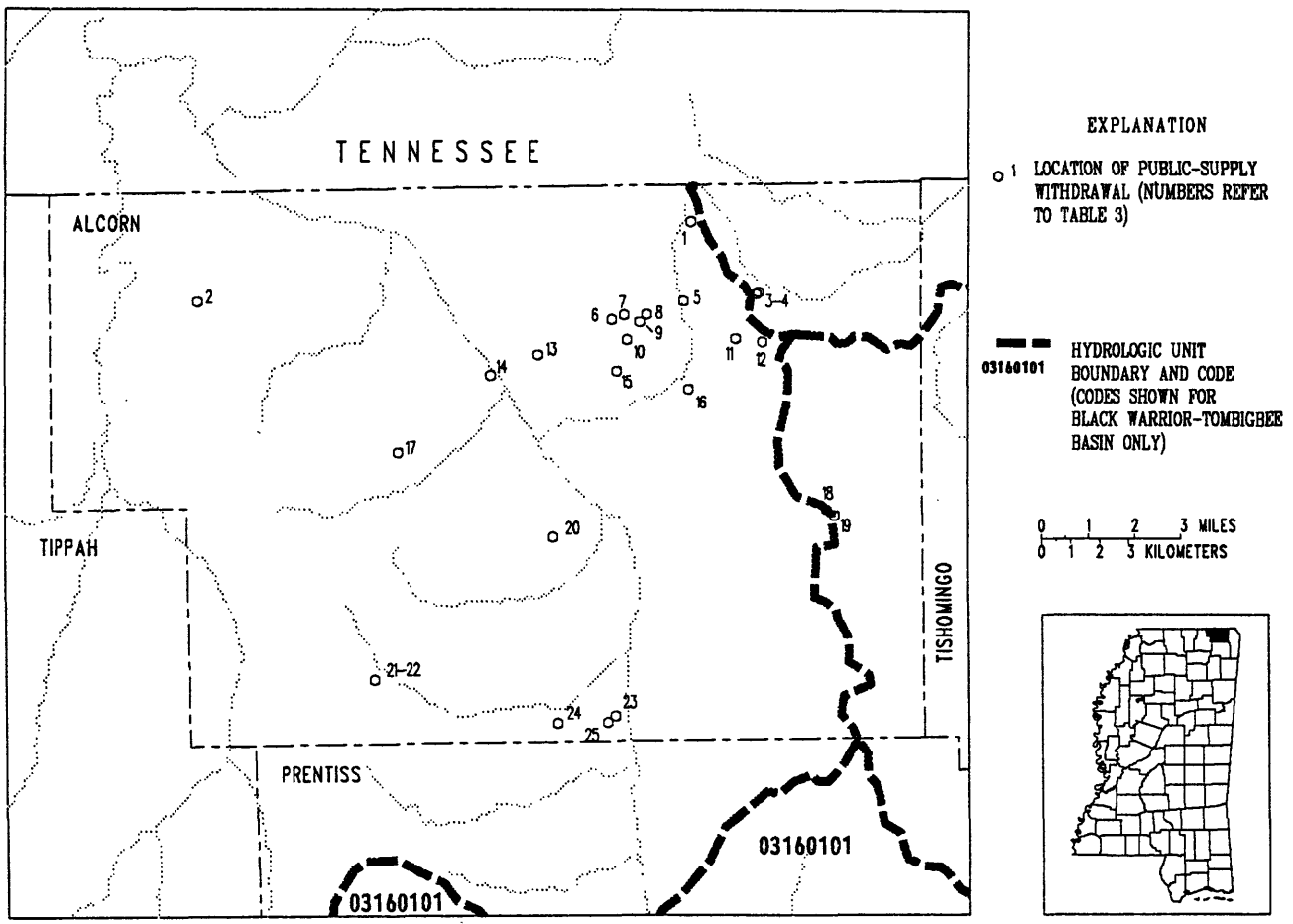

Figure 3.--Location of withdrawals for systems in Alcorn County, Mississippi.

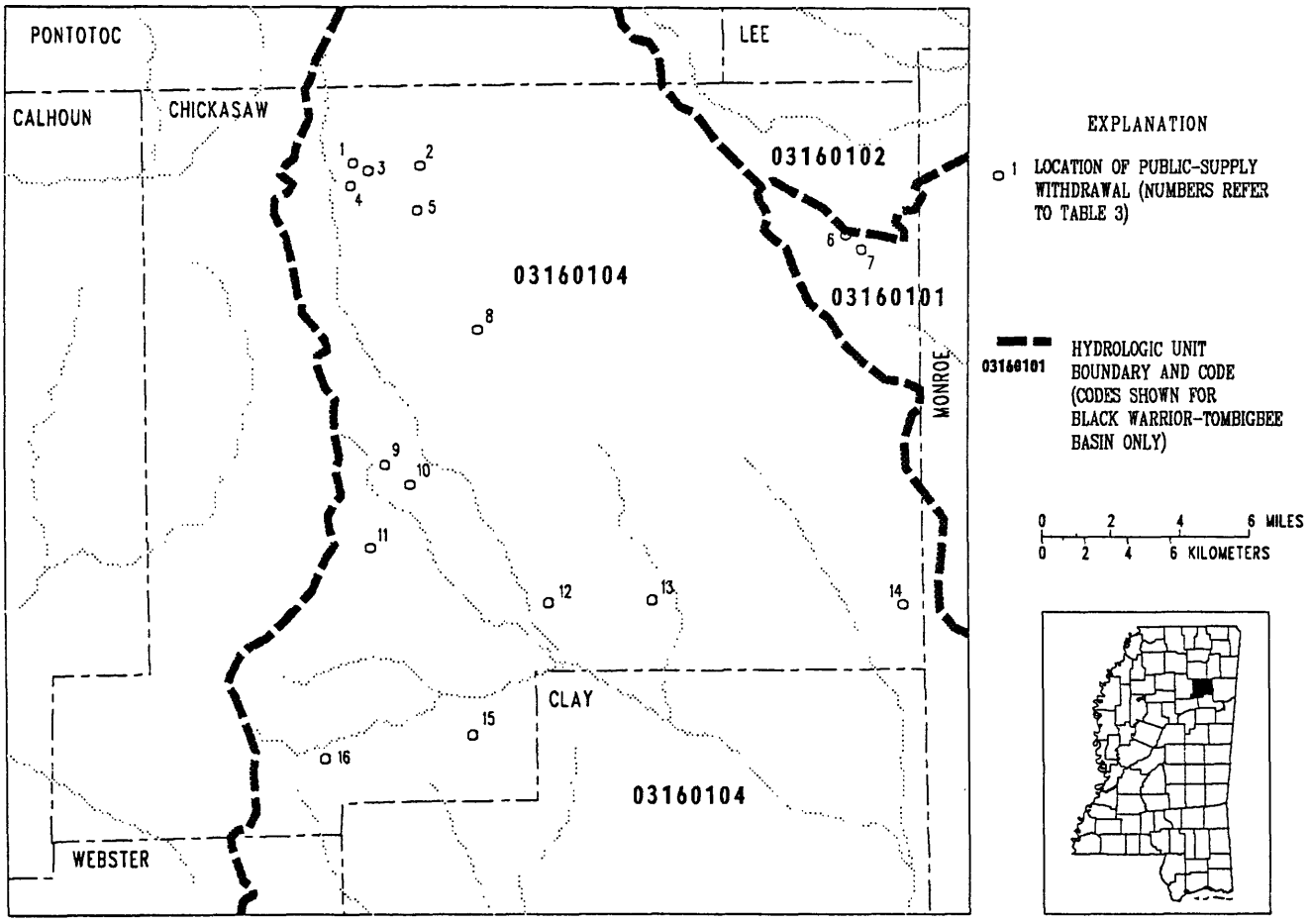

Figure 4.--Location of withdrawals for systems in Chickasaw County, Mississippi.

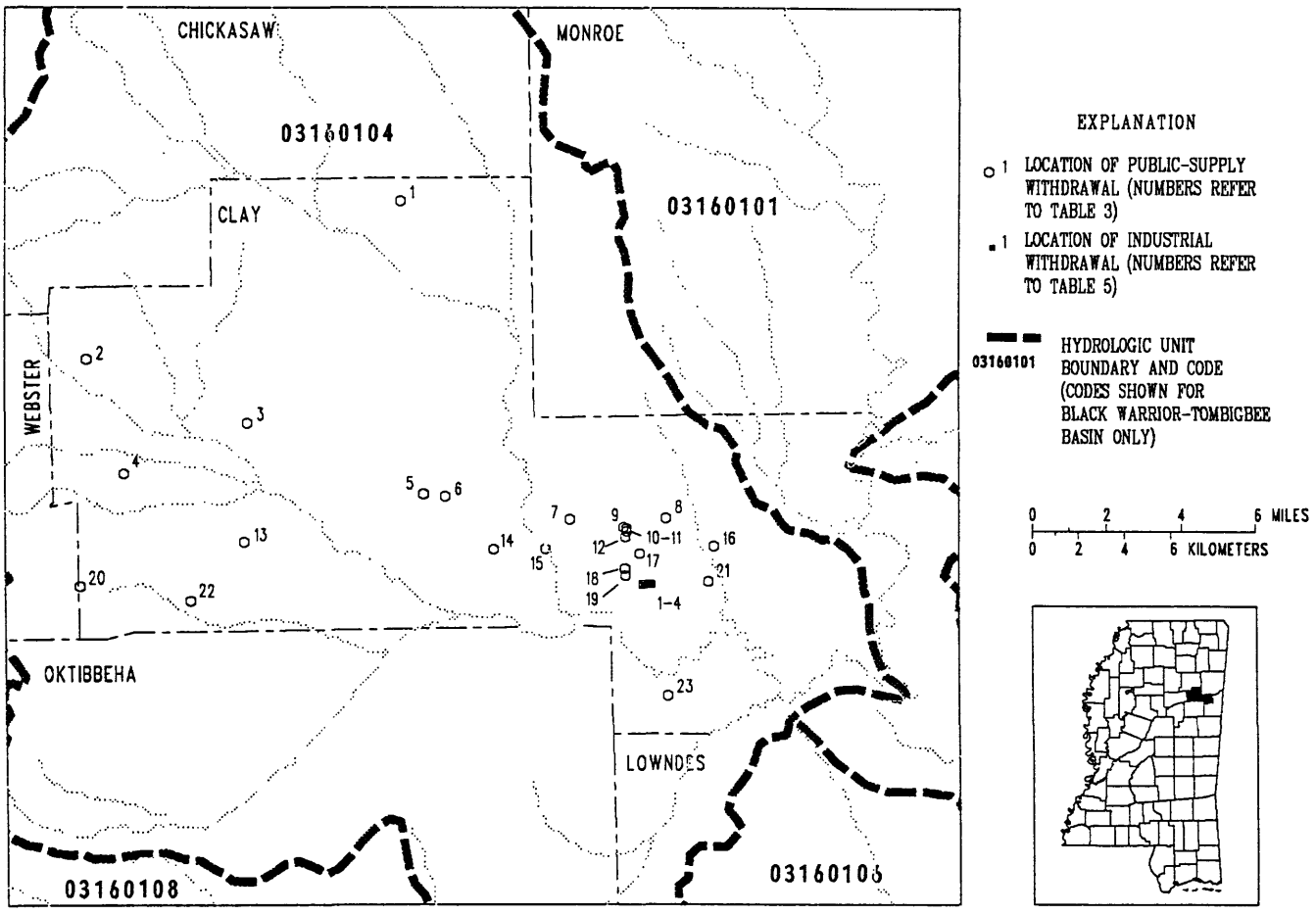

Figure 5.--Location of withdrawals for systems in Clay County, Mississippi.

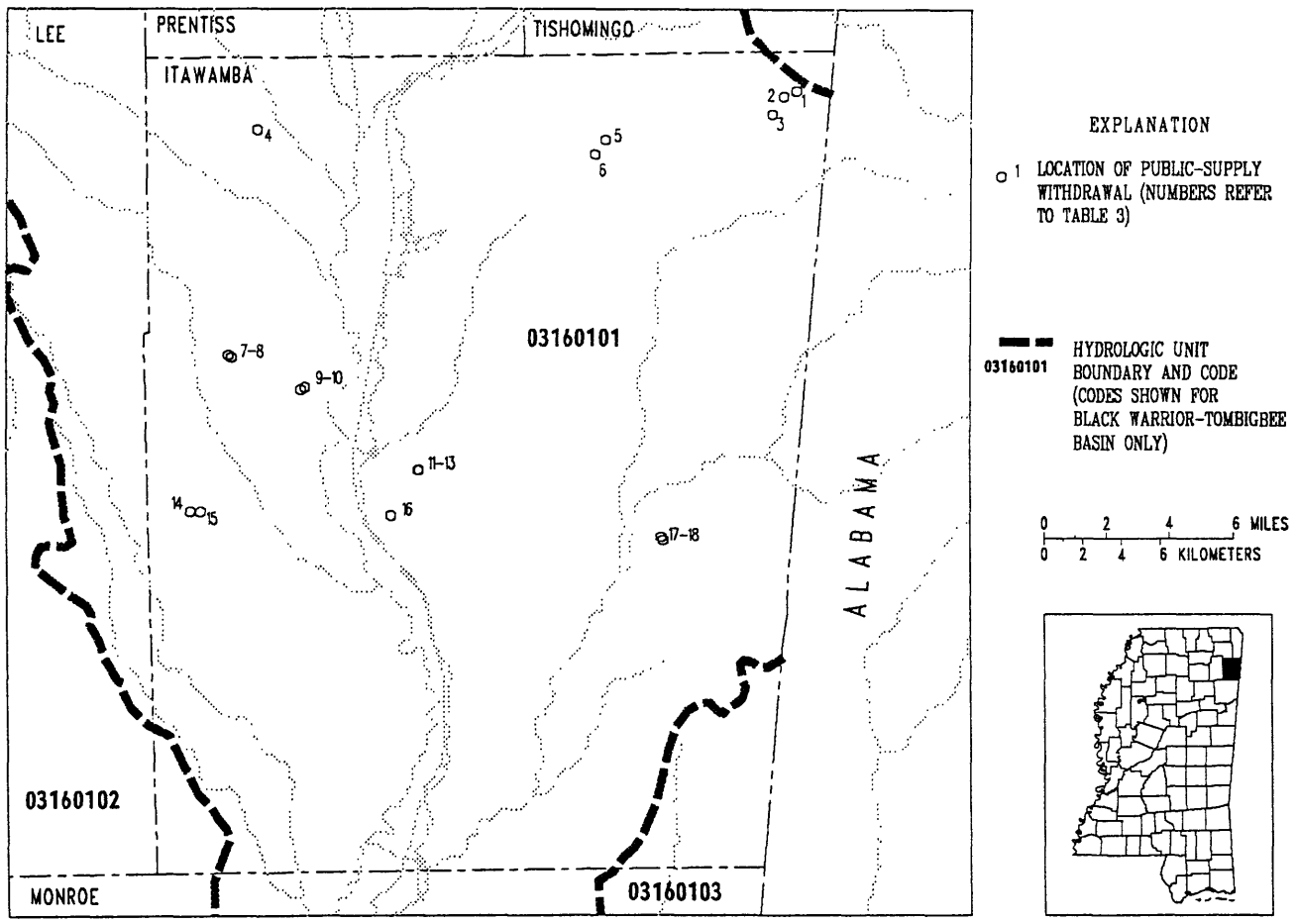

Figure 6.--Location of withdrawals for systems in Itawamba County, Mississippi.

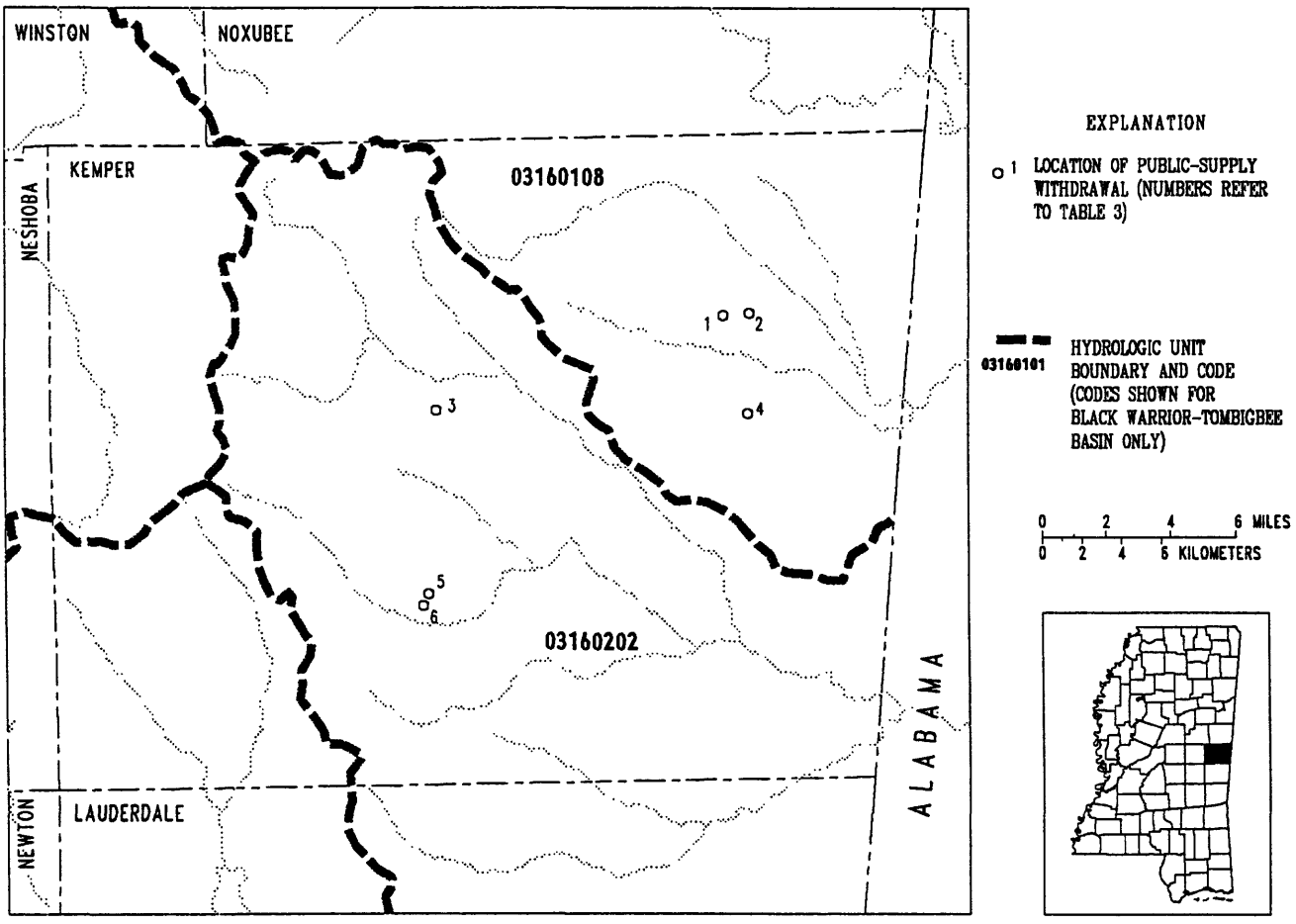

Figure 7.--Location of withdrawals for systems in Kemper County, Mississippi.

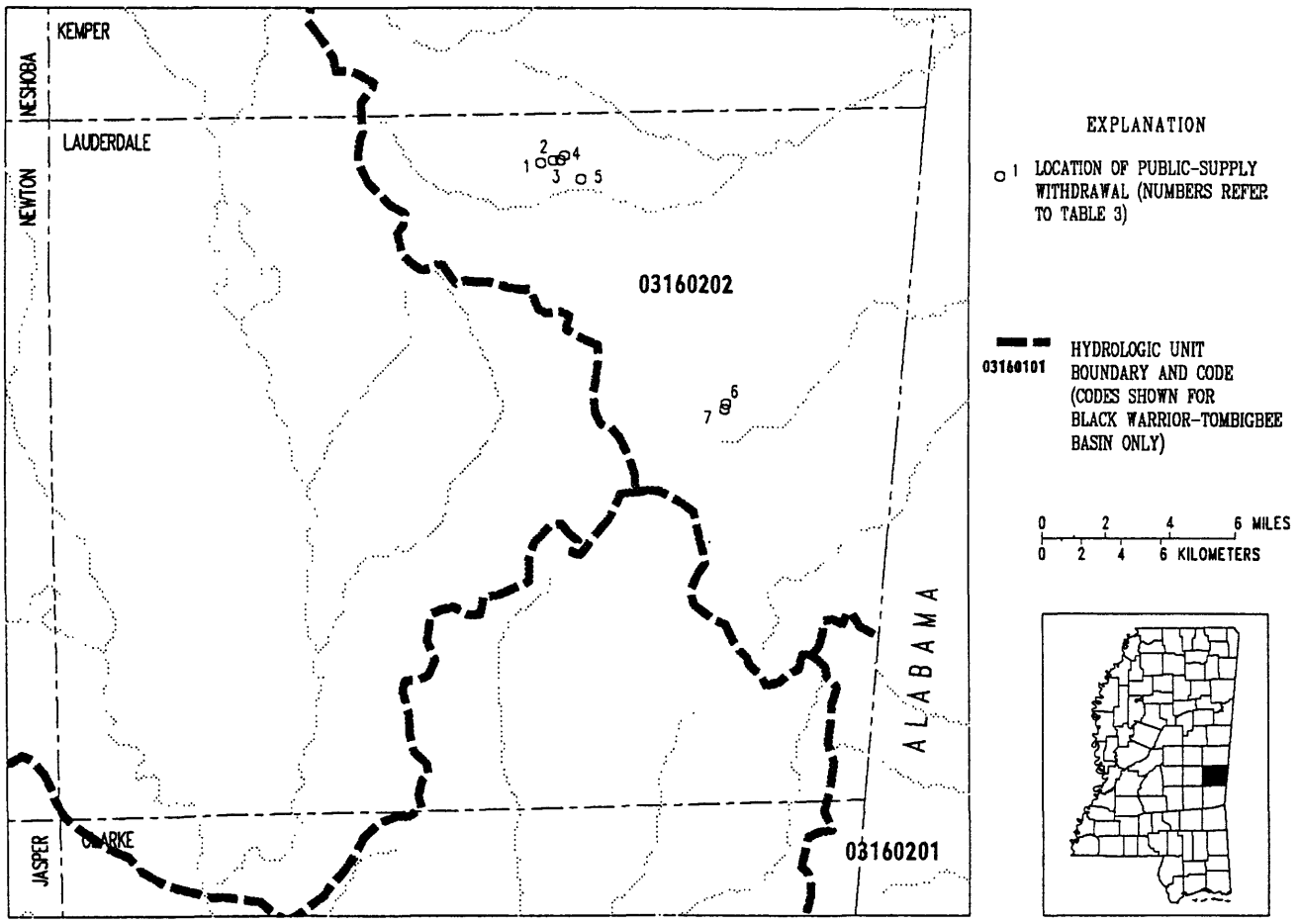

Figure 8.--Location of withdrawals for systems in Lauderdale County, Mississippi.

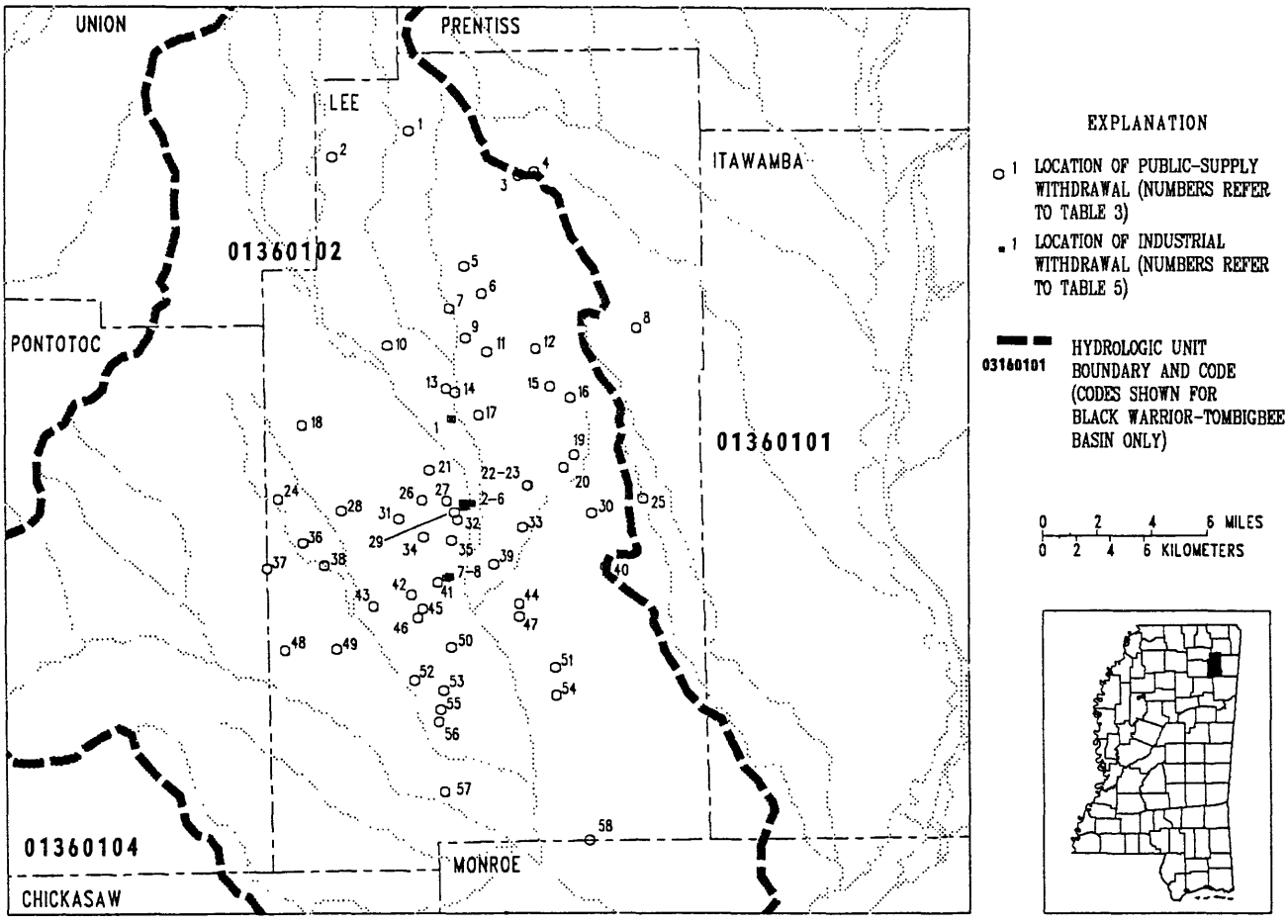

Figure 9.--Location of withdrawals for systems in Lee County, Mississippi.

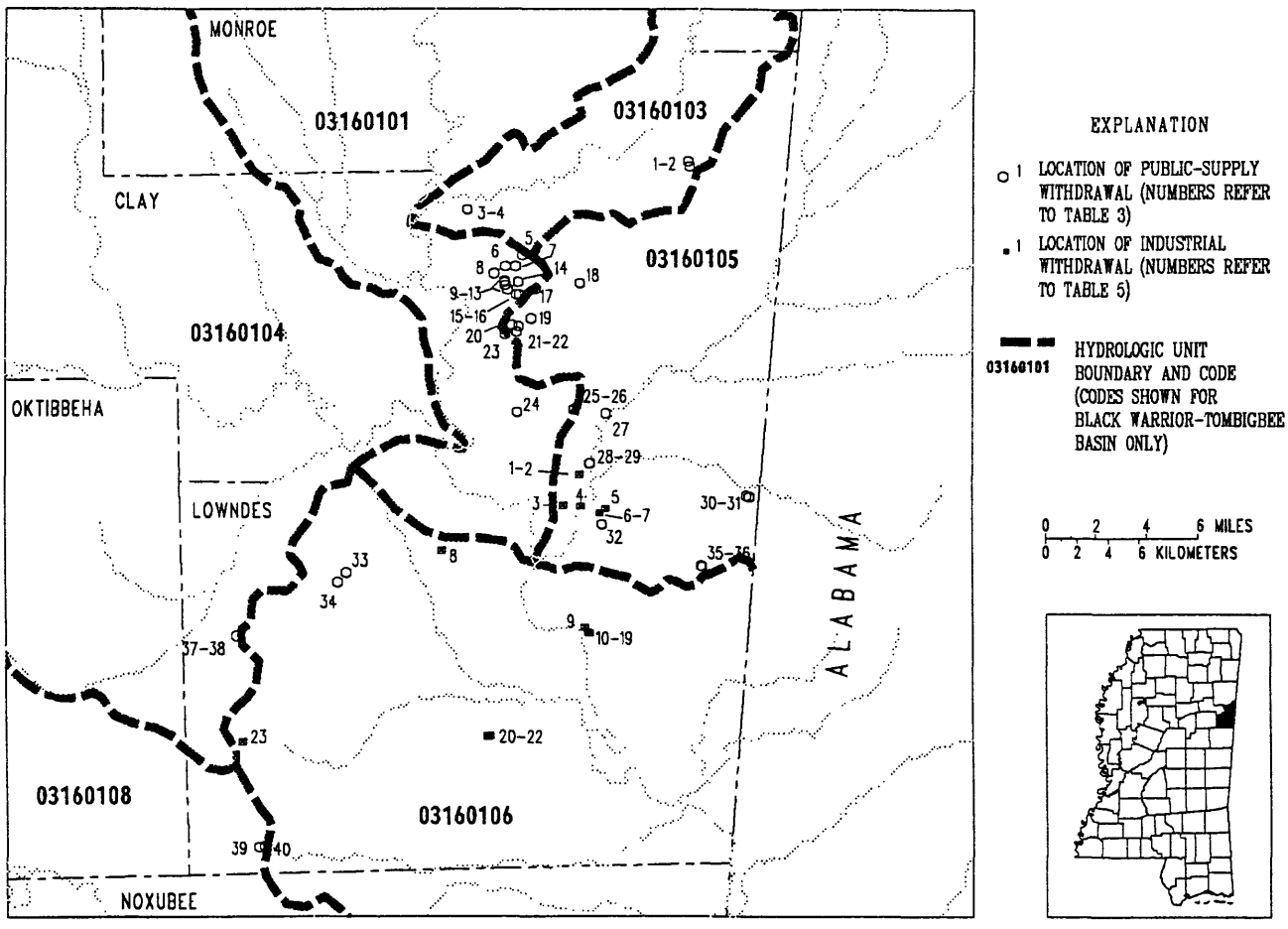

Figure 10.--Location of withdrawals for systems in Lowndes County, Mississippi.

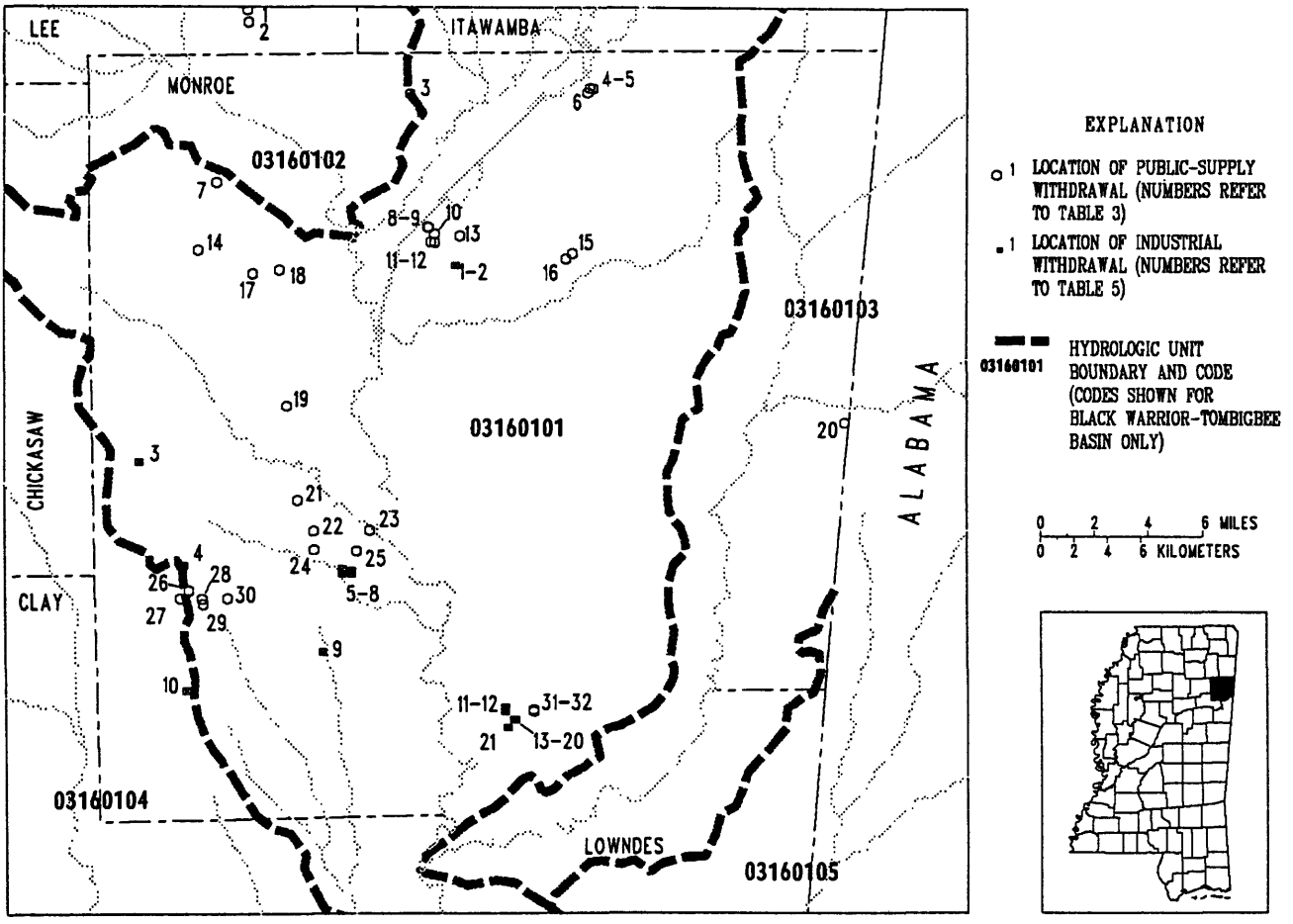

Figure 11.--Location of withdrawals for systems in Monroe County, Mississippi.

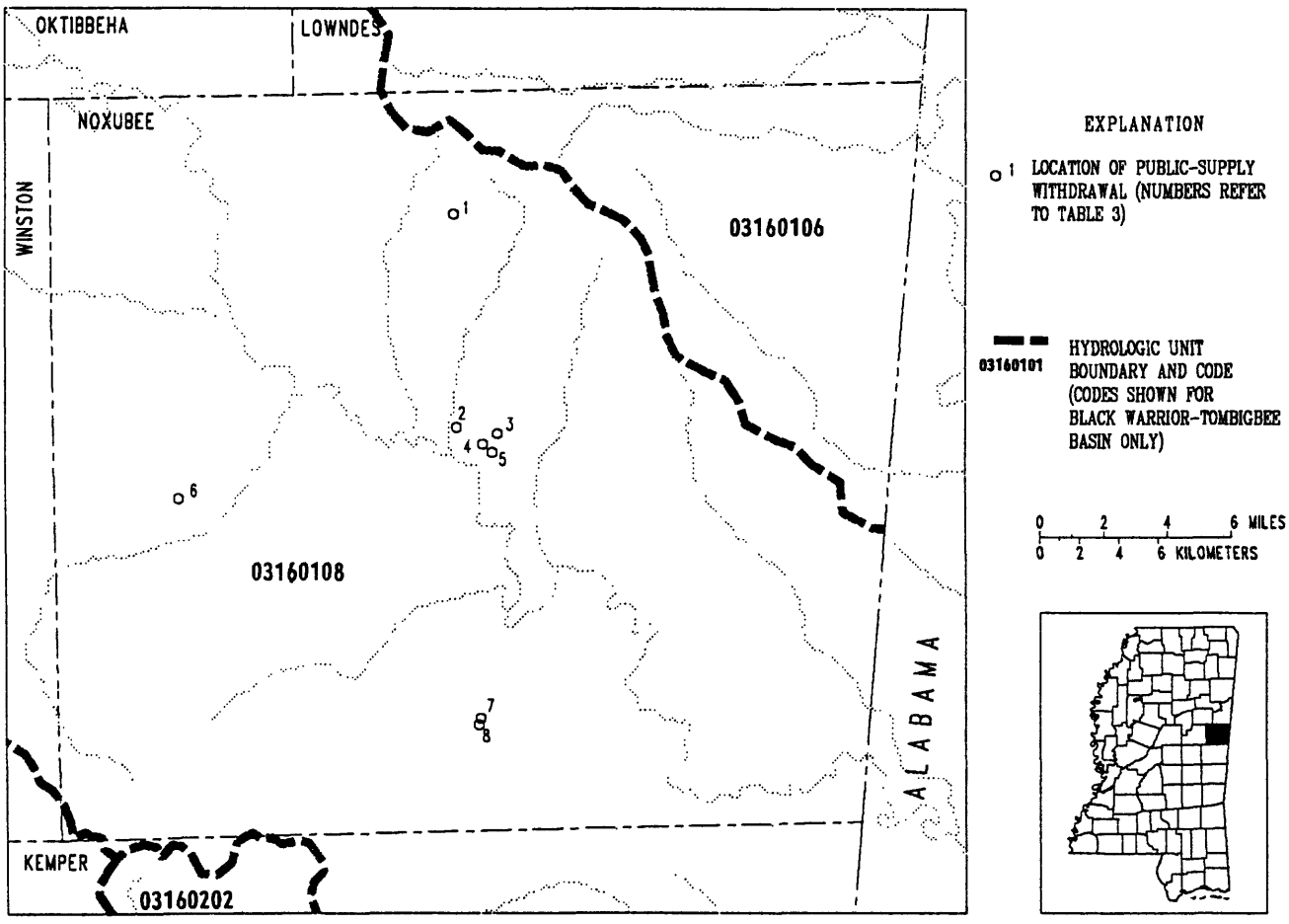

Figure 12.–Location of withdrawals for systems in Noxubee County, Mississippi.

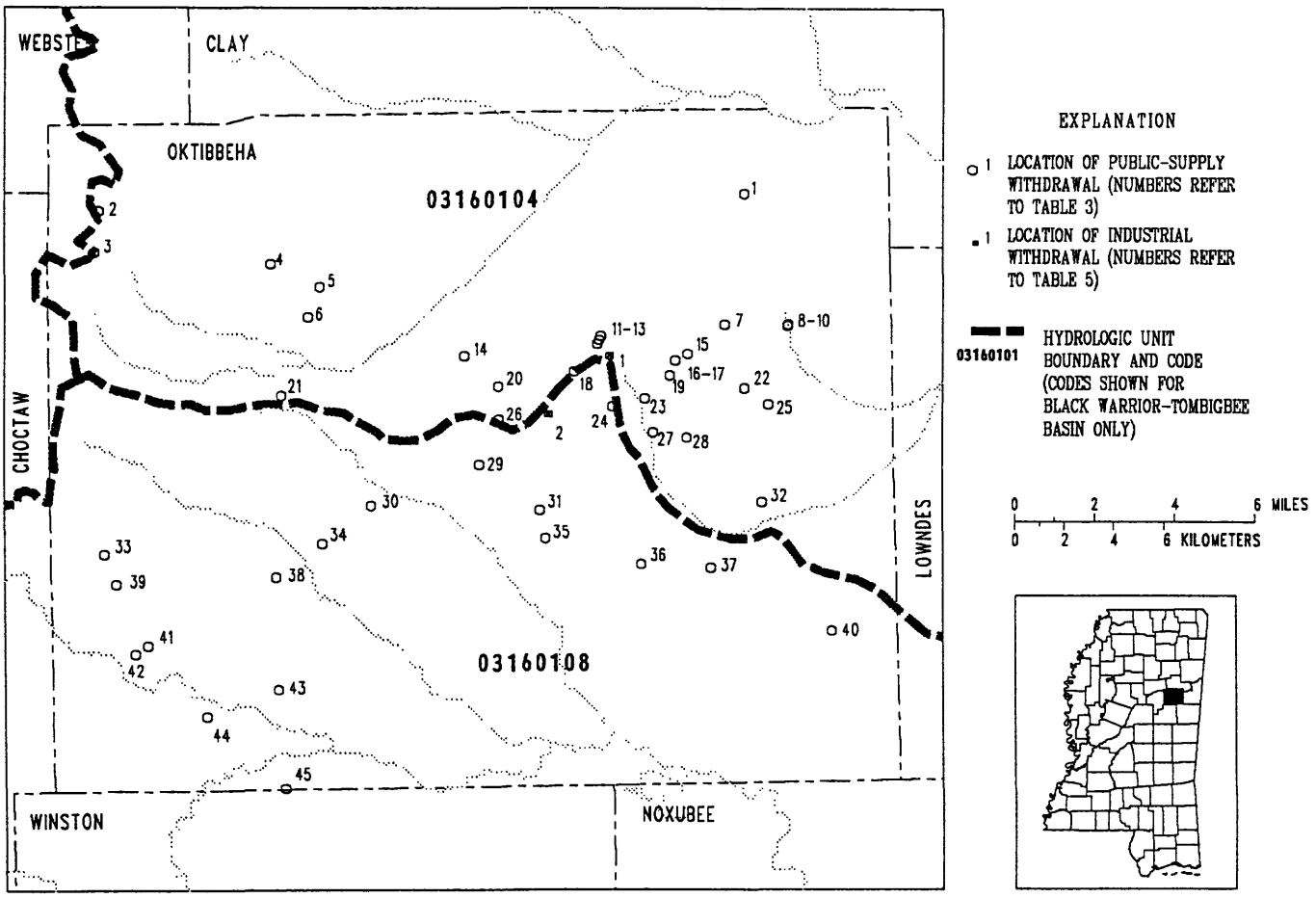

Figure 13.--Location of withdrawals for systems in Oktibbeha County, Mississippi.

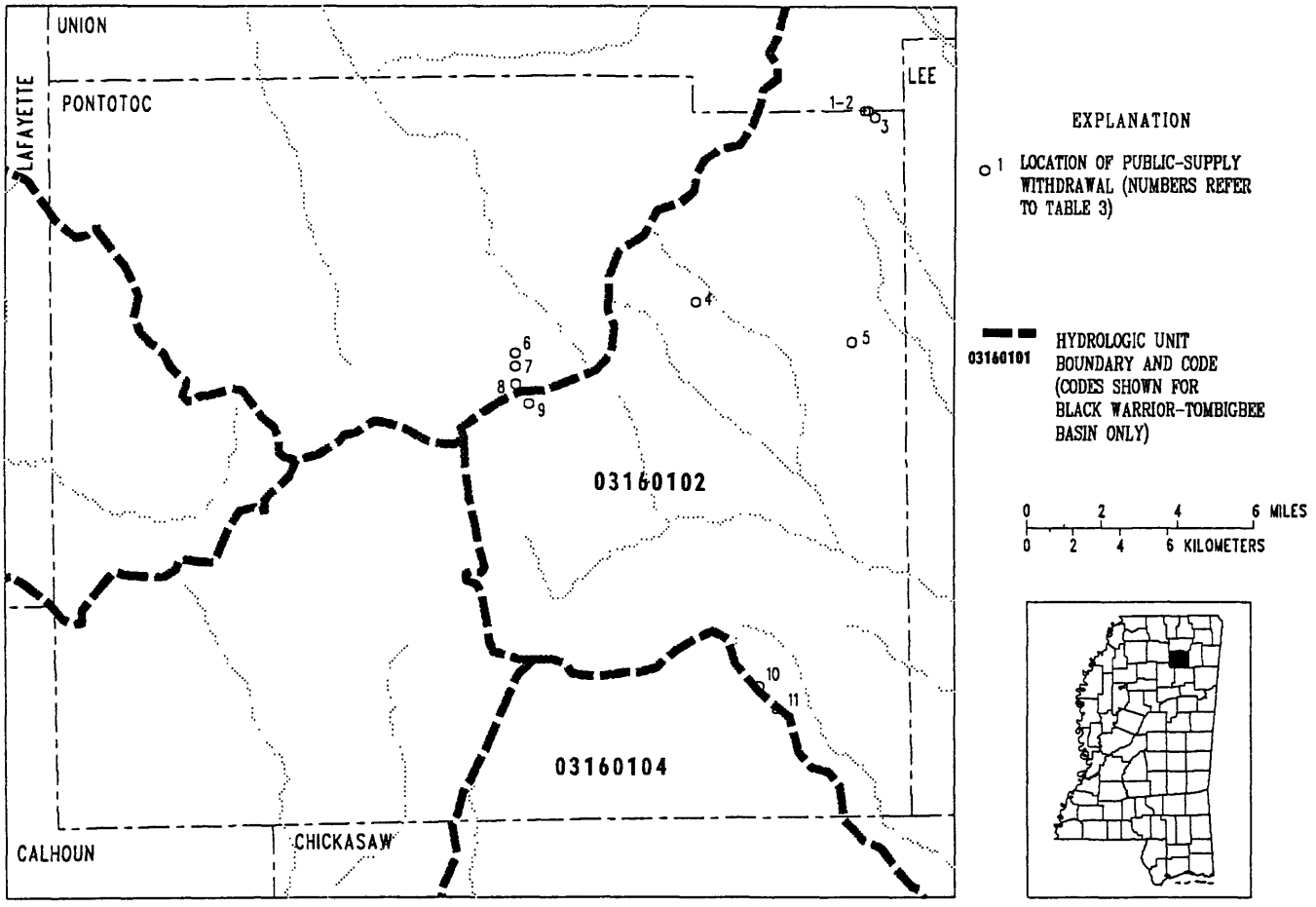

Figure 14.--Location of withdrawals for systems in Pontotoc County, Mississippi.

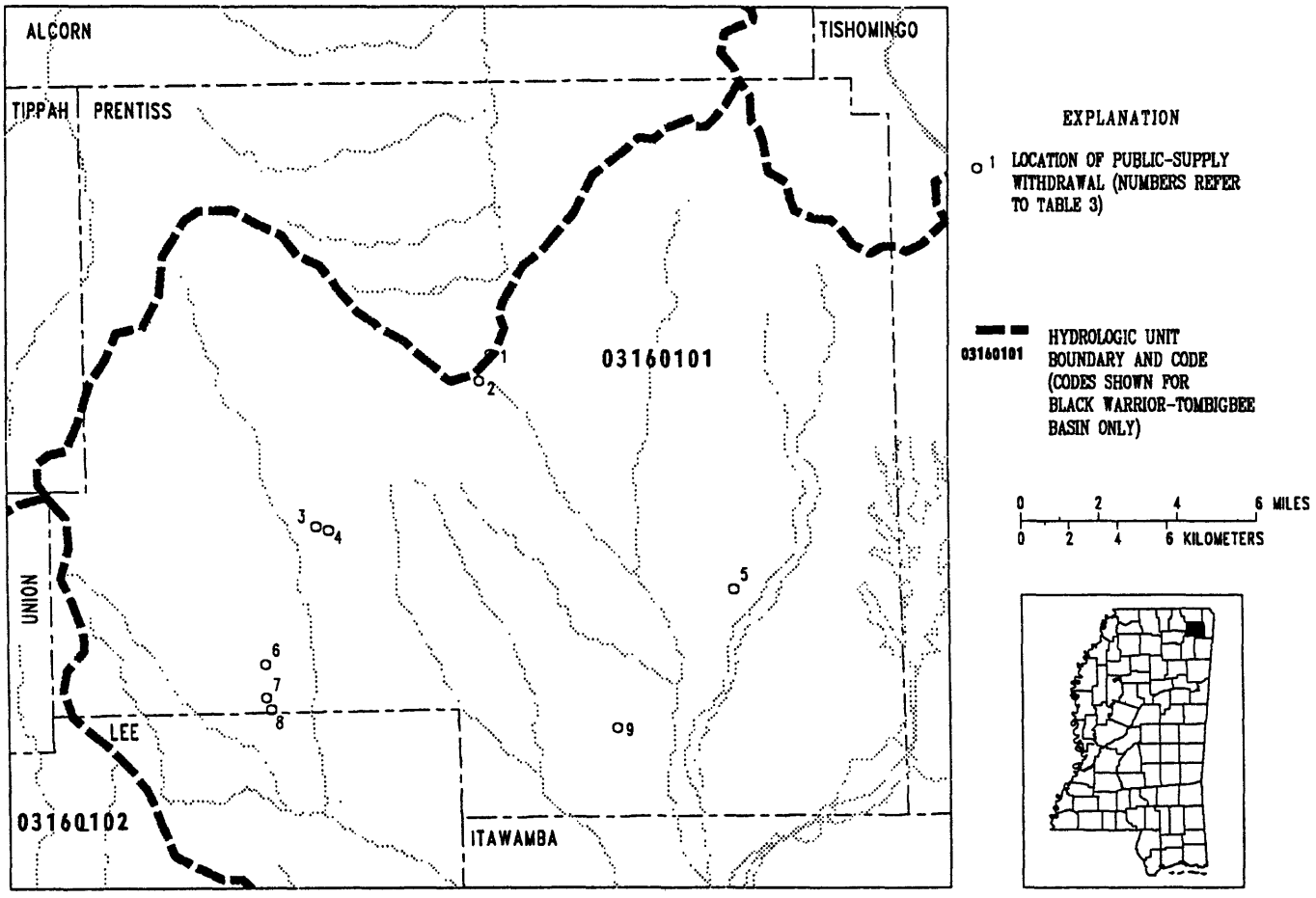

Figure 15.–Location of withdrawals for systems in Prentiss County, Mississippi.

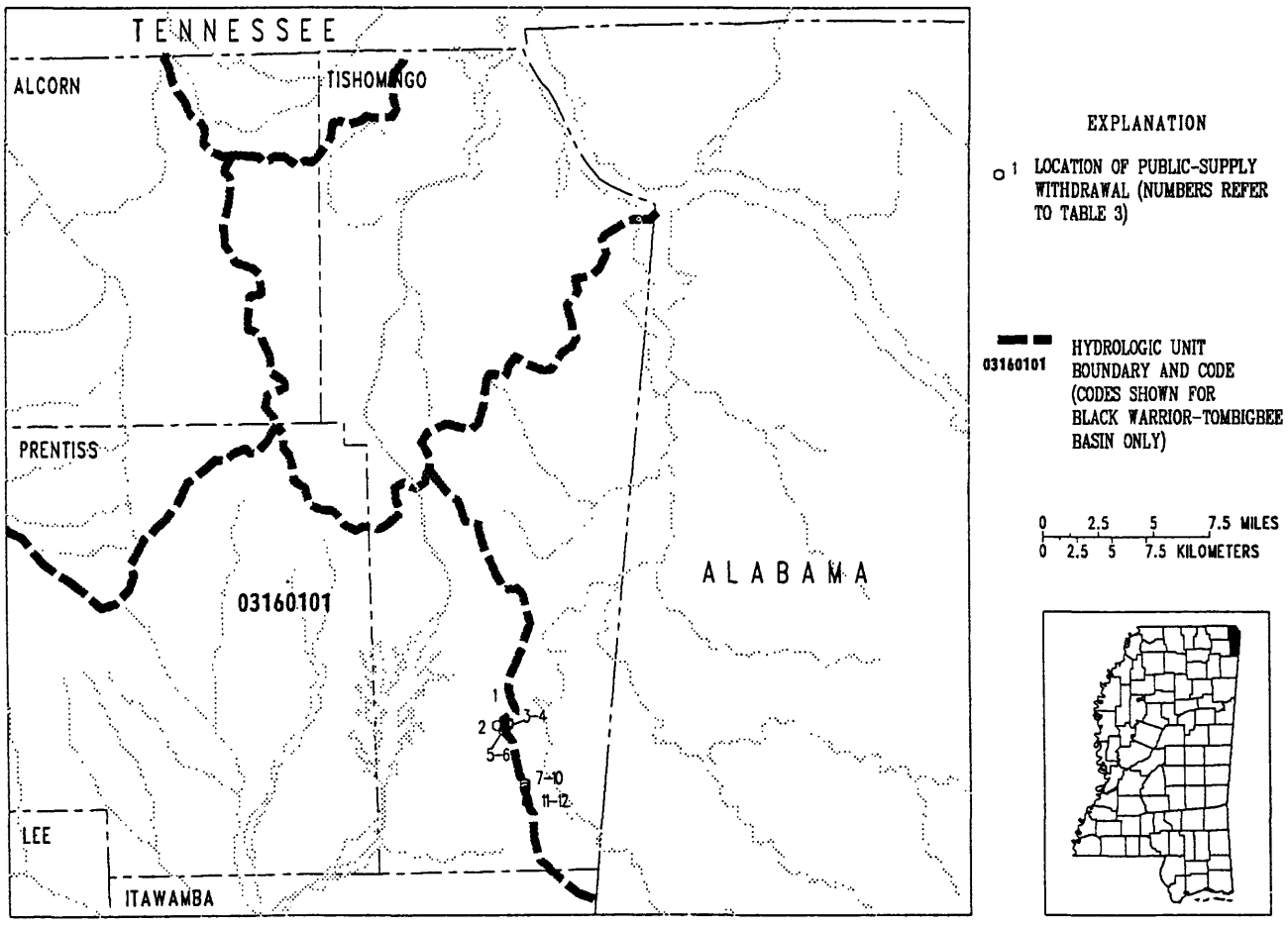

Figure 16.--Location of withdrawals for systems in Tishomingo County, Mississippi.

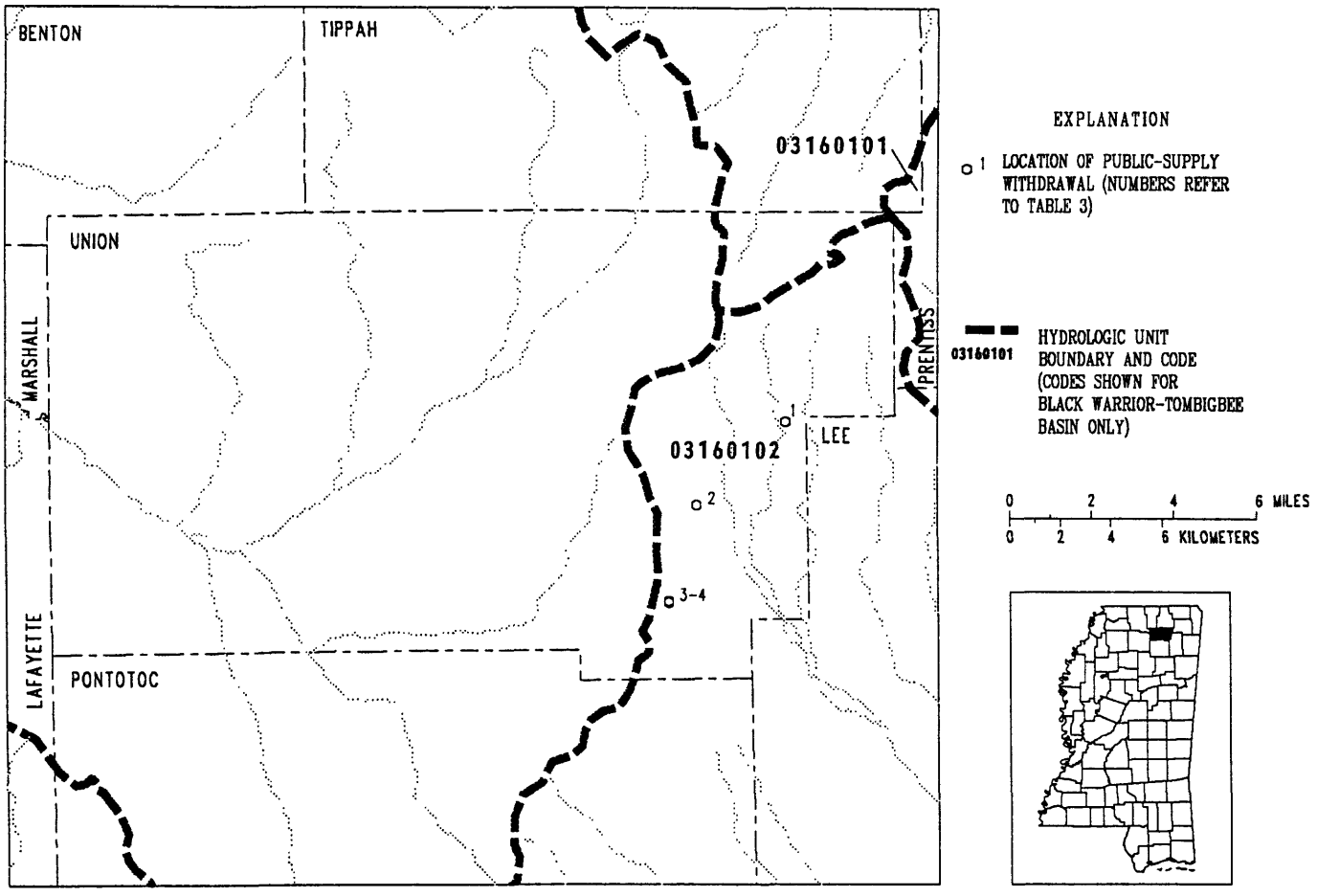

Figure 17.--Location of withdrawals for systems in Union County, Mississippi.

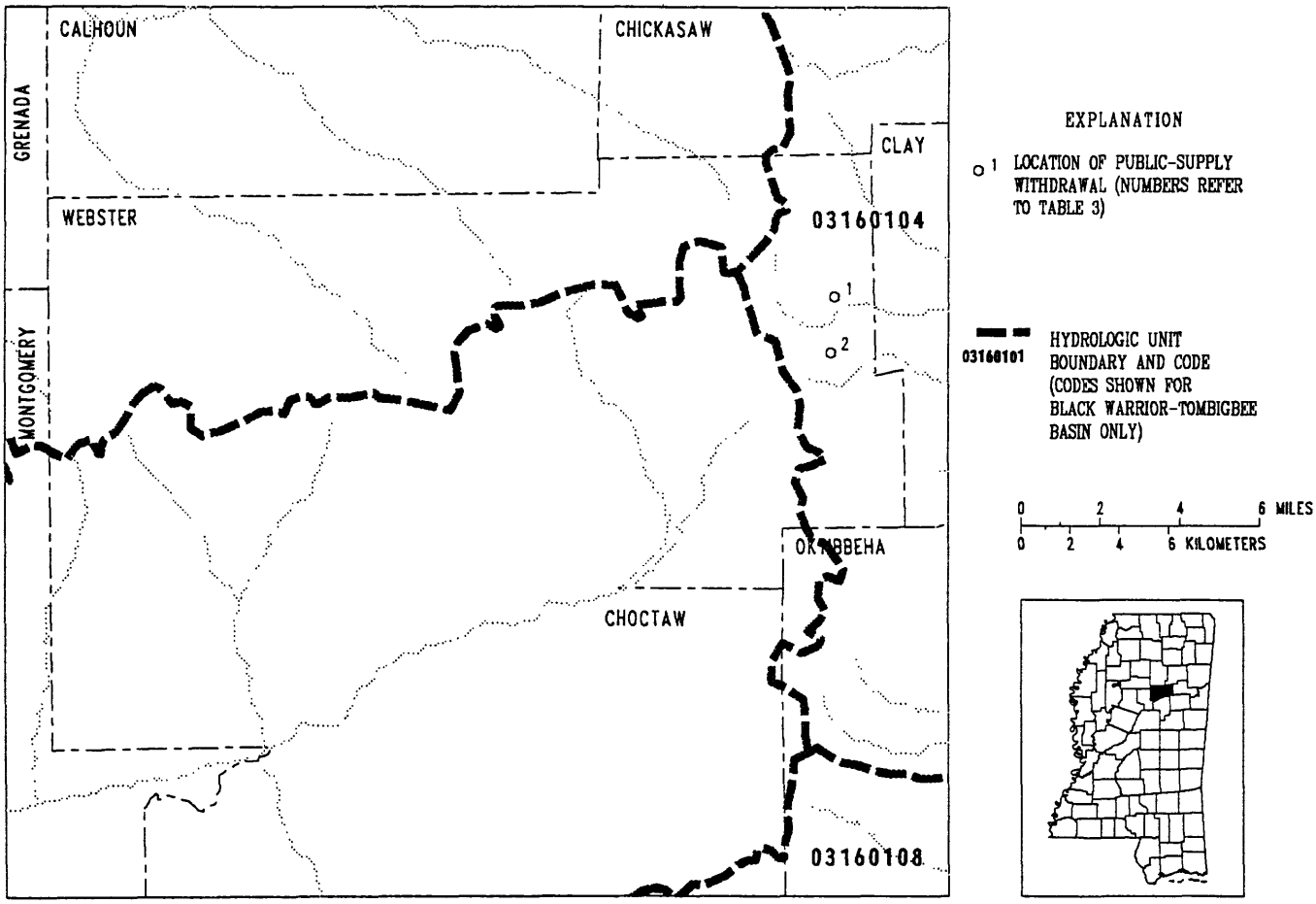

Figure 18.--Location of withdrawals for systems in Webster County, Mississippi.

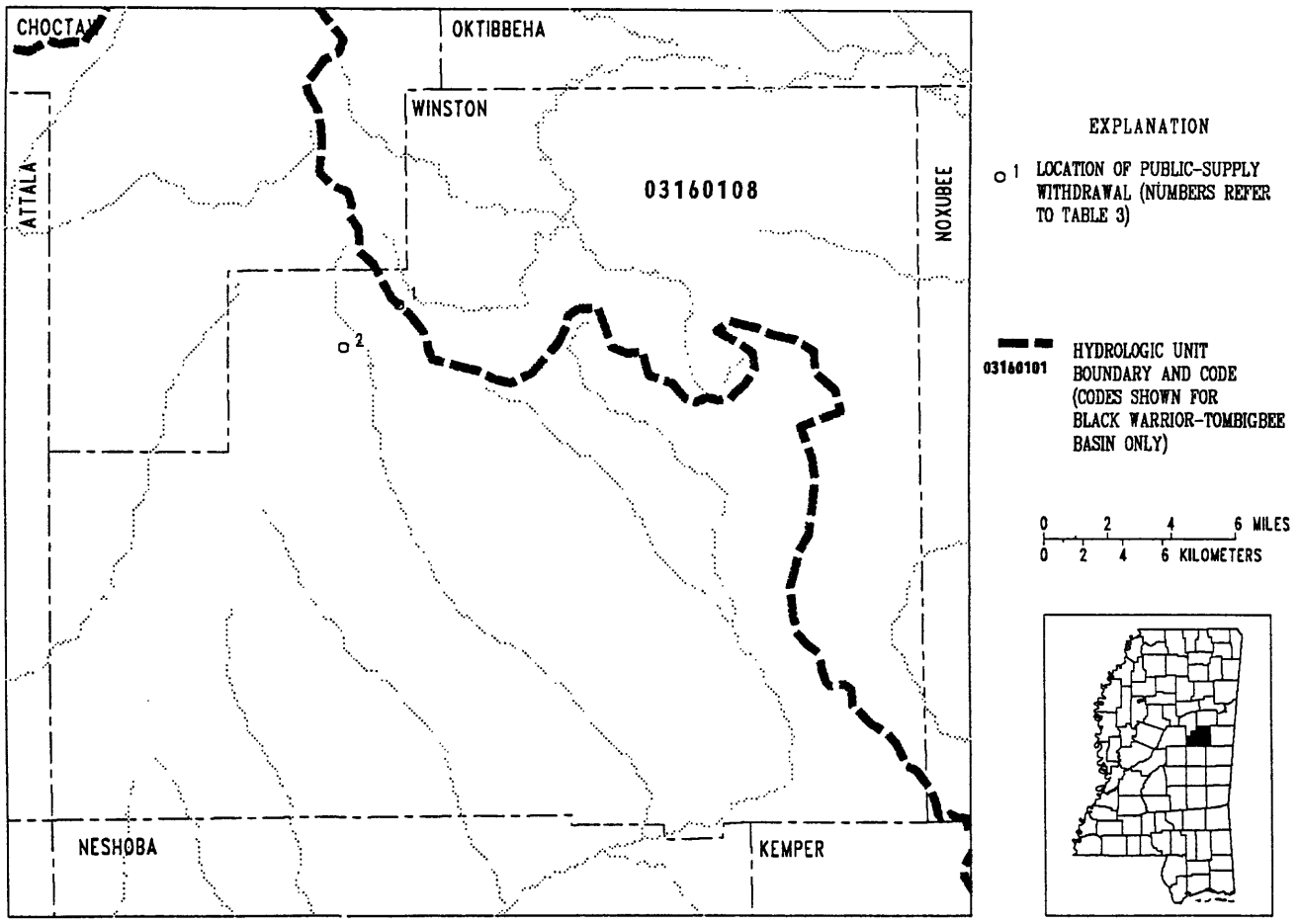

Figure 19.--Location of withdrawals for systems in Winston County, Mississippi.

Table 1. Geologic units and principal aquifers in the study area

[Modified from Slack and Darden, 1991]

Erathem	System	Series	Group	Geologic unit	Principal aquifer or aquifer system
Cenozoic	Tertiary	Eocene	Claiborne	Meridian Sand Member and Wilcox Group, upper part	Meridian-upper Wilcox aquifer
			Wilcox Group	Wilcox Group, upper part Hatchetigbee Formation	
		Paleocene	Wilcox Group	Tuscahoma Formation Wilcox Group, middle part Nanafalia Formation Fearn Springs Member Wilcox Group, lower part	Lower Wilcox aquifer
			Midway Group	Naheola Formation Porters Creek Clay Matthews Landing Marl Member Clayton Formation	
Mesozoic	Cretaceous	Upper Cretaceous	Selma Group	Prairie Bluff Chalk and Owl Creek Formation	
				Ripley Formation	Ripley aquifer
				Demopolis Chalk	
				Coffee Sand	Coffee Sand aquifer
				Mooreville Chalk Arcola Limestone Member	
			Tuscaloosa Group	Eutaw Formation Tombigbee Sand Member Eutaw Formation, lower part McShan Formation	Eutaw-McShan aquifer
				Gordo Formation Coker Formation Massive sand	Tuscaloosa aquifer system
		Lower Cretaceous		Undifferentiated	
Paleozoic				Undifferentiated Paleozoic Erathem	Paleozoic aquifer system

Table 2.--Water withdrawal and risk rating for public-supplies, 1985

[Water source is aquifer unless otherwise stated; Mgal/d, million gallons per day; W A, water authority; H, high; M, moderate; L, low; N/A, not available; dashes indicate not applicable; ft/yr, foot per year]

Facility name	Withdrawal (Mgal/d)	Water source	Number of connections	Population served	Risk rating	Comments
Alcorn County						
City of Corinth	3.617	Paleozoic	5,500	15,660	L	
Kossuth W A	.423	Coffee Sand	1,690	5,415	L	
Farmington W A	.397	Paleozoic	1,700	5,440	L	
Alcorn County W A	.326	Paleozoic	1,400	3,850	L	
Prentiss Alcorn W A	.136	Coffee Sand	566	1,810	L	
Rienzi W A	.064	Eutaw-McShan	300	960	L	
Chickasaw County						
Town of Houlka	.140	Eutaw-McShan	522	1,470	L	
Houston-Houlka W A	.072	Eutaw-McShan	320	1,185	L	
Town of Okolona	.339	Eutaw-McShan	1,234	3,950	L	
Town of Houston	.436	Eutaw-McShan	1,535	4,825	L	
Sparta W A	.125	Eutaw-McShan	500	1,600	L	
Southeast Chickasaw W A	.126	Eutaw-McShan	446	1,425	L	
C C M W A	.022	Eutaw-McShan	146	465	L	
Town of Woodland	.053	Eutaw-McShan	168	540	L	
Clay County						
Siloam W A	.265	Eutaw-McShan	1,060	3,390	L	
Lone Oak W A	.110	Eutaw-McShan	442	1,435	M	Within West Point area cone of depression.
City of West Point	----	----	3,009	9,630	--	
City of West Point	1.213	Eutaw-McShan	N/A	N/A	H	Trend is about 1 ft/yr decline in water levels.
City of West Point	1.532	Gordo	N/A	N/A	H	Trend is about 3 ft/yr decline in water levels.
Suncreek W A	.123	Eutaw-McShan	448	1,430	L	
Strong Hill W A	.091	Eutaw-McShan	365	1,170	M	Within West Point area cone of depression.
Golden Triangle W A	.080	Eutaw-McShan	310	990	M	Within West Point area cone of depression.
Itawamba County						
North East Itawamba W A	.233	Gordo	969	3,100	L	
Houston W A	.066	Gordo	319	1,040	L	
Mantachie W A	.113	Gordo	443	1,420	L	
Tombigbee W A	.096	Gordo	400	1,280	L	
Town of Fulton	.815	Gordo	2,500	8,000	L	
Dorsey Water Company	.152	Eutaw-McShan	635	2,030	L	
Tremont W A	.079	Gordo	290	930	L	
Kemper County						
Town of Scooba	.051	Coker	205	655	L	
Porterville	.162	Coker	652	2,085	L	
Town of Dekalb	.199	Springs-Middle Wilcox (?)	575	1,825	L	Source is 3 springs. City uses about one-half of average springflow.
Kipling W A	.190	Lower Wilcox	827	2,635	M	In outcrop area--susceptible to long-term drought.
Lauderdale County						
Meridian Naval Air Station	.500	Lower Wilcox	N/A	4,600	M	In outcrop area--susceptible to long-term drought.
North Lauderdale W A	.353	Lower Wilcox	1,410	4,510	L	
Toomsuba W A	.190	Lower Wilcox	670	2,430	M	do.
Lee County						
North Lee W A	.396	Eutaw-McShan	1,262	4,040	M	do.
Town of Guntown	.132	Gordo	480	1,535	M	do.
Town of Saltillo	.158	Gordo	700	2,240	M	do.
Tupelo-Lee Industrial Park	.531	Eutaw-McShan	N/A	N/A	H	do.
Mooreville Richmond W A	.414	Eutaw-McShan	1,941	6,210	H	do.
Trace W A	.059	Eutaw-McShan	277	880	M	do.
Natchez Trace Parkway	.004	Eutaw-McShan	20	64	M	do.
Lake Piomingo	.051	Eutaw-McShan	240	770	M	do.
City of Tupelo	----	----	10,137	23,905	--	
City of Tupelo	4.391	Gordo	N/A	N/A	H	Trend is about 2 ft/yr decline in water levels.
City of Tupelo	1.883	Eutaw-McShan	N/A	N/A	H	Trend is as much as 4 ft/yr decline in water levels.
Auburn W A	.061	Eutaw-McShan	231	785	M	do.
Palmetto W A	.130	Gordo	453	1,450	H	do.

Table 2.--Water withdrawal and risk rating for public-supplies, 1985--Continued

Facility name	Withdrawal (Mgal/d)	Water source	Number of connections	Population served	Risk rating	Comments
Lee County, cont.						
Haven Acres Utilities	0.060	Eutaw-McShan	310	990	M	Trend is as much as 4 ft/yr decline in water levels.
Town of Plantersville	.113	Eutaw-McShan	445	1,425	H	do.
Town of Verona	.269	Eutaw-McShan	959	3,070	H	Within Tupelo area cone of depression.
City Point W A	.128	Eutaw-McShan	598	1,915	H	Within Tupelo area cone of depression.
Town of Shannon	.122	Eutaw-McShan	379	1,030	H	do.
Town of Nettleton	.230	Eutaw-McShan	840	2,690	H	do.
Lowndes County						
Town of Caledonia	.194	Gordo	720	2,305	L	
Columbus Air Force Base	.844	Gordo	N/A	6,000	L	
Airbase Trailer Park	.015	Eutaw-McShan	190	600	L	
Fowlkes Trailer Park	.006	Eutaw-McShan	35	100	L	
Parkers Mobile Home Park	.031	Eutaw-McShan	70	225	L	
McCarty	.011	Eutaw-McShan	50	200	L	
Nicholson Mobile Home Park	.006	Eutaw-McShan	42	135	L	
Enlow Mobile Home Park	.011	Eutaw-McShan	58	185	L	
Dixie Land Water Co	.071	Gordo	286	915	M	Trend is about 2 ft/yr decline in water levels.
East Lowndes W A	1.365	Gordo	3,891	12,450	L	
City of Columbus	----	----	7,798	28,345		
City of Columbus	3.514	Coker	N/A	N/A	L	Trend is less than 1 ft/yr decline in water levels.
City of Columbus	2.004	Luxapallila Creek	N/A	N/A	L	7-day, 10-year low flow is 33 Mgal/d.
Pine Haven Water System	.010	Gordo	42	135	L	
Golden Triangle Indust. Park	.022	Coker	N/A	N/A	L	
Town of Artesia	.054	Gordo	215	690	L	
Town of Crawford	.051	Gordo	185	595	L	
Monroe County						
Cason W A	.205	Gordo	836	2,640	L	
Town of Smithville	.091	Gordo	590	1,880	L	
Wren W A	.136	Eutaw-McShan	547	1,750	L	
Town of Amory	1.230	Gordo	3,615	11,490	L	
Town of Hatley	.090	Gordo	360	1,150	L	
Coontail W A	.064	Eutaw-McShan	300	975	L	
Gattman W A	.068	Gordo	271	850	L	
City of Aberdeen	1.208	Eutaw-McShan	2,770	8,865	M	Redistribution of pumpage away from the city center has stabilized water levels in the area.
Hamilton W A	.184	Gordo	751	2,355	L	
Noxubee County						
Brooksville	.312	Eutaw-McShan	515	1,650	M	Water quality decreases rapidly to the south of the city's wells (dissolved solids concentrations increase).
Pineywoods W A	.030	Coker	118	375	L	
City of Macon	.763	Coker	1,064	3,405	L	
Mashulaville Util. Dist.	.045	Coker	157	500	L	
Town of Shuqualak	.115	Gordo	300	963	L	
Oktibbeha County						
Mhoon Farm W A	.023	Gordo	93	300	L	
Double Springs W A	.058	Gordo	232	740	L	
Center Grove W A	.024	Gordo	95	305	M	In Starkville area cone of depression.
Adaton W A	.055	Gordo	405	1,295	L	
Clayton Village W A	.145	Gordo	580	1,855	M	do.
Herman Echols W A	.035	Tuscaloosa	115	400	L	
City of Starkville	2.909	Gordo	5,950	19,040	H	Trend is about 3 ft/yr decline in water levels.
Mississippi State University	2.027	Gordo	4,316	13,810	H	Trend is about 3 ft/yr decline in water levels.
University Heights	.014	Gordo	56	180	L	
New Light W A	.028	Gordo	113	360	L	
Black Jack W A	.033	Gordo	133	425	M	In Starkville area cone of depression.
Bluefield W A	.096	Gordo	385	1,230	M	do.
Turkey Creek W A	.024	Gordo	96	305	L	
Longview W A	.045	Gordo	181	580	L	
Talking Warrior W A	.038	Gordo	150	480	L	
Sessums Community Water	.033	Gordo	132	420	L	
Wake Forest W A	.053	Gordo	213	680	L	
Bradley W A	.033	Gordo	131	420	L	
Oktoc W A	.067	Gordo	270	865	L	
Chapel Hill W A	.055	Gordo	219	700	M	do.
Town of Sturgis	.093	Gordo	279	895	L	
Craig Springs W A	.034	Gordo	136	435	L	
Morgan Chapel W A	.037	Gordo	148	475	L	

Table 2.--Water withdrawal and risk rating for public-supplies, 1985--Continued

Facility name	Withdrawal (Mgal/d)	Water source	Number of connections	Population served	Risk rating	Comments
Pontotoc County						
Town of Sherman	0.055	Eutaw-McShan	220	705	L	
East Pontotoc W A	.205	Eutaw-McShan	805	2,575	M	Within Tupelo area cone of depression.
City of Pontotoc	.500	Gordo	2,004	6,415	L	
Troy W A	.087	Gordo	348	1,115	L	
Prentiss County						
Big V W A	.218	Gordo	750	2,050	L	
Wheeler Frankston W A	.228	Eutaw-McShan	915	2,040	L	
New Site W A	.071	Gordo	250	680	L	
City of Baldwyn	.415	Eutaw-McShan	1,148	3,065	L	
Marietta W A	.064	Eutaw-McShan	214	650	L	
Tishomingo County						
Dennis Paden W A	.195	Gordo	1,000	3,200	L	
Town of Belmont	.201	Gordo	679	2,175	L	
Union County						
Alpine W A	.058	Eutaw-McShan	233	750	L	
Blue Springs W A	.110	Eutaw-McShan and Coffee Sand	338	1,080	L	
Webster County						
Dancy W A	.018	Gordo	67	215	L	
Town of Mantee	.042	Coker	147	470	L	
Winston County						
Highpoint W A	.075	Lower Wilcox	342	985	L	

Table 3. -- Public-supply withdrawal locations

[Water source is aquifer unless otherwise stated; Mgal/d, million gallons per day; N/A, withdrawal for individual wells not available; W A, water authority]

Map number	Facility name	Hydrologic unit	Latitude	Longitude	Water source	1985 withdrawal (Mgal/d)
Alcorn County						
1	City of Corinth	08010207	34 58 47	88 29 06	Paleozoic	N/A
2	Kossuth W A	08010207	34 56 53	88 44 43	Coffee Sand	N/A
3	City of Corinth	06040001	34 56 54	88 27 03	Paleozoic	N/A
4	City of Corinth	06040001	34 56 57	88 26 58	Paleozoic	N/A
5	City of Corinth	08010207	34 56 44	88 29 22	Paleozoic	N/A
6	City of Corinth	08010207	34 56 17	88 31 38	Paleozoic	N/A
7	City of Corinth	08010207	34 56 24	88 31 15	Paleozoic	N/A
8	City of Corinth	08010207	34 56 24	88 30 32	Paleozoic	N/A
9	City of Corinth	08010207	34 56 12	88 30 45	Paleozoic	N/A
10	City of Corinth	08010207	34 55 45	88 31 10	Paleozoic	N/A
11	Farmington W A	08010207	34 55 44	88 27 43	Paleozoic	N/A
12	Farmington W A	08010207	34 55 39	88 26 52	Paleozoic	N/A
13	Alcorn County W A	08010207	34 55 23	88 33 59	Paleozoic	N/A
14	Kossuth W A	08010207	34 54 52	88 35 30	Paleozoic	N/A
15	City of Corinth	08010207	34 54 56	88 31 30	Paleozoic	N/A
16	City of Corinth	08010207	34 54 26	88 29 15	Paleozoic	N/A
17	Kossuth W A	08010207	34 52 54	88 38 26	Paleozoic	N/A
18	Alcorn County W A	06030005	34 51 15	88 24 56	Paleozoic	N/A
19	Alcorn County W A	06030005	34 51 06	88 24 41	Paleozoic	N/A
20	Alcorn County W A	08010207	34 50 40	88 33 35	Paleozoic	N/A
21	Prentiss Alcorn W A	08010207	34 47 02	88 39 19	Coffee Sand	N/A
22	Prentiss Alcorn W A	08010207	34 47 02	88 39 19	Coffee Sand	N/A
23	Rienzi W A	08010207	34 46 00	88 31 45	Eutaw-McShan	N/A
24	Rienzi W A	08010207	34 45 50	88 33 35	Eutaw-McShan	N/A
25	Rienzi W A	08010207	34 45 50	88 32 00	Eutaw-McShan	N/A
Chickasaw County						
1	Town of Houlka	03160104	34 02 26	89 01 29	Eutaw-McShan	N/A
2	Houston-Houlka W A	03160104	34 02 21	88 59 18	Eutaw-McShan	N/A
3	Town of Houlka	03160104	34 02 13	89 00 59	Eutaw-McShan	N/A
4	Town of Houlka	03160104	34 01 49	89 01 34	Eutaw-McShan	N/A
5	Houston-Houlka W A	03160104	34 01 08	88 59 25	Eutaw-McShan	N/A
6	Town of Okolona	03160101	34 00 22	88 45 31	Eutaw-McShan	N/A
7	Town of Okolona	03160101	33 59 58	88 45 01	Eutaw-McShan	N/A
8	Houston-Houlka W A	03160104	33 57 55	88 57 31	Eutaw-McShan	N/A
9	Town of Houston	03160104	33 54 18	89 00 33	Eutaw-McShan	N/A
10	Town of Houston	03160104	33 53 45	88 59 45	Eutaw-McShan	N/A
11	Sparta W A	03160104	33 52 03	89 01 03	Eutaw-McShan	N/A
12	Southeast Chickasaw W A	03160104	33 50 32	88 55 21	Eutaw-McShan	N/A
13	Southeast Chickasaw W A	03160104	33 50 34	88 51 58	Eutaw-McShan	N/A
14	C C M W A	03160104	33 50 23	88 43 50	Eutaw-McShan	0.022
15	Sparta W A	03160104	33 47 02	88 57 52	Eutaw-McShan	N/A
16	Town of Woodland	03160104	33 46 26	89 02 39	Eutaw-McShan	.053

Table 3. -- Public-supply withdrawal locations--Continued

Map number	Facility name	Hydrologic unit	Latitude	Longitude	Water source	1985 withdrawal (Mgal/d)
Clay County						
1	Siloam W A	03160104	33 47 55	88 48 18	Eutaw-McShan	N/A
2	Siloam W A	03160104	33 42 53	89 00 43	Gordo	N/A
3	Siloam W A	03160104	33 40 44	88 54 27	Eutaw-McShan	N/A
4	Siloam W A	03160104	33 39 05	88 59 21	Eutaw-McShan	N/A
5	Siloam W A	03160104	33 38 18	88 47 33	Eutaw-McShan	N/A
6	Siloam W A	03160104	33 38 14	88 46 42	Eutaw-McShan	N/A
7	Lone Oak W A	03160104	33 37 26	88 41 50	Eutaw-McShan	N/A
8	City of West Point	03160104	33 37 26	88 38 05	Gordo	0.766
9	City of West Point	03160104	33 37 09	88 39 44	Eutaw-McShan	.201
10	City of West Point	03160104	33 37 01	88 39 37	Eutaw-McShan	.111
11	City of West Point	03160104	33 37 06	88 39 37	Gordo	.766
12	City of West Point	03160104	33 36 50	88 39 40	Eutaw-McShan	.231
13	Suncreek W A	03160104	33 36 49	88 54 38	Eutaw-McShan	N/A
14	Siloam W A	03160104	33 36 28	88 44 50	Eutaw-McShan	N/A
15	Lone Oak W A	03160104	33 36 28	88 42 48	Eutaw-McShan	N/A
16	Strong Hill W A	03160104	33 36 29	88 36 11	Eutaw-McShan	N/A
17	City of West Point	03160104	33 36 17	88 39 07	Eutaw-McShan	.185
18	City of West Point	03160104	33 35 48	88 39 42	Eutaw-McShan	.189
19	City of West Point	03160104	33 35 34	88 39 41	Eutaw-McShan	.295
20	Suncreek W A	03160104	33 35 25	89 01 05	Gordo	N/A
21	Strong Hill W A	03160104	33 35 21	88 36 26	Eutaw-McShan	N/A
22	Suncreek W A	03160104	33 34 55	88 56 48	Eutaw-McShan	N/A
23	Golden Triangle W A	03160104	33 31 39	88 38 08	Eutaw-McShan	.080
Itawamba County						
1	North East Itawamba W A	03160101	34 26 42	88 10 41	Gordo	N/A
2	North East Itawamba W A	03160101	34 26 33	88 11 06	Gordo	N/A
3	North East Itawamba W A	03160101	34 26 04	88 11 29	Gordo	N/A
4	Houston W A	03160101	34 25 53	88 28 47	Gordo	.066
5	North East Itawamba W A	03160101	34 25 27	88 17 04	Gordo	N/A
6	North East Itawamba W A	03160101	34 25 02	88 17 26	Gordo	N/A
7	Mantachie W A	03160101	34 19 35	88 29 46	Gordo	N/A
8	Mantachie W A	03160101	34 19 39	88 29 52	Gordo	N/A
9	Tombigbee W A	03160101	34 18 39	88 27 29	Gordo	N/A
10	Tombigbee W A	03160101	34 18 43	88 27 21	Gordo	N/A
11	Town of Fulton	03160101	34 16 22	88 23 36	Gordo	N/A
12	Town of Fulton	03160101	34 16 22	88 23 36	Gordo	N/A
13	Town of Fulton	03160101	34 16 22	88 23 34	Gordo	N/A
14	Dorsey Water Company	03160101	34 15 19	88 31 15	Eutaw-McShan	N/A
15	Dorsey Water Company	03160101	34 15 18	88 30 54	Gordo	N/A
16	Town of Fulton	03160101	34 15 07	88 24 34	Gordo	N/A
17	Tremont W A	03160101	34 14 19	88 15 24	Gordo	N/A
18	Tremont W A	03160101	34 14 24	88 15 28	Gordo	N/A
Kemper County						
1	Town of Scooba	03160108	32 49 46	88 28 48	Coker	.051
2	Porterville	03160108	32 49 50	88 27 48	Coker	N/A
3	Town of Dekalb	03160202	32 46 50	88 40 01	Springs-Middle Wilcox (?)	.199
4	Porterville	03160108	32 46 35	88 27 55	Coker	N/A
5	Kipling W A	03160202	32 40 51	88 40 26	Lower Wilcox	N/A
6	Kipling W A	03160202	32 40 28	88 40 38	Lower Wilcox	N/A

Table 3. -- Public-supply withdrawal locations--Continued

Map number	Facility name	Hydrologic unit	Latitude	Longitude	Water source	1985 withdrawal (Mgal/d)
Lauderdale County						
1	Meridian Naval Air Station	03160202	32 33 08	88 37 10	Lower Wilcox	N/A
2	Meridian Naval Air Station	03160202	32 33 12	88 36 43	Lower Wilcox	N/A
3	Meridian Naval Air Station	03160202	32 33 12	88 36 27	Lower Wilcox	N/A
4	Meridian Naval Air Station	03160202	32 33 21	88 36 18	Lower Wilcox	N/A
5	Meridian Naval Air Station	03160202	32 32 37	88 35 44	Lower Wilcox	N/A
6	Toomsuba W A	03160202	32 25 44	88 30 37	Lower Wilcox	N/A
7	Toomsuba W A	03160202	32 25 34	88 30 40	Lower Wilcox	N/A
Lee County						
1	North Lee W A	03160102	34 28 01	88 43 48	Eutaw-McShan	N/A
2	North Lee W A	03160102	34 27 12	88 46 43	Gordo	N/A
3	Town of Guntown	03160102	34 26 31	88 39 37	Eutaw-McShan	N/A
4	Town of Guntown	03160101	34 26 38	88 38 59	Gordo	N/A
5	Town of Saltillo	03160102	34 23 40	88 41 45	Eutaw-McShan	N/A
6	Town of Saltillo	03160102	34 22 48	88 41 06	Gordo	N/A
7	Tupelo-Lee Industrial Park	03160102	34 22 20	88 42 21	Eutaw-McShan	N/A
8	Mooreville Richmond W A	03160101	34 21 39	88 35 07	Eutaw-McShan	N/A
9	Tupelo-Lee Industrial Park	03160102	34 21 25	88 41 44	Eutaw-McShan	N/A
10	North Lee W A	03160102	34 21 12	88 44 43	Eutaw-McShan	N/A
11	North Lee W A	03160102	34 20 58	88 40 55	Eutaw-McShan	N/A
12	Trace W A	03160102	34 21 02	88 39 01	Eutaw-McShan	0.059
13	Natchez Trace Parkway	03160102	34 19 48	88 42 31	Eutaw-McShan	N/A
14	Natchez Trace Parkway	03160102	34 19 41	88 42 10	Eutaw-McShan	N/A
15	Lake Piomingo	03160102	34 19 50	88 38 30	Eutaw-McShan	N/A
16	Lake Piomingo	03160102	34 19 28	88 37 43	Eutaw-McShan	N/A
17	North Lee W A	03160102	34 18 57	88 41 18	Eutaw-McShan	N/A
18	City of Tupelo	03160102	34 18 41	88 48 02	Gordo	.724
19	Auburn W A	03160102	34 17 39	88 37 35	Eutaw-McShan	N/A
20	Auburn W A	03160102	34 17 14	88 38 00	Eutaw-McShan	N/A
21	City of Tupelo	03160102	34 17 11	88 43 12	Gordo	.450
22	City of Tupelo	03160102	34 16 39	88 39 27	Gordo	.040
23	City of Tupelo	03160102	34 16 40	88 39 25	Eutaw-McShan	.040
24	City of Tupelo	03160102	34 16 20	88 48 59	Gordo	.220
25	Mooreville Richmond W A	03160101	34 16 12	88 34 58	Eutaw-McShan	N/A
26	City of Tupelo	03160102	34 16 14	88 43 30	Eutaw-McShan	.375
27	City of Tupelo	03160102	34 16 12	88 42 34	Eutaw-McShan	.225
28	City of Tupelo	03160102	34 15 55	88 46 35	Gordo	.556
29	City of Tupelo	03160102	34 15 50	88 42 17	Gordo	.110
30	Mooreville Richmond W A	03160102	34 15 46	88 36 58	Eutaw-McShan	N/A
31	City of Tupelo	03160102	34 15 38	88 44 24	Eutaw-McShan	.366
32	City of Tupelo	03160102	34 15 36	88 42 10	Gordo	.103
33	City of Tupelo	03160102	34 15 19	88 39 39	Eutaw-McShan	.442
34	City of Tupelo	03160102	34 15 03	88 43 27	Gordo	.324
35	City of Tupelo	03160102	34 14 57	88 42 23	Eutaw-McShan	.056
36	City of Tupelo	03160102	34 14 54	88 48 03	Eutaw-McShan	.004
37	Palmetto W A	03160102	34 14 06	88 49 26	Eutaw-McShan	N/A
38	City of Tupelo	03160102	34 14 10	88 47 15	Eutaw-McShan	.375
39	City of Tupelo	03160102	34 14 09	88 40 48	Gordo	.566
40	Mooreville Richmond W A	03160102	34 14 02	88 36 27	Eutaw-McShan	N/A
41	City of Tupelo	03160102	34 13 35	88 42 57	Gordo	.378

Table 3. -- Public-supply withdrawal locations--Continued

Map number	Facility name	Hydrologic unit	Latitude	Longitude	Water source	1985 withdrawal (Mgal/d)
Lee County, continued						
42	City of Tupelo	03160102	34 13 13	88 43 58	Gordo	0.321
43	Haven Acres Utilities	03160102	34 12 52	88 45 25	Eutaw-McShan	.060
44	Town of Plantersville	03160102	34 12 52	88 39 50	Eutaw-McShan	N/A
45	City of Tupelo	03160102	34 12 45	88 43 33	Gordo	.374
46	City of Tupelo	03160102	34 12 28	88 43 44	Gordo	.225
47	Town of Plantersville	03160102	34 12 28	88 39 51	Eutaw-McShan	N/A
48	Palmetto W A	03160102	34 11 31	88 48 49	Eutaw-McShan	N/A
49	Palmetto W A	03160102	34 11 31	88 46 50	Gordo	N/A
50	Town of Verona	03160102	34 11 33	88 42 28	Eutaw-McShan	N/A
51	City Point W A	03160102	34 10 51	88 38 29	Eutaw-McShan	N/A
52	Town of Verona	03160102	34 10 30	88 43 55	Eutaw-McShan	N/A
53	Tupelo-Lee Industrial Park	03160102	34 10 10	88 42 48	Eutaw-McShan	N/A
54	City Point W A	03160102	34 09 59	88 38 28	Eutaw-McShan	N/A
55	Tupelo-Lee Industrial Park	03160102	34 09 34	88 42 56	Eutaw-McShan	N/A
56	Tupelo-Lee Industrial Park	03160102	34 09 11	88 43 00	Eutaw-McShan	N/A
57	Town of Shannon	03160102	34 06 58	88 42 51	Eutaw-McShan	.122
58	Town of Nettleton	03160102	34 05 23	88 37 17	Eutaw-McShan	.230
Lowndes County						
1	Town of Caledonia	03160103	33 40 50	88 19 27	Gordo	N/A
2	Town of Caledonia	03160103	33 41 00	88 19 30	Gordo	N/A
3	Columbus Air Force Base	03160103	33 39 30	88 28 30	Eutaw-McShan	N/A
4	Columbus Air Force Base	03160103	33 39 30	88 28 30	Eutaw-McShan	N/A
5	Columbus Air Force Base	03160101	33 37 54	88 26 20	Gordo	N/A
6	Columbus Air Force Base	03160101	33 37 32	88 27 00	Gordo	N/A
7	Columbus Air Force Base	03160101	33 37 32	88 26 36	Gordo	N/A
8	Airbase Trailer Park	03160101	33 37 18	88 27 28	Eutaw-McShan	N/A
9	Fowlkes Trailer Park	03160101	33 36 54	88 27 01	Eutaw-McShan	N/A
10	Parkers Mobile Home Park	03160101	33 37 00	88 27 03	Eutaw-McShan	N/A
11	Parkers Mobile Home Park	03160101	33 37 01	88 27 02	Eutaw-McShan	N/A
12	Parkers Mobile Home Park	03160101	33 37 02	88 27 03	Eutaw-McShan	N/A
13	Airbase Trailer Park	03160101	33 37 00	88 26 30	Eutaw-McShan	N/A
14	McCarty	03160101	33 36 45	88 26 55	Eutaw-McShan	N/A
15	Nicholson Mobile Home Park	03160101	33 36 35	88 26 27	Eutaw-McShan	N/A
16	Nicholson Mobile Home Park	03160101	33 36 35	88 26 35	Eutaw-McShan	N/A
17	Enlow Mobile Home Park	03160101	33 36 45	88 25 47	Eutaw-McShan	N/A
18	Fowlkes Trailer Park	03160105	33 36 55	88 24 00	Eutaw-McShan	N/A
19	Enlow Mobile Home Park	03160105	33 35 46	88 25 59	Eutaw-McShan	N/A
20	McCarty	03160105	33 35 33	88 26 46	Eutaw-McShan	N/A
21	McCarty	03160105	33 35 30	88 26 30	Eutaw-McShan	N/A
22	Airbase Trailer Park	03160105	33 35 19	88 26 35	Eutaw-McShan	N/A
23	Airbase Trailer Park	03160101	33 35 15	88 27 03	Eutaw-McShan	N/A
24	Dixie Land Water Co	03160101	33 32 36	88 26 38	Gordo	.071
25	East Lowndes W A	03160105	33 32 40	88 24 20	Gordo	.288
26	East Lowndes W A	03160105	33 32 41	88 24 19	Gordo	.288
27	Enlow Mobile Home Park	03160105	33 32 31	88 23 02	Eutaw-McShan	N/A
28	City of Columbus	03160105	33 30 50	88 23 44	Luxapallila Creek	2.004
29	City of Columbus	03160105	33 30 51	88 23 42	Coker	3.514
30	East Lowndes W A	03160105	33 29 37	88 17 12	Gordo	.132
31	East Lowndes W A	03160105	33 29 40	88 17 20	Gordo	.132
32	Pine Haven Water System	03160105	33 28 45	88 23 15	Gordo	.010
33	Golden Triangle Industrial Park	03160106	33 27 15	88 33 37	Coker	N/A
34	Golden Triangle Industrial Park	03160106	33 26 56	88 33 58	Coker	N/A

Table 3. -- Public-supply withdrawal locations--Continued

Map number	Facility name	Hydrologic unit	Latitude	Longitude	Water source	1985 withdrawal (Mgal/d)
Lowndes County, continued						
35	East Lowndes W A	03160105	33 27 16	88 19 12	Gordo	0.263
36	East Lowndes W A	03160105	33 27 18	88 19 15	Gordo	.263
37	Town of Artesia	03160104	33 25 12	88 38 06	Gordo	N/A
38	Town of Artesia	03160104	33 25 12	88 38 06	Coker	N/A
39	Town of Crawford	03160108	33 18 06	88 37 22	Gordo	N/A
40	Town of Crawford	03160108	33 18 08	88 37 08	Gordo	N/A
Monroe County						
1	Cason W A	03160102	34 06 48	88 36 51	Eutaw-McShan	N/A
2	Cason W A	03160102	34 06 24	88 36 49	Eutaw-McShan	N/A
3	Cason W A	03160102	34 04 02	88 30 38	Gordo	N/A
4	Town of Smithville	03160101	34 04 07	88 23 35	Gordo	N/A
5	Town of Smithville	03160101	34 04 08	88 23 42	Gordo	N/A
6	Town of Smithville	03160101	34 03 59	88 23 48	Gordo	N/A
7	Wren W A	03160101	34 01 15	88 38 10	Eutaw-McShan	N/A
8	Town of Amory	03160101	33 59 42	88 29 59	Gordo	N/A
9	Town of Amory	03160101	33 59 43	88 30 02	Gordo	N/A
10	Town of Amory	03160101	33 59 30	88 29 45	Gordo	N/A
11	Town of Amory	03160101	33 59 13	88 29 45	Gordo	N/A
12	Town of Amory	03160101	33 59 14	88 29 54	Gordo	N/A
13	Town of Amory	03160101	33 59 25	88 28 47	Gordo	N/A
14	Wren W A	03160101	33 59 05	88 38 56	Eutaw-McShan	N/A
15	Town of Hatley	03160101	33 58 48	88 24 28	Gordo	N/A
16	Town of Hatley	03160101	33 58 38	88 24 43	Gordo	N/A
17	Wren W A	03160101	33 58 18	88 36 49	Eutaw-McShan	N/A
18	Wren W A	03160101	33 58 25	88 35 45	Eutaw-McShan	N/A
19	Coontail W A	03160101	33 54 03	88 35 36	Eutaw-McShan	.064
20	Gattman W A	03160103	33 53 15	88 14 00	Gordo	.068
21	City of Aberdeen	03160101	33 50 59	88 35 14	Eutaw-McShan	N/A
22	City of Aberdeen	03160101	33 50 00	88 34 38	Eutaw-McShan	N/A
23	City of Aberdeen	03160101	33 50 00	88 32 29	Eutaw-McShan	N/A
24	City of Aberdeen	03160101	33 49 23	88 34 38	Eutaw-McShan	N/A
25	City of Aberdeen	03160101	33 49 20	88 33 00	Eutaw-McShan	N/A
26	City of Aberdeen	03160101	33 48 08	88 39 32	Eutaw-McShan	N/A
27	City of Aberdeen	03160104	33 47 53	88 39 52	Eutaw-McShan	N/A
28	City of Aberdeen	03160101	33 47 42	88 38 59	Eutaw-McShan	N/A
29	City of Aberdeen	03160101	33 47 52	88 39 01	Eutaw-McShan	N/A
30	City of Aberdeen	03160101	33 47 53	88 38 02	Eutaw-McShan	N/A
31	Hamilton W A	03160101	33 44 08	88 26 20	Gordo	N/A
32	Hamilton W A	03160101	33 44 11	88 26 20	Gordo	N/A
Noxubee County						
1	Brooksville	03160108	33 13 38	88 34 42	Eutaw-McShan	.312
2	Pineywoods W A	03160108	33 07 25	88 34 43	Coker	.030
3	City of Macon	03160108	33 07 13	88 33 18	Coker	N/A
4	City of Macon	03160108	33 06 55	88 33 49	Coker	N/A
5	City of Macon	03160108	33 06 40	88 33 29	Coker	N/A
6	Mashulaville Util. Dist.	03160108	33 05 28	88 44 30	Coker	.045
7	Town of Shuqualak	03160108	32 58 57	88 34 04	Gordo	N/A
8	Town of Shuqualak	03160108	32 58 46	88 34 08	Gordo	N/A

Table 3. -- Public-supply withdrawal locations--Continued

Map number	Facility name	Hydrologic unit	Latitude	Longitude	Water source	1985 withdrawal (Mgal/d)
Oktibbeha County						
1	Mhoon Farm W A	03160104	33 31 48	88 44 36	Gordo	0.023
2	Double Springs W A	03160104	33 31 32	89 03 52	Gordo	N/A
3	Double Springs W A	03160104	33 30 30	89 04 00	Gordo	N/A
4	Center Grove W A	03160104	33 30 10	88 58 45	Gordo	.024
5	Adaton W A	03160104	33 29 35	88 57 18	Gordo	N/A
6	Adaton W A	03160104	33 28 50	88 57 40	Gordo	N/A
7	Clayton Village W A	03160104	33 28 33	88 45 15	Gordo	N/A
8	Herman Echols W A	03160104	33 28 30	88 43 22	Tuscaloosa	N/A
9	Herman Echols W A	03160104	33 28 31	88 43 21	Eutaw-McShan	N/A
10	Herman Echols W A	03160104	33 28 32	88 43 21	Gordo	N/A
11	City of Starkville	03060104	33 28 06	88 49 04	Gordo	N/A
12	City of Starkville	03060104	33 28 12	88 49 01	Gordo	N/A
13	City of Starkville	03060104	33 28 18	88 48 58	Gordo	N/A
14	Adaton W A	03160104	33 27 50	88 53 00	Gordo	N/A
15	Clayton Village W A	03160104	33 27 50	88 46 22	Gordo	N/A
16	Mississippi State University	03160104	33 27 40	88 46 43	Gordo	N/A
17	Mississippi State University	03160104	33 27 40	88 46 43	Gordo	N/A
18	City of Starkville	03060104	33 27 25	88 49 46	Gordo	N/A
19	University Heights	03160104	33 27 18	88 46 54	Gordo	.014
20	Mississippi State University	03160104	33 27 05	88 52 00	Gordo	N/A
21	New Light W A	03160104	33 26 54	88 58 29	Gordo	N/A
22	Black Jack W A	03160104	33 26 58	88 44 40	Gordo	N/A
23	Mississippi State University	03160104	33 26 44	88 47 40	Gordo	N/A
24	City of Starkville	03060108	33 26 33	88 48 38	Gordo	N/A
25	Black Jack W A	03160104	33 26 33	88 43 58	Gordo	N/A
26	Bluefield W A	03160104	33 26 15	88 52 00	Gordo	N/A
27	Mississippi State University	03160104	33 25 54	88 47 26	Gordo	N/A
28	Turkey Creek W A	03160104	33 25 45	88 46 25	Gordo	.024
29	Bluefield W A	03160108	33 25 09	88 52 35	Gordo	N/A
30	Longview W A	03160108	33 24 09	88 55 50	Gordo	.045
31	Talking Warrior W A	03160108	33 24 00	88 50 50	Gordo	N/A
32	Sessums Community Water	03160104	33 24 08	88 44 11	Gordo	.033
33	Wake Forest W A	03160108	33 23 01	89 03 49	Gordo	N/A
34	Bradley W A	03160108	33 23 13	88 57 19	Gordo	N/A
35	Talking Warrior W A	03160108	33 23 17	88 50 41	Gordo	N/A
36	Oktoc W A	03160108	33 22 38	88 47 50	Gordo	N/A
37	Oktoc W A	03160108	33 22 31	88 45 45	Gordo	N/A
38	Bradley W A	03160108	33 22 25	88 58 42	Gordo	N/A
39	Wake Forest W A	03160108	33 22 16	89 03 29	Gordo	N/A
40	Chapel Hill W A	03160108	33 20 56	88 42 11	Gordo	.055
41	Town of Sturgis	03160108	33 20 45	89 02 33	Gordo	N/A
42	Town of Sturgis	03160108	33 20 34	89 02 56	Gordo	N/A
43	Craig Springs W A	03160108	33 19 39	88 58 41	Gordo	.034
44	Morgan Chapel W A	03160108	33 19 00	89 00 50	Gordo	N/A
45	Morgan Chapel W A	03160108	33 17 11	88 58 32	Gordo	N/A

Table 3. -- Public-supply withdrawal locations--Continued

Map number	Facility name	Hydrologic unit	Latitude	Longitude	Water source	1985 withdrawal (Mgal/d)
Pontotoc County						
1	Town of Sherman	03160102	34 21 52	88 50 29	Gordo	N/A
2	Town of Sherman	03160102	34 21 52	88 50 35	Eutaw-McShan	N/A
3	Town of Sherman	03160102	34 21 42	88 50 18	Eutaw-McShan	N/A
4	East Pontotoc W A	03160102	34 17 10	88 55 38	Eutaw-McShan	N/A
5	East Pontotoc W A	03160102	34 16 09	88 51 02	Eutaw-McShan	N/A
6	Pontotoc	08030201	34 15 58	89 01 01	Gordo	N/A
7	Pontotoc	08030201	34 15 39	89 01 01	Gordo	N/A
8	Pontotoc	08030201	34 15 13	89 01 00	Gordo	N/A
9	Pontotoc	03160102	34 14 44	89 00 37	Gordo	N/A
10	Troy W A	03160102	34 07 46	88 53 54	Gordo	N/A
11	Troy W A	03160102	34 07 12	88 53 23	Eutaw-McShan	N/A
Prentiss County						
1	Big V W A	08010207	34 38 52	88 31 23	Gordo	N/A
2	Big V W A	03160101	34 38 14	88 31 43	Eutaw-McShan	N/A
3	Wheeler Frankston W A	03160101	34 34 51	88 36 29	Eutaw-McShan	N/A
4	Wheeler Frankston W A	03160101	34 34 46	88 36 08	Eutaw-McShan	N/A
5	New Site W A	03160101	34 33 13	88 24 34	Gordo	0.071
6	City of Baldwyn	03160101	34 31 39	88 38 01	Eutaw-McShan	N/A
7	City of Baldwyn	03160101	34 30 52	88 38 02	Eutaw-McShan	N/A
8	City of Baldwyn	03160101	34 30 35	88 37 54	Eutaw-McShan	N/A
9	Marietta W A	03160101	34 30 00	88 28 00	Eutaw-McShan	.064
Tishomingo County						
1	Dennis Paden W A	03160101	34 33 40	88 13 42	Gordo	N/A
2	Dennis Paden W A	03160101	34 33 28	88 14 02	Gordo	N/A
3	Dennis Paden W A	06030006	34 33 30	88 13 30	Gordo	N/A
4	Dennis Paden W A	06030006	34 33 34	88 13 31	Gordo	N/A
5	Dennis Paden W A	03160101	34 33 16	88 13 44	Gordo	N/A
6	Dennis Paden W A	03160101	34 33 22	88 13 41	Gordo	N/A
7	Town of Belmont	06030006	34 31 03	88 12 48	Gordo	N/A
8	Town of Belmont	06030006	34 31 11	88 12 49	Gordo	N/A
9	Town of Belmont	06030006	34 31 12	88 12 48	Gordo	N/A
10	Town of Belmont	06030006	34 31 12	88 12 49	Gordo	N/A
11	Town of Belmont	03160101	34 30 30	88 12 44	Gordo	N/A
12	Town of Belmont	03160101	34 30 31	88 12 44	Gordo	N/A
Union County						
1	Alpine W A	03160102	34 29 31	88 48 04	Eutaw-McShan	.058
2	Blue Springs W A	03160102	34 27 02	88 51 20	Eutaw-McShan	N/A
3	Blue Springs W A	03160102	34 24 09	88 52 25	Eutaw-McShan	N/A
4	Blue Springs W A	03160102	34 24 12	88 52 25	Coffee Sand	N/A
Webster County						
1	Dancy W A	03160104	33 40 17	89 03 27	Gordo	.018
2	Mantee W A	03160104	33 38 42	89 03 36	Coker	.042
Winston County						
1	Highpoint W A	03160108	33 10 51	89 06 51	Lower Wilcox	N/A
2	Highpoint W A	03180001	33 09 37	89 08 48	Lower Wilcox	N/A

Table 4.--Water withdrawal and risk rating for self-supplied industries

[Water source is aquifer; Mgal/d, million gallons per day; W A, water authority; H, high; M, moderate; L, low; N/A, not available; dashes indicate not applicable; ft/yr, foot per year]

Standard Industrial Classification (SIC) category	With-drawal (Mgal/d)	Year of data	Water source	Number of employees	SIC code	Risk rating	Comments
Clay County							
Food and Kindred Products	1.800	1985	Gordo and Eutaw-McShan	1,646	2011	M-H	Trend in Gordo water levels is about 3 ft/yr decline: Eutaw-McShan about 1 ft/yr decline.
Lee County							
Apparel, Other Fabric Products	.006	1985	Eutaw-McShan	210	2321	M	Within Tupelo area cone of depression: purchases some water from Tupelo.
Food and Kindred Products	.550	1985	Gordo and Eutaw-McShan	500	2011	H	Within Tupelo area cone of depression.
Rubber and Misc. Plastics	.168	1986	Gordo	480	3011	H	Within Tupelo area cone of depression.
Lowndes County							
Lumber and Wood Products	1.080	1985	Gordo	530	2499	M	Use has not changed recently--system is not metered. Within Lowndes County cone of depression.
Apparel, Other Fabric Products	.099	1985	Gordo and Eutaw-McShan	550	2327	M	Within Lowndes County cone of depression.
Lumber and Wood Products	.107	1985	Gordo	225	2426	M	Within Lowndes County cone of depression: purchases some water from Columbus.
Food and Kindred Products	.017	1985	Gordo	130	2062	M	Within Lowndes County cone of depression.
Chemicals and Allied Products	8.420	1987	Coker and Gordo	63	2819	M	Plant will install a cooling tower late in 1989. Pumpage in this area has declined, and water levels in the Gordo have recovered 20 feet between 1978 and 1988. A cone of depression was still present in the Gordo during 1988.
Paper and Allied Products	7.163	1988	Coker	430	2621	L	Plant does not monitor pumpage: use estimated by plant engineer.
Stone, Clay, Glass, and Concrete	.576	1985	Gordo	108	3241	L	
Monroe County							
Miscellaneous Manufacturing	.401	1985	Gordo	466	3949	L	
Electric, Gas, and Sanitary Services	.001	1985	Eutaw-McShan	6	4922	L	
Electric, Gas, and Sanitary Services	.002	1985	Eutaw-McShan	32	4922	L	
Rubber and Misc. Plastics	.399	1987	Eutaw-McShan	248	3079	M	Also purchased 1.446 Mgal/d from city: aquifer is thin, has had moderate water-level declines.
Chemicals and Allied Products	<.001	1985	Gordo	14	2899	L	Withdrawal rate is 500 gallons per day.
Chemicals and Allied Products	14.277	1986	Gordo	350	2816	L-M	Continued large withdrawals may cause additional water-level declines.
Oktibbeha County							
Food and Kindred Products	.113	1985	Gordo	48	2023	M	Moderate water-level declines in this area.
Primary Metal Industries	.565	1985	Gordo	250	3351	M	Moderate water-level declines in this area: installing recirculation equipment (1988).

Table 5.--Self-supplied industrial withdrawal locations

[Water source is aquifer; Mgal/d, million gallons per day; dashes indicate not applicable; N/A, not available]

Map number	Standard Industrial Classification category	Hydrologic Unit	Latitude	Longitude	Water source	Year	Withdrawal (Mgal/d)
Clay County							
1	Food and Kindred Products	03160104	33 35 16	88 39 00	Gordo	---	N/A
2	Food and Kindred Products	03160104	33 35 18	88 38 42	Eutaw-McShan	---	N/A
3	Food and Kindred Products	03160104	33 35 19	88 38 43	Gordo	---	N/A
4	Food and Kindred Products	03160104	33 35 19	88 39 00	Eutaw-McShan	---	N/A
Lee County							
1	Apparel, Other Fabric Products	03160102	34 18 51	88 42 20	Eutaw-McShan	1985	0.006
2	Food and Kindred Products	03160102	34 16 01	88 41 56	Gordo	---	N/A
3	Food and Kindred Products	03160102	34 16 03	88 41 52	Eutaw-McShan	---	N/A
4	Food and Kindred Products	03160102	34 16 08	88 41 37	Gordo	---	N/A
5	Food and Kindred Products	03160102	34 16 08	88 41 57	Gordo	---	N/A
6	Food and Kindred Products	03160102	34 16 09	88 41 56	Eutaw-McShan	---	N/A
7	Rubber and Misc. Plastics	03160102	34 13 45	88 42 37	Gordo	---	N/A
8	Rubber and Misc. Plastics	03160102	34 13 47	88 42 29	Gordo	---	N/A
Lowndes County							
1	Lumber and Wood Products	03160105	33 30 30	88 24 08	Gordo	---	N/A
2	Lumber and Wood Products	03160105	33 30 30	88 24 08	Gordo	---	N/A
3	Apparel, Other Fabric Products	03160105	33 29 27	88 24 48	Eutaw-McShan	---	N/A
4	Apparel, Other Fabric Products	03160105	33 29 25	88 24 06	Gordo	---	N/A
5	Lumber and Wood Products	03160105	33 29 10	88 23 20	Gordo	---	N/A
6	Lumber and Wood Products	03160105	33 29 10	88 23 20	Gordo	---	N/A
7	Lumber and Wood Products	03160105	33 29 19	88 23 05	Gordo	---	N/A
8	Food and Kindred Products	03160106	33 27 58	88 29 45	Gordo	1985	.017
9	Chemicals and Allied Products	03160106	33 25 20	88 24 02	Coker	---	N/A
10	Chemicals and Allied Products	03160106	33 25 08	88 23 53	Gordo	---	N/A
11	Chemicals and Allied Products	03160106	33 25 08	88 23 54	Gordo	---	N/A
12	Chemicals and Allied Products	03160106	33 25 08	88 23 54	Gordo	---	N/A
13	Chemicals and Allied Products	03160106	33 25 08	88 23 54	Gordo	---	N/A
14	Chemicals and Allied Products	03160106	33 25 08	88 23 54	Gordo	---	N/A
15	Chemicals and Allied Products	03160106	33 25 08	88 23 54	Gordo	---	N/A
16	Chemicals and Allied Products	03160106	33 25 09	88 23 55	Coker	---	N/A
17	Chemicals and Allied Products	03160106	33 25 09	88 23 55	Coker	---	N/A
18	Chemicals and Allied Products	03160106	33 25 09	88 23 55	Coker	---	N/A
19	Chemicals and Allied Products	03160106	33 25 09	88 23 55	Coker	---	N/A
20	Paper and Allied Products	03160106	33 21 46	88 28 02	Coker	---	N/A
21	Paper and Allied Products	03160106	33 21 46	88 28 04	Coker	---	N/A
22	Paper and Allied Products	03160106	33 21 47	88 27 58	Coker	---	N/A
23	Stone, Clay, Glass, and Concrete	03160106	33 21 42	88 37 54	Gordo	1985	.576
Monroe County							
1	Miscellaneous Manufacturing	03160101	33 58 30	88 28 58	Gordo	---	N/A
2	Miscellaneous Manufacturing	03160101	33 58 30	88 28 58	Gordo	---	N/A
3	Electric, Gas, and Sanitary Services	03160101	33 52 18	88 41 22	Eutaw-McShan	1985	.001
4	Electric, Gas, and Sanitary Services	03160101	33 48 57	88 39 43	Eutaw-McShan	---	N/A
5	Rubber and Misc. Plastics	03160101	33 48 37	88 33 34	Eutaw-McShan	---	N/A
6	Rubber and Misc. Plastics	03160101	33 48 38	88 33 12	Eutaw-McShan	---	N/A
7	Rubber and Misc. Plastics	03160101	33 48 44	88 33 13	Eutaw-McShan	---	N/A
8	Rubber and Misc. Plastics	03160101	33 48 47	88 33 35	Eutaw-McShan	---	N/A
9	Chemicals and Allied Products	03160101	33 46 09	88 34 23	Gordo	1985	.003
10	Electric, Gas, and Sanitary Services	03160104	33 44 58	88 39 42	Eutaw-McShan	---	N/A
11	Chemicals and Allied Products	03160101	33 44 10	88 27 25	Gordo	---	N/A
12	Chemicals and Allied Products	03160101	33 44 17	88 27 25	Gordo	---	N/A
13	Chemicals and Allied Products	03160101	33 43 54	88 27 03	Gordo	---	N/A
14	Chemicals and Allied Products	03160101	33 43 54	88 27 03	Gordo	---	N/A
15	Chemicals and Allied Products	03160101	33 43 54	88 27 03	Gordo	---	N/A
16	Chemicals and Allied Products	03160101	33 43 54	88 27 03	Gordo	---	N/A
17	Chemicals and Allied Products	03160101	33 43 54	88 27 03	Gordo	---	N/A
18	Chemicals and Allied Products	03160101	33 43 54	88 27 03	Gordo	---	N/A
19	Chemicals and Allied Products	03160101	33 43 54	88 27 03	Gordo	---	N/A
20	Chemicals and Allied Products	03160101	33 43 54	88 27 06	Gordo	---	N/A
21	Chemicals and Allied Products	03160101	33 43 38	88 27 20	Gordo	---	N/A
Oktibbeha County							
1	Food and Kindred Products	03160104	33 27 50	88 48 42	Gordo	1985	.113
2	Primary Metal Industries	03160108	33 26 23	88 50 32	Gordo	1985	.565

Table 6.--Agricultural water withdrawals, 1985

[Note: Withdrawals are county totals and may include parts of the counties not within the Black Warrior-Tombigbee basin. Mgal/d, million gallons per day.]

County	Total county livestock use		Total county irrigation		Acres irrigated		Percent of county in Black Warrior-Tombigbee basin
	Ground water (Mgal/d)	Surface water (Mgal/d)	Ground water (Mgal/d)	Surface water (Mgal/d)	Spray	Flood	
Alcorn	0.49	0.13	0.00	0.00	160	20	0.0
Chickasaw	.33	.20	.00	.00	0	0	77.2
Choctaw	.18	.09	.00	.00	0	20	16.1
Clarke	.09	.09	.00	.00	0	0	5.3
Clay	.40	.20	.00	.00	0	0	100.0
Itawamba	.41	.08	.00	.08	0	350	99.6
Kemper	.08	.12	.00	.00	0	0	82.6
Lauderdale	.82	.11	.00	.01	60	0	33.0
Lee	.55	.17	.00	.00	0	0	100.0
Lowndes	.07	.10	.03	.05	360	40	100.0
Monroe	.39	.19	.13	.15	1100	0	100.0
Noxubee	.63	.21	.20	.10	1000	330	100.0
Oktibbeha	.09	.14	.07	.00	300	0	99.2
Pontotoc	.26	.14	.02	.08	420	0	43.6
Prentiss	.05	.08	.01	.00	0	410	73.1
Tishomingo	.03	.05	.00	.00	0	0	25.1
Union	.12	.11	.00	.00	0	0	22.7
Webster	.09	.06	.00	.12	150	400	10.0
Winston	.29	.21	.00	.07	300	0	33.6

Table 7.--Self-supplied domestic water withdrawals, 1985

[Note: Withdrawals are county totals and may include parts of the counties not within the Black Warrior-Tombigbee basin. Mgal/d, million gallons per day]

County	County population		Self-supplied domestic water use-- Ground water (Mgal/d)	Percent of total county population in Black Warrior-Tombigbee basin
	Total (1,000's)	Self-supplied (1,000's)		
Alcorn	33.00	1.01	0.05	0.00
Chickasaw	18.10	.09	.00	94.53
Choctaw	9.00	.17	.01	8.18
Clarke	17.00	.93	.04	.00
Clay	21.90	3.47	.16	100.00
Itawamba	20.50	3.74	.17	100.00
Kemper	10.30	.79	.04	86.19
Lauderdale	78.70	13.17	.59	10.35
Lee	60.80	1.23	.06	100.00
Lowndes	59.20	12.32	.56	100.00
Monroe	36.90	1.63	.07	100.00
Noxubee	13.00	5.03	.23	100.00
Oktibbeha	36.90	2.91	.12	98.54
Pontotoc	22.00	.83	.04	51.79
Prentiss	24.80	.02	.00	61.22
Tishomingo	18.00	.00	.00	19.62
Union	22.00	3.98	.17	19.85
Webster	10.40	.04	.00	1.53
Winston	19.20	.00	.00	7.54

☆ U.S. GOVERNMENT PRINTING OFFICE 1991—533—885