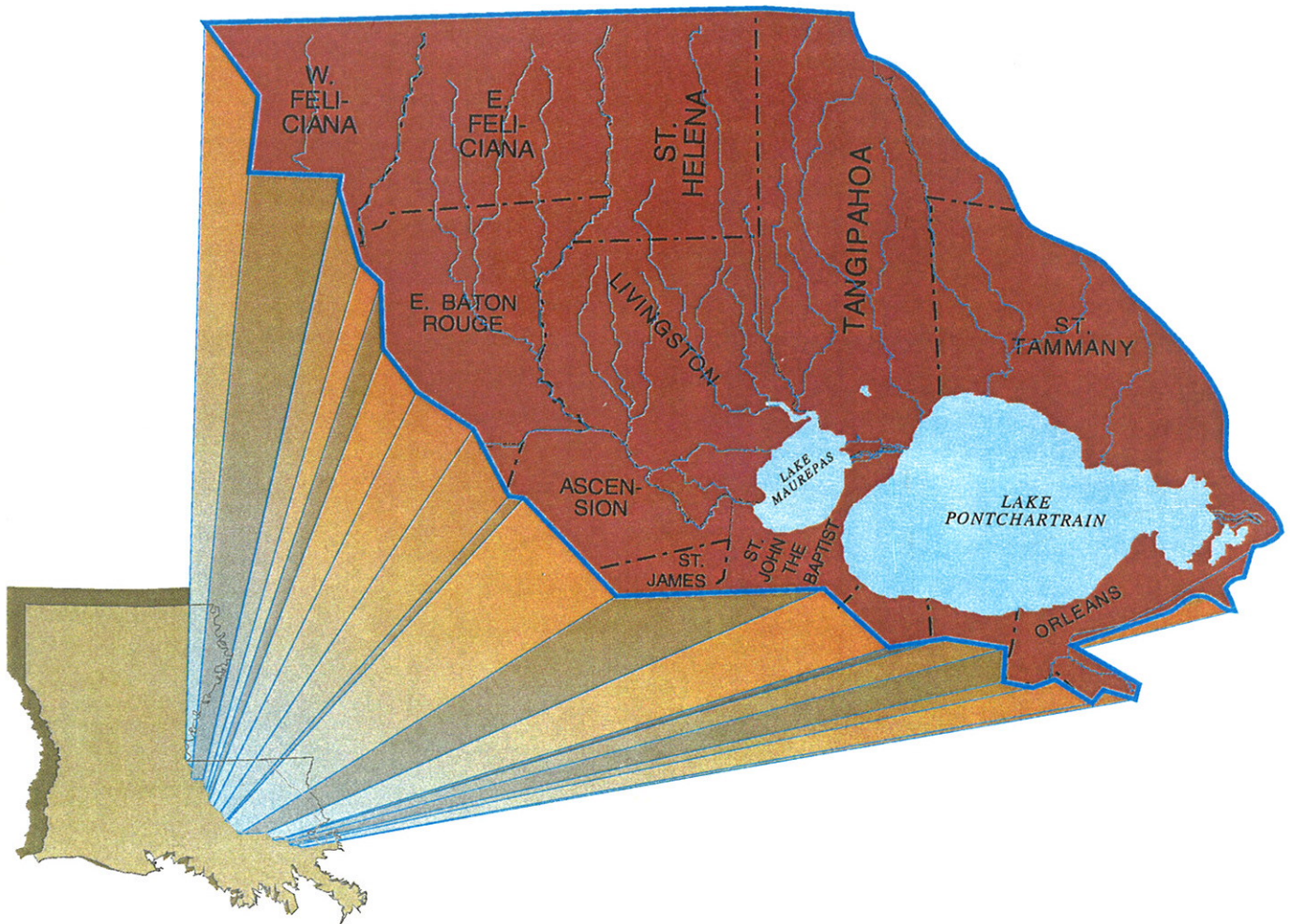


Statistical Summary of Surface-Water Quality in Louisiana--Lake Pontchartrain-Lake Maurepas Basin, 1943-95

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
Water Resources Technical Report No. 55G



STATE OF LOUISIANA

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



1999



STATE OF LOUISIANA
DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
PUBLIC WORKS AND FLOOD CONTROL DIRECTORATE
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WATER RESOURCES
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Statistical Summary of Surface-Water Quality in Louisiana--Lake Pontchartrain- Lake Maurepas Basin, 1943-95

By
Charles R. Garrison
U.S. GEOLOGICAL SURVEY

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STATE OF LOUISIANA

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CONTENTS

Abstract	1
Acknowledgments	1
1.0 Introduction	2
1.1 Background	3
1.2 Purpose and scope	4
1.3 Methods of study	6
1.4 Hydrologic setting and land use in Louisiana	8
1.4.1 Climate	8
1.4.2 Physiography	10
1.5 Surface-water-quality properties and constituents	12
2.0 Lake Pontchartrain-Lake Maurepas basin in Louisiana	14
2.1 Overview	16
2.2 Surface-water quality	18
2.2.1 Physical properties--specific conductance, pH, water temperature, and dissolved oxygen	20
2.2.2 Relation between specific conductance and dissolved solids	22
2.2.3 Major inorganic cations--dissolved calcium, magnesium, sodium, and potassium	24
2.2.4 Major inorganic anions--total alkalinity as calcium carbonate, dissolved sulfate, and dissolved chloride	26
2.2.5 Relation between specific conductance and dissolved chloride	28
2.2.6 Trace metals--dissolved copper, iron, lead, and zinc	30
2.2.7 Nutrients--nitrogen and phosphorus constituents	32
2.2.8 Organic compounds--pesticides and PCB's	34
2.2.9 Biological constituents--fecal coliform and fecal streptococcus bacteria and phytoplankton	36
2.3 Summary and conclusions	38
3.0 Selected references	39

FIGURES

1.1-1. Map showing location of the major surface-water basins in Louisiana	3
1.2-1. Diagram showing files in the U.S. Geological Survey Water-Data Storage and Retrieval System	5
1.3-1. Diagram showing example and definition of boxplot	7
1.3-2. Graph showing example and definition of linear regression	7
1.4.1-1. Map showing mean annual precipitation in Louisiana, 1951-80	9
1.4.2-1. Map showing physiographic divisions and streams in Louisiana	11
2.0-1. Map showing location of surface-water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, 1943-95	15
2.1-1. Surface-water withdrawals from the Lake Pontchartrain-Lake Maurepas basin, Louisiana, 1995	17
2.2-1. Photograph showing water-quality data-collection site at Pass Manchac at Manchac, Louisiana	19
2.2.1-1. Map showing water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and boxplots summarizing specific conductance, pH, water temperature, and dissolved oxygen data for selected sites	21
2.2.2-1. Map showing water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and graphs showing relation between specific conductance and dissolved solids in water from selected sites	23
2.2.3-1. Map showing water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and boxplots summarizing data for dissolved calcium, magnesium, sodium, and potassium concentrations in water from selected sites	25

2.2.4-1.	Map showing water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and boxplots summarizing data for total alkalinity as calcium carbonate and dissolved sulfate and chloride concentrations in water from selected sites.....	27
2.2.5-1.	Map showing water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and graphs showing relation between specific conductance and dissolved chloride in water from selected sites.....	29
2.2.6-1.	Map showing water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and boxplots summarizing data for dissolved copper, iron, lead, and zinc concentrations in water from selected sites.....	31
2.2.7-1.	Map showing water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and boxplots summarizing data for concentrations of nutrients in water from selected sites.....	33
2.2.8-1.	Map showing water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and tables listing organic compounds detected in water from selected sites.....	35
2.2.9-1.	Map showing water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and boxplots summarizing data for concentrations of fecal coliform and fecal streptococcus bacteria and phytoplankton in water from selected sites.....	37

TABLES

1.5-1.	Common sources of properties and constituents, their environmental significance, and Federal regulations and State criteria.....	13
2.0-1.	Surface-water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, 1943-95.....	14
2.2-1.	Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95	41

CONVERSION FACTORS, VERTICAL DATUM, AND ABBREVIATED WATER-QUALITY UNITS

Multiply	By	To obtain
acre	0.4047	hectare
cubic foot per second (ft ³ /s)	0.0283	cubic meter per second
foot (ft)	0.3048	meter
inch (in.)	25.4	millimeter
mile (mi)	1.609	kilometer
million gallons per day (Mgal/d)	0.04381	cubic meter per second

Temperature in degrees Celsius (°C) can be converted to degrees Fahrenheit (°F) as follows: °F = 1.8(°C) + 32.

Sea level: In this report, "sea level" refers to the National Geodetic Vertical Datum of 1929--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "Sea Level Datum of 1929."

Abbreviated water-quality units:

- cells per milliliter (cells/mL)
- colonies per 100 milliliters (cols/100 mL)
- microsiemens per centimeter at 25 degrees Celsius (µS/cm)
- micrograms per liter (µg/L)
- milligrams per liter (mg/L)
- nanograms per liter (ng/L)

Statistical Summary of Surface-Water Quality in Louisiana--Lake Pontchartrain-Lake Maurepas Basin, 1943-95

By Charles R. Garrison

ABSTRACT

A statistical summary of surface-water quality in the Lake Pontchartrain-Lake Maurepas basin was completed using available data from the U.S. Geological Survey Water-Data Storage and Retrieval System (WATSTORE), a computerized data base. Data for 33 water-quality properties and constituents for 35 sites in the Lake Pontchartrain-Lake Maurepas basin within Louisiana were statistically analyzed for the water years 1943-95. Results are reported as boxplots, linear-regression plots, and tabulated data.

The data were summarized into seven categories: (1) physical properties--specific conductance, pH, water temperature, dissolved oxygen, and dissolved solids; (2) major inorganic cations--dissolved calcium, magnesium, sodium, and potassium; (3) major inorganic anions--total alkalinity as calcium carbonate, dissolved sulfate, and dissolved chloride; (4) trace metals--dissolved copper, iron, lead, and zinc; (5) nutrients--nitrogen and phosphorus constituents; (6) organic compounds--pesticides and PCB's; and (7) biological constituents--fecal coliform and fecal streptococcus bacteria and phytoplankton.

The physical properties varied for surface waters in the Lake Pontchartrain-Lake Maurepas basin. The median values for specific conductance ranged from 30 to 4,200 microsiemens per centimeter at 25 degrees Celsius for all sites. Values for pH in water from the basin were less than 6.5, the lower limit of the U.S. Environmental Protection Agency's recommended range for freshwater aquatic life, in fewer than 25 percent of the samples. Median values for water temperatures ranged from 14.5 to 23.5 degrees Celsius. Dissolved oxygen concentrations were greater than the State's minimum water quality criterion of 5.0 mg/L (milligrams per liter) in more than 75 percent of the samples analyzed for most sites.

An analysis of the data for major inorganic cations and anions indicated that concentrations of major ions were below recommended maximum levels for drinking water, for which such levels have been established. However, there were high concentrations of sodium and chloride in some of the samples from lake sites.

An analysis of the available data for trace metals indicated that dissolved copper, lead, and zinc were less than the maximum contaminant levels of the U.S. Envi-

ronmental Protection Agency's primary and secondary drinking water regulations. The iron concentrations in water from the basin occasionally exceeded the Environmental Protection Agency's Secondary Maximum Contaminant Level of 300 $\mu\text{g/L}$ (micrograms per liter) for domestic water supplies at most of the sites.

An analysis of the nutrient data indicated that the median concentrations of ammonia plus organic nitrogen as nitrogen at the sites ranged from 0.4 to 0.6 mg/L. However, the maximum concentration of ammonia plus organic nitrogen as nitrogen in the Lake Pontchartrain-Lake Maurepas basin (9.9 mg/L) occurred at City Park Lake at Outflow at Baton Rouge. Median concentrations of total phosphorus in the basin ranged from 0.03 to 0.62 mg/L. However, the maximum phosphorus concentration in the Lake Pontchartrain-Lake Maurepas basin (4.2 mg/L) occurred at Lake Pontchartrain at Pass Manchac near Manchac.

An analysis of available data for selected organic chemical compounds indicated that concentrations of pesticides, except diazinon and 2,4-D, only occasionally exceeded their detection levels.

The median ratios of fecal coliform to fecal streptococcus bacteria were less than 0.7 for most of the sites in the Lake Pontchartrain-Lake Maurepas basin, indicating that sources of fecal coliform bacteria were probably predominantly livestock or poultry wastes. Additional study is needed to confirm these results. Phytoplankton concentrations ranged from 13 to 74,000 cells per milliliter due to seasonal influence.

ACKNOWLEDGMENTS

The author extends his appreciation to Zahir "Bo" Bolourchi, Chief, Water Resources Section, of the Louisiana Department of Transportation and Development, for guidance and assistance provided during the study and his substantial contribution to the completion of this report. The Report Preparation Section of the Louisiana District was especially helpful in the completion of this report at early stages of preparation and different stages of review. The final preparation and layout of the report was a team effort. The team members were Mary L. Anderson, Sebastian R. Brazelton, Dorothy L. Collier, Cheryl A. Johnson, William C. Martin, and Darlene M. Smothers.

1.0 INTRODUCTION

THIS REPORT IS ORGANIZED INTO THREE PARTS AND PRESENTED IN "STOP" FORMAT¹

A single topic is presented in text and pictures on facing pages.

This report, "Statistical Summary of Surface-Water Quality in Louisiana--Lake Pontchartrain-Lake Maurepas Basin, 1943-95," is one of a series of reports in which surface-water-quality data for the major river basins in Louisiana will be statistically summarized. This report is organized into three parts (excluding the "Abstract"): the "Introduction," the "Lake Pontchartrain-Lake Maurepas Basin in Louisiana," and "Selected References."

The "Introduction" provides background information about the study, describes the hydrologic setting and land use in Louisiana, and presents a brief description of selected water-quality properties and constituents.

The section titled "Lake Pontchartrain-Lake Maurepas Basin in Louisiana," presents statistical analyses of the surface-water-quality data at selected representative sites in the basin. This basin summary section contains the following:

- Maps and text giving an overview of the basin, including location, areal extent, drainage area, major drainage and surface-water bodies, land use, and water use.

- Boxplots and text describing statistical summaries of selected physical properties of surface waters at representative sampling sites.
- Graphs and text describing the relation between specific conductance and dissolved solids and specific conductance and dissolved chloride, at representative sampling sites.
- Boxplots, tables, and text describing statistical summaries of major inorganic chemical constituents; selected trace metals, nutrients, and organic chemicals concentrations; and selected biological constituents, usually bacteria.
- Summary and conclusions, which pertain only to the basin summary.

The "Selected References" lists all references that pertain to the water quality in the basin.

¹This report is presented in "STOP" (Sequential Thematic Organization of Publications) format (Hobba, Jr., 1981, p. 1). In this format, topics are presented using text and illustrations on two facing pages. Generally, topics are presented on two facing pages in this report, but in a few places the information is continued on additional pages.

1.0 INTRODUCTION--continued

1.1 Background

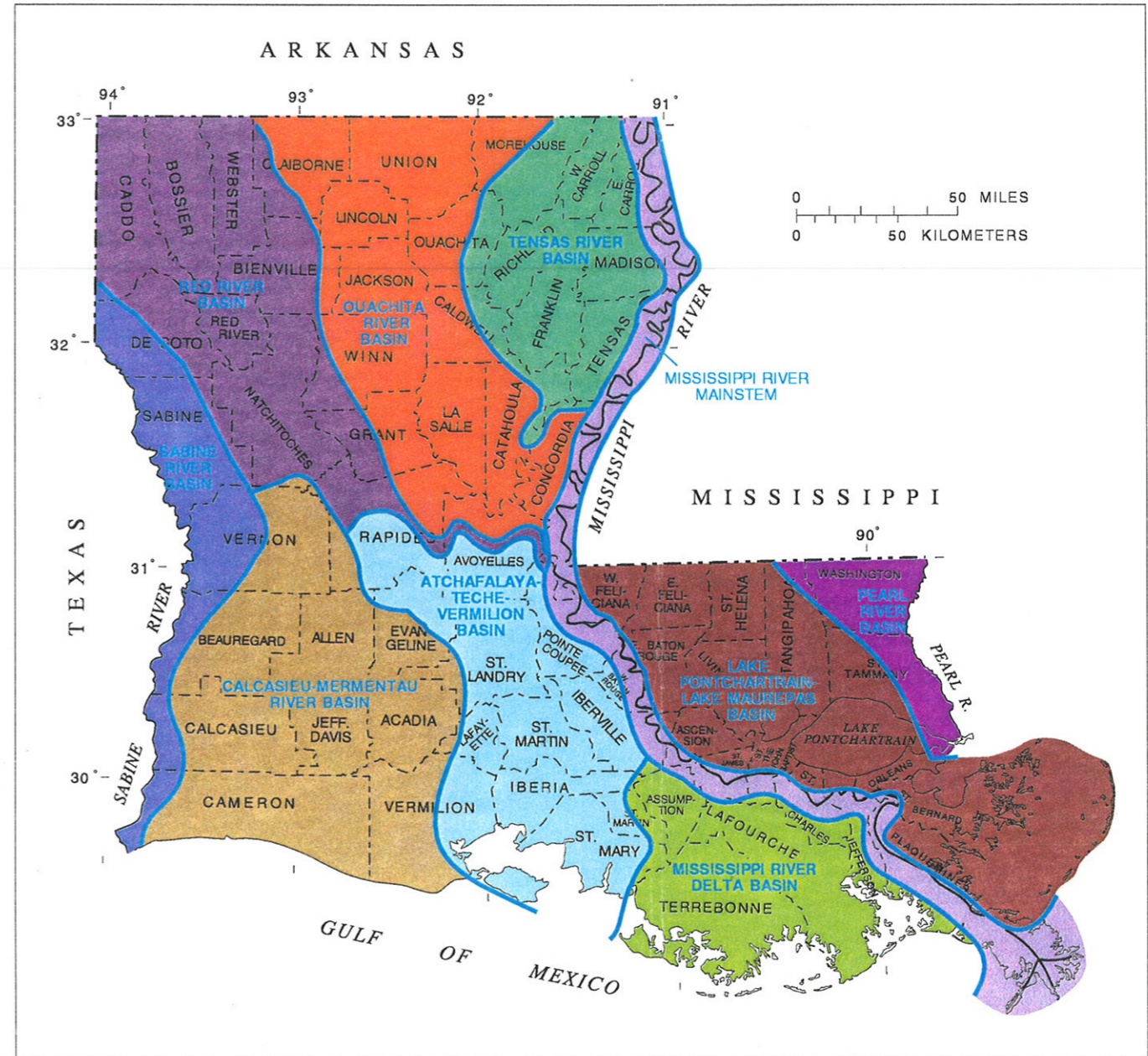
SURFACE-WATER QUALITY OF THE MAJOR DRAINAGE BASINS IN LOUISIANA

A large amount of water-quality data is available for streams, rivers, and lakes in Louisiana.

Water-quality samples from streams, rivers, and lakes in Louisiana have been collected and analyzed by the U.S. Geological Survey (USGS) since 1905, and the USGS, in cooperation with local, State, and other Federal agencies, systematically has operated water-quality sites on streams, rivers, and lakes in the State since 1943. Results of the analyses are stored in the USGS computerized water-quality files and often are used to answer data requests and provide a large source of information for the managers of Louisiana's surface-water resources. Even though these data have been published in the USGS series of annual reports entitled Water Resources Data for Louisiana (Garrison and others, 1996) and in many other reports that describe surface-water quality, descriptive statistics for these data are needed to make the data more useful for water managers, to allow more complete answers to be given for information requests from the public, to indicate the

need for additional water-quality data at existing or new sites, and to indicate problem areas where interpretive studies are needed.

In response to the above needs, the USGS, in cooperation with the Louisiana Department of Transportation and Development, began a study in October 1987 to statistically analyze and summarize water-quality data from about 300 surface-water-quality sites in Louisiana and to present the data in such a manner that trends, overall quality, and basin-wide changes in water quality could be evaluated. The study focused on the surface-water quality of the Mississippi River mainstem and the major drainage basins in Louisiana: the Lake Pontchartrain-Lake Maurepas basin; the Mississippi River Delta basin; the Atchafalaya-Teche-Vermilion basin; and the Calcasieu-Mermentau, Ouachita, Pearl, Red, Sabine, and Tensas River basins (fig. 1.1-1).



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Figure 1.1-1. Major surface-water basins in Louisiana.

1.0 INTRODUCTION--continued

1.2 Purpose and Scope

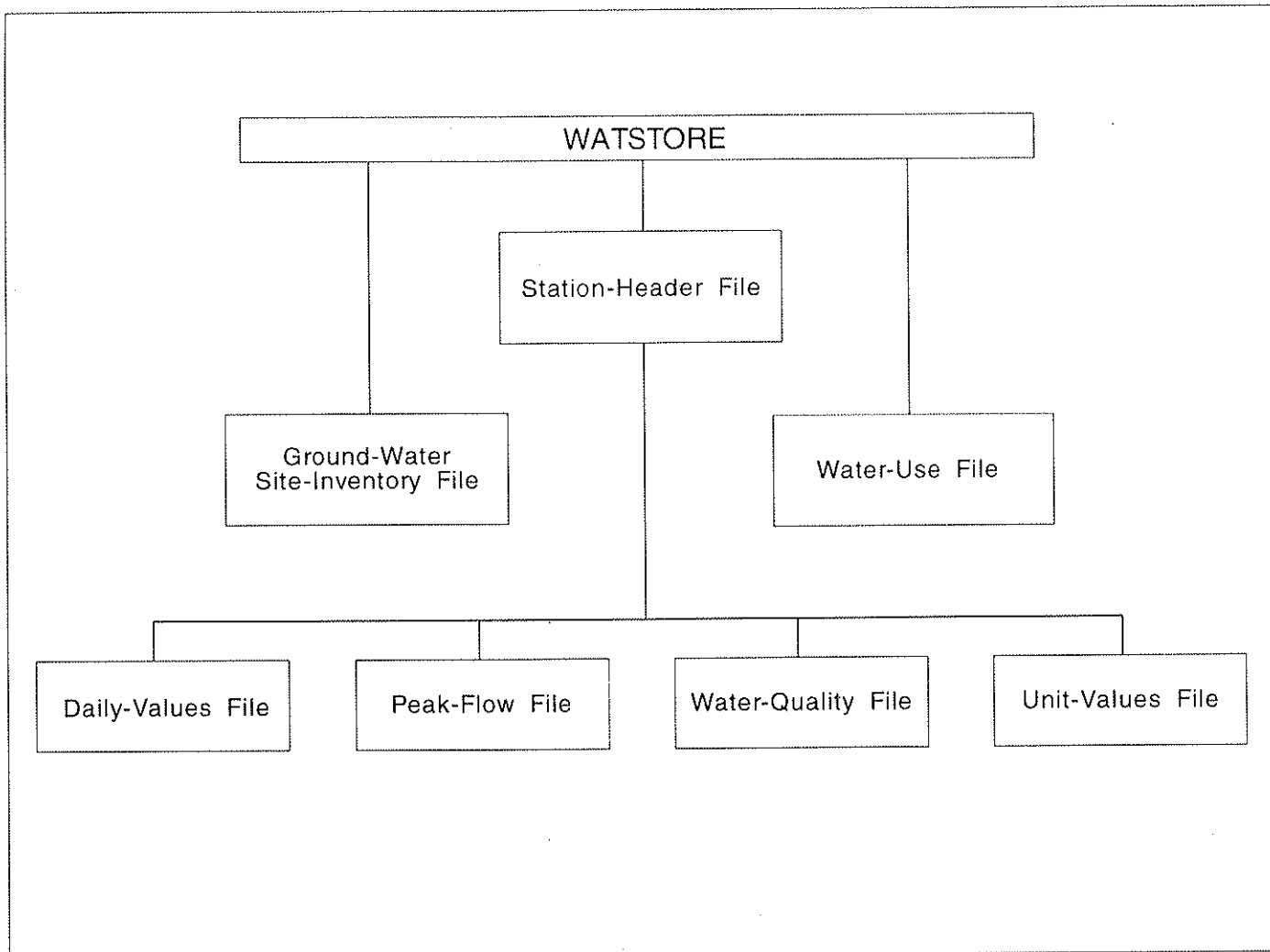
ANALYZE AND SUMMARIZE SURFACE-WATER-QUALITY DATA

Statistical analyses with illustrations describe water quality of the major drainage basins in Louisiana.

Statistical analyses of water-quality data and corresponding illustrations are presented for each major drainage basin in Louisiana. Nine of the 10 basins described in this study are those delineated by the Louisiana Department of Transportation and Development (1984). The mainstem of the Mississippi River is discussed separately from the Mississippi River Delta basin to preserve continuity of data for the Mississippi River.

Data for about 300 sites in Louisiana for water years 1905-95 were included in these statistical analyses. The number of water-quality sites varied from basin to basin, and the number and type of samples varied from site to site within a given basin. Pesticides, and occasionally, trace metals and nutrients are presented in

tables when there are more than 10 samples, and most, or all, of the concentrations are below the largest detection level for the analytical methods used. Daily sediment data were collected at Bayou Grand Cane near Stanley, Bayou Castor near Logansport, and Bayou San Patricio near Benson in the Sabine River basin, and Pearl River near Bogalusa in the Pearl River basin. This information is presented in tables in the Sabine River basin and the Pearl River basin reports. All water-quality data and streamflow data used for the statistical analyses are stored in the USGS Water-Data Storage and Retrieval System (WATSTORE), a computerized data base (fig. 1.2-1). Only WATSTORE data were used for the study.



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Figure 1.2-1. Files in the U.S. Geological Survey Water-Data Storage and Retrieval System (WATSTORE).

1.0 INTRODUCTION--continued

1.3 Methods of Study

BOXPLOTS AND GRAPHS ILLUSTRATE WATER QUALITY AT SIX REPRESENTATIVE SITES IN A BASIN

Tables list statistical information for selected water-quality properties and constituents.

Data from six representative sites within a basin are presented graphically. Data from all sites within a basin that were sampled 10 or more times are summarized in tables for each basin. These tables list the following information and summary statistics for selected properties and constituents for each site: number of analyses; detection level; maximum, minimum, and mean values or concentrations; and values or concentrations representing the 5th, 25th, 50th, 75th, and 95th percentiles of the total sample population. The data for selected sites were used to generate boxplots and linear regression equations and graphs for selected properties and constituents.

Boxplots illustrate a statistical summary of water-quality data at a site (D.R. Helsel, U.S. Geological Survey, written commun., 1989) (fig. 1.3-1). Boxplots of specific conductance, pH, water temperature, dissolved oxygen, major inorganic cations, major inorganic anions, trace metals, nutrients, bacteria, and phytoplankton (where data were available), were developed for selected sites in each basin.

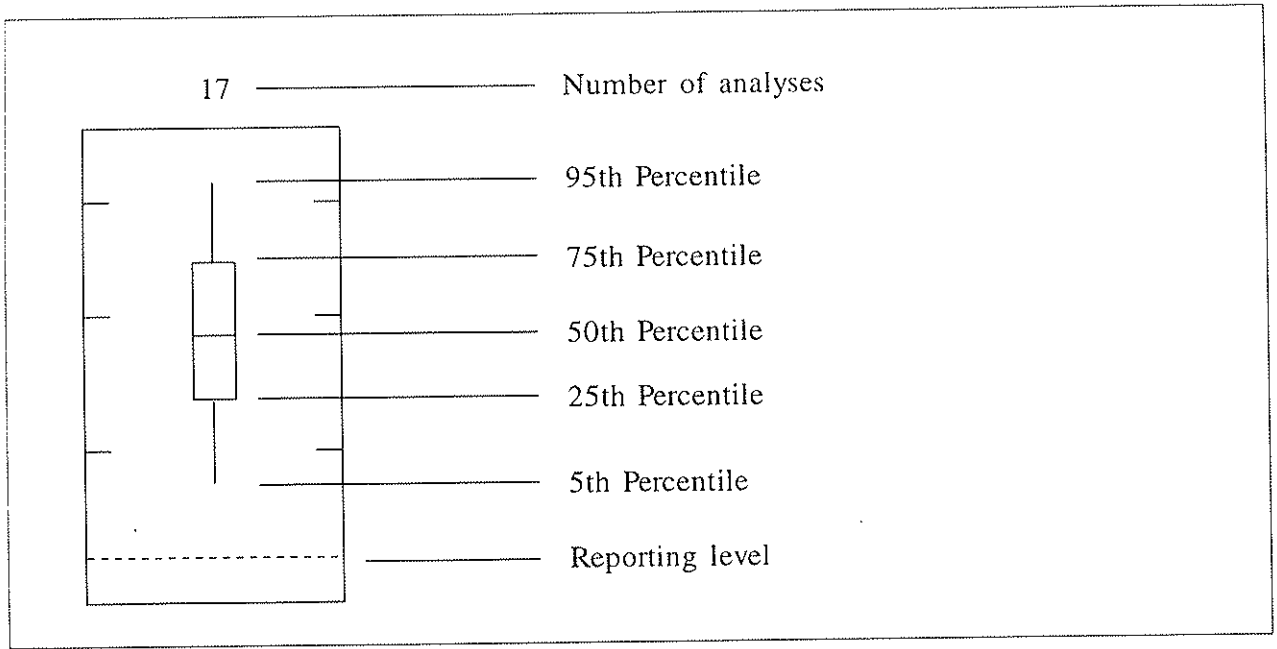
A boxplot summarizes a data set by displaying the values or concentrations representing the 5th, 25th, 50th, 75th, and 95th percentiles of the data. This format allows comparison among streams in the basin. The term percentile as used in this report refers to a distribution of values in the total data set. For example, the 25th percentile is the data value below which 25 percent of the data values occur (Sokal and Rohlf, 1969, p. 45). The 50th percentile is also the median of the data. The interquartile range is between the 25th and 75th percentiles. Fifty percent of the data are within this range.

A boxplot is constructed so the top and bottom of the box are drawn at the 75th and 25th percentiles. A line across the box indicates the median. The 95th and 5th percentiles are indicated by a vertical line from the top of the box to the 95th percentile and from the bottom of the box to the 5th percentile.

A horizontal dashed line indicates the analytical detection level. Because of changes in analytical procedures the reporting level may have changed over time. When multiple reporting levels were used for some constituents, a dashed line was drawn across the boxplot at the largest reporting level used.

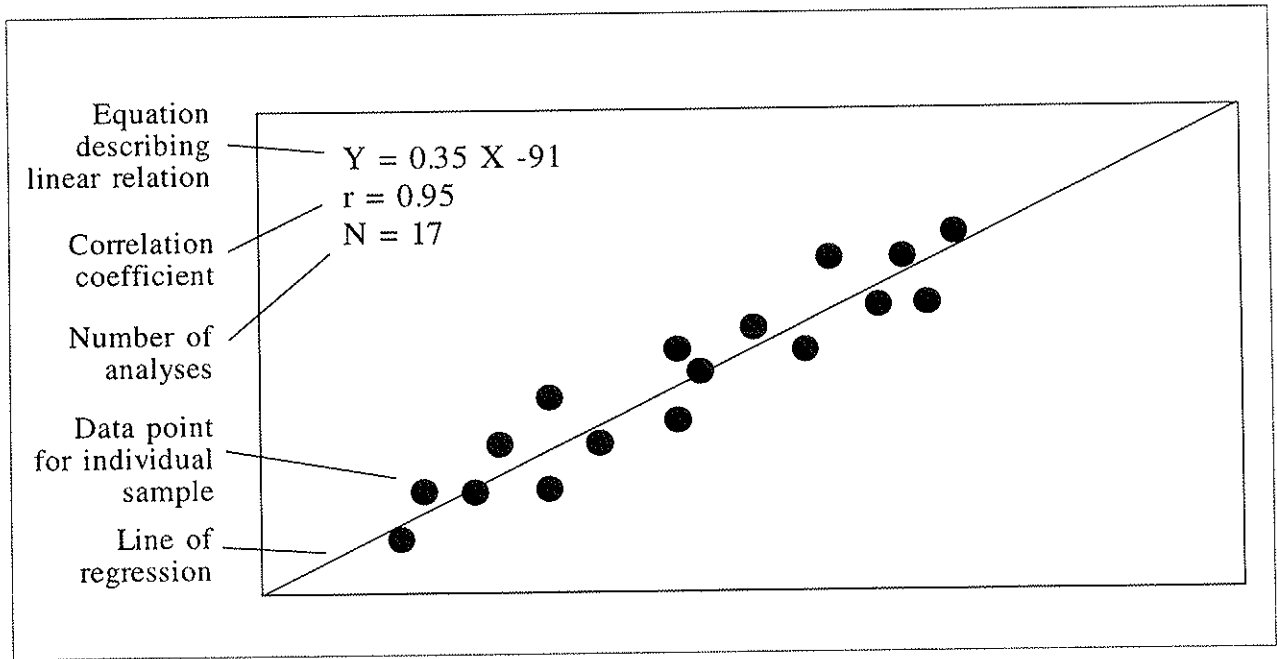
Another method used to evaluate water-quality data in this series of reports is linear regression (fig. 1.3-2). Linear regression equations were calculated in the form of $Y = aX + b$, where a is the slope of the regression line, b is the Y intercept, and Y and X are the dependent and independent variables (Sokal and Rohlf, 1969, p. 408). The number of data pairs, N , and the correlation coefficient, r , also are presented. The correlation coefficient indicates the degree of association between two variables. The closer the r value is to ± 1 , the better the association. Linear regression equations and graphs are presented for specific conductance and dissolved solids and for specific conductance and dissolved chloride. However, extrapolation of the equations beyond the data used to define the equation could result in incorrect values because the relation may not be linear in that range.

Water-quality samples were collected and analyzed using techniques and methods prescribed by the USGS. Collection procedures for chemical constituents are determined by the Office of Water Quality within the USGS. Methods for chemical analyses are presented in "Methods for Determination of Inorganic Substances in Water and Fluvial Sediments" (Fishman and Friedman, 1989). Collection procedures and analytical methods for biological constituents are presented in "Methods for Collection and Analysis of Aquatic Biological and Microbiological Samples" (Britton and Greeson, 1988). Collection procedures and analytical methods for organic constituents are presented in "Methods for the Determination of Organic Substances in Water and Fluvial Sediments" (Wershaw and others, 1983).



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Figure 1.3-1. Example and definition of boxplot.



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Figure 1.3-2. Example and definition of linear regression.

1.0 INTRODUCTION--continued

1.4 Hydrologic Setting and Land Use in Louisiana

CLIMATE AND PHYSIOGRAPHY INDIRECTLY AFFECT WATER QUALITY

Climate and physiography are the primary factors that affect land use in Louisiana, and "the quality of Louisiana's streams, rivers, and lakes depends in large part on the uses of the land they drain" (U.S. Geological Survey, 1993, p. 293).

1.4.1 Climate

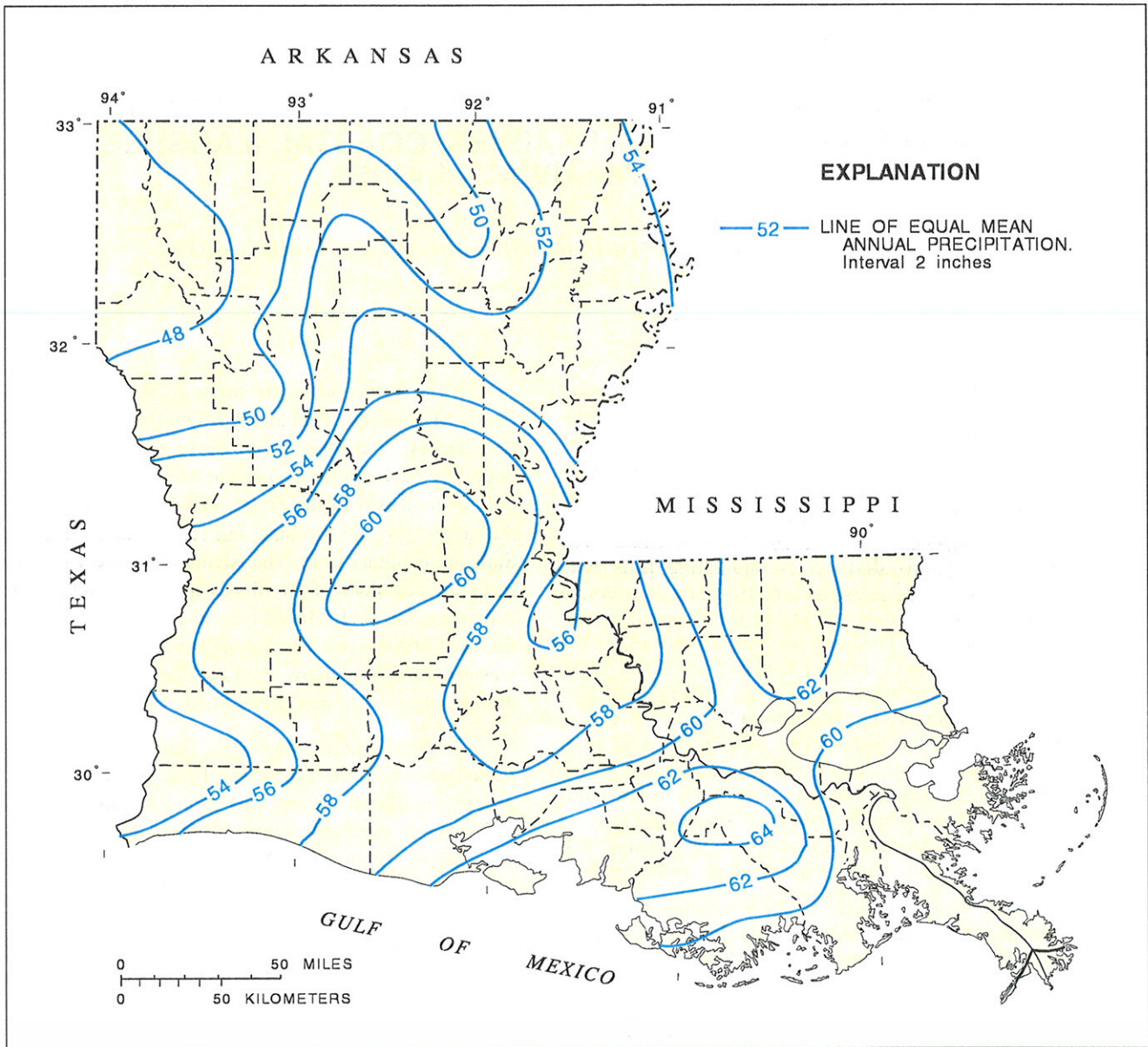
HUMID, SUBTROPICAL CLIMATE PREVAILS IN LOUISIANA

The mean annual precipitation ranges from about 48 inches in the northwestern part of the State to 64 inches in the southeastern part.

The relatively high annual rainfall and the year-round moderate air temperatures account for the humid, subtropical climate in Louisiana (Lee, 1985b, p. 2). Annual rainfall ranges from about 48 in. in the northwestern part of the State to about 64 in. in the southeastern part (fig. 1.4.1-1) (Muller and others, 1984; McWreath and Lowe, 1986). The most intense rainfall occurs during localized thunderstorms that produce large amounts of rainfall but move rapidly through an area.

Other sources of heavy rainfall are tropical storms and hurricanes. These storms intensify over the warm waters of the Gulf of Mexico and move slowly inland. During this inland movement, extremely heavy rainfall can occur over most of the State in a short period of time and can cause major flooding.

Mean annual air temperatures range from 19.0°C in the northern part of the State to 20.5°C in the southern part. The lowest temperatures usually occur during January and February, and the highest temperatures occur during July and August (Lee, 1985b, p. 2).



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Figure 1.4.1-1. Mean annual precipitation in Louisiana, 1951-80. (Source: Muller and others, 1984)

1.0 INTRODUCTION--continued

1.4 Hydrologic Setting and Land Use in Louisiana--continued

1.4.2 Physiography

LOUISIANA INCLUDES PARTS OF FOUR PHYSIOGRAPHIC DIVISIONS--PINE HILLS, PRAIRIES, COASTAL MARSHES, AND ALLUVIAL PLAINS

Major land uses include forests and agricultural lands.

Louisiana lies within the Coastal Plain Physiographic Province, and includes parts of four physiographic divisions--the Pine Hills, the Prairies, the Coastal Marshes, and the Alluvial Plains (Fenneman, 1938). These physiographic divisions are shown in figure 1.4.2-1. Parts of north-central, western, and southeastern Louisiana are in the Pine Hills division. The topography of this division is undulating hills with extensive pine and hardwood forests. Parts of southern and southwestern Louisiana are in the Prairies physiographic division. The land surface elevations in the Prairies range from 20 to 30 ft above sea level. This area generally is treeless except along streams. Much of coastal Louisiana is in the Coastal Marshes division. These areas are flat and subject to tidal flooding from the Gulf of Mexico. The flood plains adjacent to the Mississippi, Ouachita, and Red Rivers are in the Alluvial Plains physiographic division. The topography of these areas is flat with interconnecting streams that allow flow between the river basins (Lee, 1985b, p. 3).

The major land uses in the State include forests, cropland, grazing land, and wetlands (Louisiana Department of Transportation and Development, 1984, p. 24-28). Even though most land is well suited to agriculture, some areas support industry, oil and gas production, and aquaculture (U.S. Geological Survey, 1993, p. 293).

The principal rivers draining the State are the Pearl, Mississippi, Atchafalaya, Ouachita, Sabine, and Red Rivers. The Pearl River forms part of the eastern boundary between Louisiana and Mississippi and drains only a small part of the State. The Mississippi River is the largest river in the State but few streams within the State are tributary to it. The Atchafalaya River is a controlled distributary of the Mississippi River, and carries flow from the Red, Mississippi, and Ouachita Rivers to the Gulf of Mexico. The Sabine River forms part of the western boundary between Louisiana and Texas and drains only a small part of the State.

All other streams in the State are tributary to these rivers with the exception of two groups. The first group consists of streams east of the Mississippi River and west of the Pearl River. This group includes the Tchefuncte, Tangipahoa, Natalbany, and Amite Rivers. These rivers eventually flow into the Gulf of Mexico by way of Lake Pontchartrain and Lake Maurepas. The second group includes rivers west of the Mississippi River and east of the Sabine River. Major streams in this group are Bayou Teche and the Vermilion, Mermen-tau, and Calcasieu Rivers. These rivers flow into the Gulf of Mexico.



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Figure 1.4.2-1. Physiographic divisions and streams in Louisiana. (Source: Lee, 1985b, p. 4)

1.0 INTRODUCTION--continued

1.5 Surface-Water-Quality Properties and Constituents

TABLE INCLUDES COMMON SOURCES OF SELECTED PROPERTIES AND CONSTITUENTS

Federal regulations and State criteria have been established for selected properties and constituents analyzed.

Table 1.5-1 describes selected water-quality properties and constituents discussed in this report. The table lists common sources of the properties and constituents and their environmental significance, and where established, the Federal regulations and State criteria are presented.

In addition to the information presented in this table, it may be noted that values for fecal coliform and fecal streptococcus bacteria have a special importance when compared to each other. "When the ratio (fecal coliform bacteria to fecal streptococcus bacteria) is greater than or equal to 4, it may be taken as strong evidence that pollution derives from human wastes. When the ratio is less than or equal to 0.7, it may be taken as

strong evidence that pollution derives predominantly or entirely from livestock or poultry wastes. When the ratio lies between 2 and 4, it can indicate a predominance of human wastes in mixed pollution. When the ratio is between 0.7 and 1.0, it can indicate a predominance of livestock and poultry wastes in mixed pollution. When the ratio falls on values from 1 to 2, it represents a 'grey area' of uncertain interpretation" (Millipore Corporation, 1972, p. 36). This interpretation of ratios is most reliable when the two counts describe samples collected at the same site within 24 hours of flow downstream from the source of pollution. Because the source of contamination in most instances is unknown, the interpretation of these ratios presented in this report should be used with caution.

Table 1.5-1. Common sources of properties and constituents, their environmental significance, and Federal regulations and State criteria

[Source: U.S. Environmental Protection Agency (USEPA), 1976; 1986; 1994; 1996; Louisiana Department of Environmental Quality (DEQ), 1984; Hem, 1985; Tobin and Youger, 1977. NE, no established criteria; SMCL, secondary maximum contaminant level; °C, degrees Celsius; mg/L, milligrams per liter; µg/L, micrograms per liter; MCL, maximum contaminant level; Proposed MCL, proposed maximum contaminant level; ng/L, nanograms per liter; cols/100 mL, colonies per 100 milliliters]

Property or constituent	Common source	Environmental significance	USEPA Federal water-quality regulations ¹	DEQ State water-quality criteria
Physical properties				
Specific conductance	Ions within the water.	Indicates the presence of precipitation, dilution, evaporation, and metabolic uptake and release of chemicals.	NE	NE
pH	Hydrogen-ion activity.	May indicate oxidation of some form of sulfur or iron.	SMCL is 6.5-8.5 and 6.5-9.0 is the recommended range for freshwater aquatic life. See U.S. Environmental Protection Agency (1976, p. 218).	6.0-9.0 and no effluent will cause pH to vary by more than 1.0. Freshwater:
Water temperature	Seasonal changes; daily variance outside discharges into water-body.	Affects migration patterns and colonization characteristics; accelerates biodegradation; decreases maximum oxygen concentration.		(1) Maximum of 2.8 °C rise above ambient for streams. (2) Maximum of 1.7 °C rise above ambient for lakes. (3) Maximum temperature of 32.2 °C except where otherwise listed.
Dissolved oxygen	Transferred from the atmosphere; photosynthesis by aquatic plants.	Inadequate dissolved oxygen can have adverse effect on aquatic life.		Estuarine and coastal waters: (1) Maximum of 2.2 °C rise above ambient October through May. (2) Maximum of 0.83 °C rise during June through September. (3) Maximum temperature of 35.0 °C except when natural conditions elevate temperature above this level.
Total dissolved solids.	Inorganic salts and some organic materials.	Excess can cause pipe corrosion or have detrimental effects on sensitive crops if used for irrigation.	For freshwater aquatic life and coastal marine water, 5.0 mg/L. SMCL is 500 mg/L. 250 mg/L for chlorides and sulfates in domestic water supplies (welfare).	For freshwater and coastal marine water, 5.0 mg/L. State criteria vary from stream to stream.
Major inorganic cations				
Calcium, dissolved	Occurs in igneous-rock minerals, silicate minerals, and as carbonates in sedimentary rocks.	Important for animal and plant nutrition.	NE	NE
Magnesium, dissolved	Carbonate sedimentary rock forms such as limestone.	Important for animal and plant nutrition.	NE	NE
Sodium, dissolved	Occurs in igneous and sedimentary rocks, especially evaporites.	Excessive sodium in drinking or irrigation water can have detrimental effects on plants and consumers.	NE	NE
Potassium, dissolved	More abundant in sedimentary rocks than igneous rocks.	Essential plant nutrient.	NE	NE
Major inorganic anions				
Alkalinity, as calcium carbonate	Caused by the presence of bicarbonates, carbonates, and hydroxides. Function of pH and temperature.	Buffers water against pH changes.	For freshwater aquatic life, 20 mg/L.	NE
Sulfate, dissolved	Can be dissolved from gypsum, sodium sulfate, and some types of shales. Mining activities, industrial waste, and organic matter.	Concentrations exceeding a natural, background level indicate contamination from human activity; in sufficient quantity, can cause water to be unsuitable for public supply; can harm aquatic organisms.	SMCL is 250 mg/L.	Maximum contaminant level is 250 mg/L.
Chloride, dissolved	Common in brine and a primary constituent in seawater; evaporite sediment.	Associated with sodium and, if present in excess, can be detrimental in water used for drinking or irrigation.	SMCL is 250 mg/L.	For instream concentration, 250 mg/L.
Trace metals				
Copper, dissolved	Malachite and cuprite. Oxides and sulfates are used in algicides, pesticides, and fungicides.	Important for the synthesis of chlorophyll.	SMCL is 1,000 µg/L.	NE
Iron, dissolved	Present in igneous-rock minerals and in sedimentary rocks.	Important for plant and animal nutrition.	SMCL is 300 µg/L.	NE
Lead, dissolved	Often result from mining, smelting, and other industrial operations. May occur naturally as lead sulfide.	Toxic, bioaccumulative. Has no nutritional value.	MCL is 15 µg/L at the tap. For sensitive freshwater resident species, 0.01 times the 96-hour LC ₅₀ value, using the receiving or comparable water as the diluent and soluble lead measurements (using an 0.45 micron filter).	NE
Zinc, dissolved	Used in the metallurgy, paint, rubber, and photo-engraving industries.	Important for animal metabolism. However, small quantities can be toxic to aquatic plants, animals, and bacteria.	SMCL is 5,000 µg/L.	NE
Nutrients				
Ammonia plus organic nitrogen, total	Sewerage or industrial contamination.	Ammonia reactions with chlorine can result in the formation of chloramine compounds. Organic nitrogen can be an indicator of organic pollution.	NE	NE
Nitrite plus nitrate, nitrate, and nitrite as nitrogen, total	Fertilizers and animal and human wastes.	Plant nutrient that can be an indication of wastes.	MCL for nitrite plus nitrate is 10 mg/L, nitrate is 10 mg/L, and nitrite 1.0 mg/L.	NE
Phosphorus, total	Results from leaching of rocks and soil, decomposition of plants and animals, from fertilizers, sewerage, and industrial waste.	Although it is not toxic to man, it is bioaccumulative and toxic to certain forms of aquatic life. High concentrations promote undesirable plant growth causing eutrophication of lakes.	NE	NE
Pesticides and other organics				
DDT, total	Insecticides.	Bioaccumulative and toxic.	For freshwater and marine aquatic life, 0.001 µg/L.	For freshwater, 1.1 µg/L. For public water supply, 0.24 ng/L.
PCB, total	Found in capacitors and transformers used in the electrical industry.	Bioaccumulative and toxic.	For freshwater aquatic life, 0.014 µg/L. Ingestion of contaminated water and aquatic organisms should be zero.	For freshwater, 2.0 µg/L. For public water supply, 0.79 ng/L.
Diazinon, total	Insecticides.	Bioaccumulative and toxic.	NE	NE
Lindane, total	Insecticides.	Bioaccumulative and toxic.	For domestic water supply, 0.2 µg/L. For freshwater aquatic life, 0.01 µg/L.	NE
Chlordane, total	Insecticides.	Bioaccumulative and toxic.	For freshwater aquatic life, 2.4 µg/L.	For freshwater, 2.4 µg/L. For public water supply, 4.6 ng/L.
Malathion, total	Insecticides.	Bioaccumulative and toxic.	For freshwater and marine aquatic life, 0.1 µg/L.	NE
Endrin, total	Insecticides.	Bioaccumulative and toxic.	MCL is 2.0 µg/L.	For freshwater, 0.18 µg/L. For public water supply, 1.0 µg/L.
Parathion, total	Insecticides.	Bioaccumulative and toxic.	For freshwater and marine aquatic life, 0.04 µg/L.	NE
Endosulfan, total	Insecticides.	Bioaccumulative and toxic.	For freshwater aquatic life, 0.22 µg/L. To protect public health, 74 µg/L.	NE
2,4-D, total	Herbicides.	Bioaccumulative and toxic.	For domestic water supply, 70 µg/L.	For public water supply, 100 µg/L.
Biological constituents				
Fecal coliform	Human wastes.	Indicator of pathogens.	Based on minimum of 5 samples collected over a 30-day period, the level should not exceed a log mean of 200 cols/100 mL, nor should more than 10 percent of the total samples collected during any 30-day period exceed 400 cols/100 mL.	NE
Fecal streptococcus	Livestock and poultry wastes.	Indicator of pathogens.	NE	NE
Suspended sediment				
Suspended sediment	Sand, silt, clay, and organic material which enter a stream either from hillslope erosion or directly from the streambed.	Long periods of high concentrations of sediment can interfere with photosynthesis, bury benthic organisms, inhibit respiration of gilled organisms, and ultimately alter the aquatic ecosystem.	NE	NE

¹ Primary Drinking-Water Regulations maximum contaminant level (February, 1996): Enforceable, health-based regulation that is to be set as close to the maximum contaminant level goal as is feasible. The definition of feasible means the use of best technology, treatment techniques, and other means that the Administrator of USEPA finds, after examination for efficacy under field conditions and not solely under laboratory conditions, are generally available (taking cost into consideration).

Proposed maximum contaminant level: Not enforceable.

Secondary Drinking-Water Regulations secondary maximum contaminant level: Contaminants that affect the aesthetic quality of drinking water. At high concentrations or values, health implications as well as aesthetic degradation may also exist. SMCLs are not federally enforced, but are intended as guidelines for the states.

2.0 LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN IN LOUISIANA

STATISTICAL SUMMARY OF SURFACE-WATER QUALITY IN THE LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN

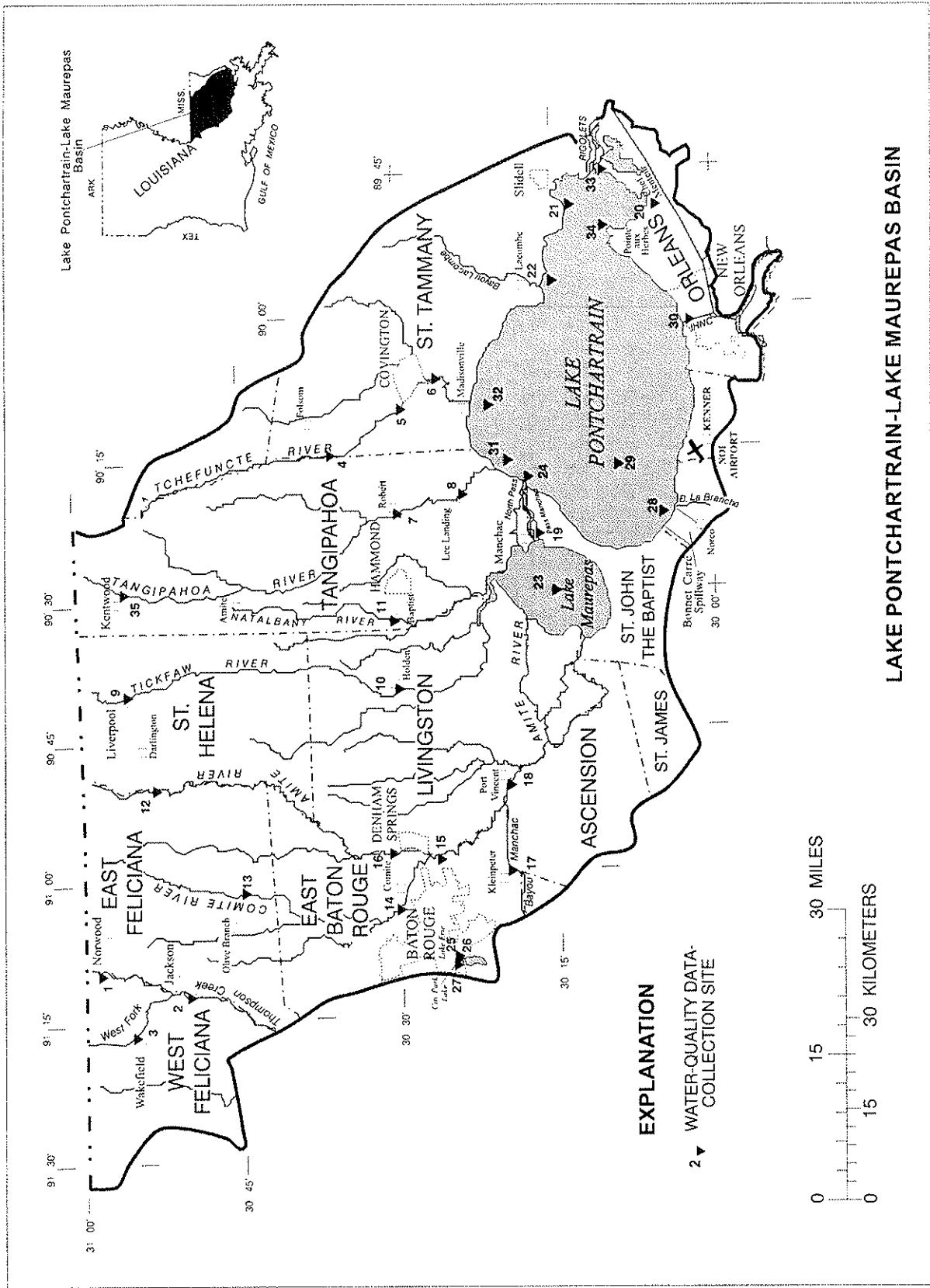
Data from 35 sites were analyzed.

Statistical analyses of surface-water-quality data for the Lake Pontchartrain-Lake Maurepas basin are presented in this part of the report. Text, maps, box-plots, graphs, and tables are used to describe the surface-water quality. Data are presented for 33 water-quality properties and constituents for analyses stored in the USGS WATSTORE files. The data were collected

from 35 sites (table 2.0-1 and fig. 2.0-1) in the basin during water years 1943-95. This information is useful to Federal, State, and local planners; hydrologists; engineers; scientists; and others who have water-resources management responsibilities for the Lake Pontchartrain-Lake Maurepas basin.

Table 2.0-1. Surface-water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, 1943-95

Map no. (fig. 2.0-1)	Site name and location	Map no. (fig. 2.0-1)	Site name and location
1	Thompson Creek near Norwood	22	Lake Pontchartrain at mouth of Bayou Lacombe near Lacombe
2	Thompson Creek at Jackson	23	Lake Maurepas, in middle, near Manchac
3	West Fork Thompson Creek near Wakefield	24	Lake Pontchartrain at Pass Manchac near Manchac
4	Tchefuncte River near Folsom	25	Lake Erie at Outflow at Baton Rouge
5	Tchefuncte River near Covington	26	City Park Lake at Outflow at Baton Rouge
6	Tchefuncte River below Covington	27	City Park Lake in northwest corner at Baton Rouge
7	Tangipahoa River at Robert	28	Lake Pontchartrain 2.25 miles northwest of Bayou La Branche at Norco
8	Tangipahoa River at Lee Landing	29	Lake Pontchartrain 10 miles northeast of Moisant Airport near Kenner
9	Tickfaw River at Liverpool	30	Lake Pontchartrain at Inner Harbor Navigation Canal at New Orleans
10	Tickfaw River at Holden	31	Lake Pontchartrain at Tangipahoa River near Lee Landing
11	Natalbany River at Baptist	32	Lake Pontchartrain at Tchefuncte River near Madisonville
12	Amite River near Darlington	33	Lake Pontchartrain at West Rigolets near Slidell
13	Comite River near Olive Branch	34	Lake Pontchartrain north of Pointe Aux Herbes
14	Comite River near Comite	35	Tangipahoa River near Kentwood
15	Amite River near Denham Springs		
16	Amite River at 4-H Camp near Denham Springs		
17	Bayou Manchac near Kleinpeter		
18	Amite River at Port Vincent		
19	Pass Manchac at Manchac		
20	Lake Pontchartrain 2.2 miles north northwest of Chef Menteur		
21	Lake Pontchartrain at north shore near Slidell		



Louisiana Department of Transportation and Development-U.S. Geological Survey Water Resources Cooperative Program

Figure 2.0-1. Surface-water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, 1943-95.

2.0 LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN IN LOUISIANA--continued

2.1 Overview

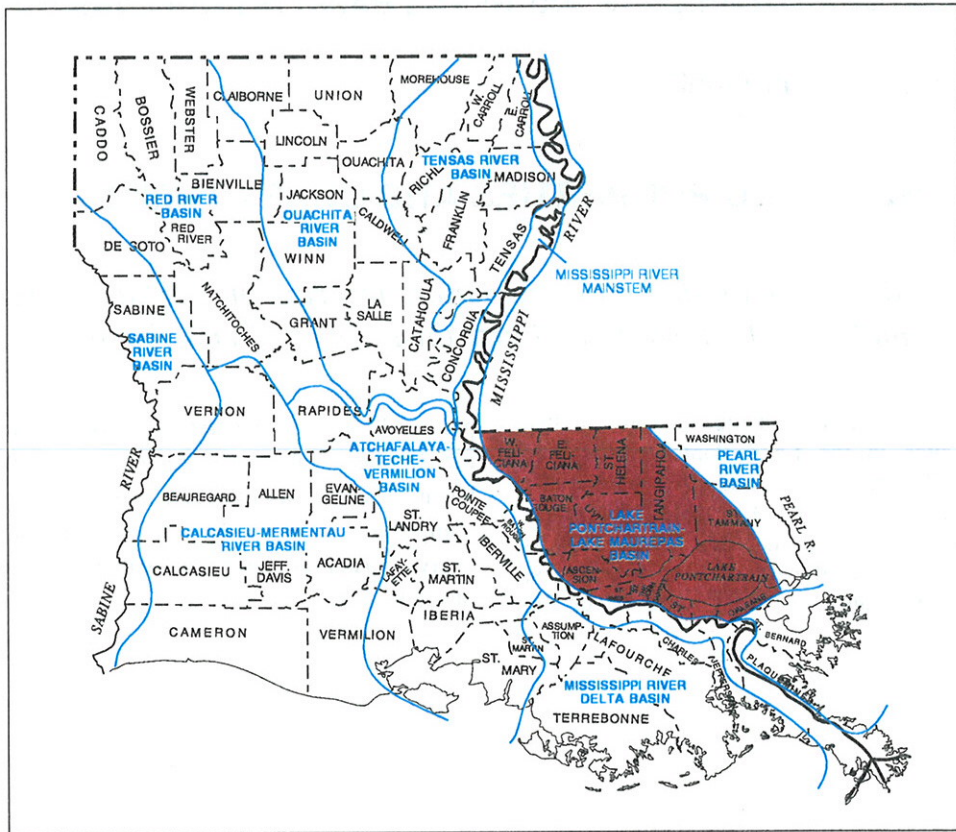
FARMLAND IN THE LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN HAS BEEN CONVERTED TO INDUSTRIAL USE

Surface water within the Lake Pontchartrain-Lake Maurepas basin is primarily used for industry and aquaculture.

The Lake Pontchartrain-Lake Maurepas basin in Louisiana (fig. 2.0-1) is about 70 mi long and 100 mi wide. Lake Pontchartrain, Lake Maurepas, Tchefuncte River, Tangipahoa River, Amite River, Natalbany River, and Tickfaw River are the primary sources of surface water in the basin, and most of the water is used for industry and aquaculture (fig. 2.1-1) (Lovelace and Johnson, 1996, p. 105). The minimum average discharge for sites where data were available within the basin is 121 ft³/s at Natalbany River at Baptist for the period, 1944-95 (Garrison and others, 1996); and the maximum average discharge is 2,140 ft³/s at Amite River near Denham Springs for the period, 1938-95 (Garrison and others, 1996). Other bodies of fresh sur-

face water in the basin include Bayou Manchac, City Park Lake, Comite River, Lake Erie, Pass Manchac, and Thompson Creek.

The uplands are generally covered with mixed and evergreen forests interspersed with farmlands. Lowland areas near the Mississippi River are in agricultural, industrial, and urban uses. Lowland areas away from the river are covered by bottomland or wetland forests. Large tracts of prime farmland have been converted to industrial use in the last 40 years. Additionally, the growth of Baton Rouge and several smaller urban areas has removed considerable land from agricultural use (Louisiana Department of Transportation and Development, 1984).



Louisiana Department of Transportation and Development-U.S. Geological Survey Water Resources Cooperative Program

Withdrawals by Category

Category	Amount (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 Parish

Parish	Amount (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 by Major Water Body

Water Body	Amount (Mgal/d)
Mississippi River	144.16

Figure 2.1-1. Surface-water withdrawals (in million gallons per day) from the Lake Pontchartrain-Lake Maurepas basin, Louisiana, 1995. (Source: Lovelace and Johnson, 1996, p. 105)

2.0 LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN IN LOUISIANA--continued

2.2 Surface-Water Quality

SELECTED PROPERTIES AND CONSTITUENTS

Physical, chemical, and biological data describe the surface-water quality of the Lake Pontchartrain-Lake Maurepas basin.

Figure 2.2-1 shows one of the 35 water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin. The data for this and other water-quality sites in the basin are presented in table 2.2-1 at the back of this report. The table includes selected water-quality properties and constituents, number of analyses, reporting levels, and values or concentrations for the

percentiles used to generate the boxplots shown for 6 of the 35 sites in the Lake Pontchartrain-Lake Maurepas basin. The format of the data in these tables allows easy comparison among sites within the basin. Results of analyses used for statistical computations are in the files of the USGS.

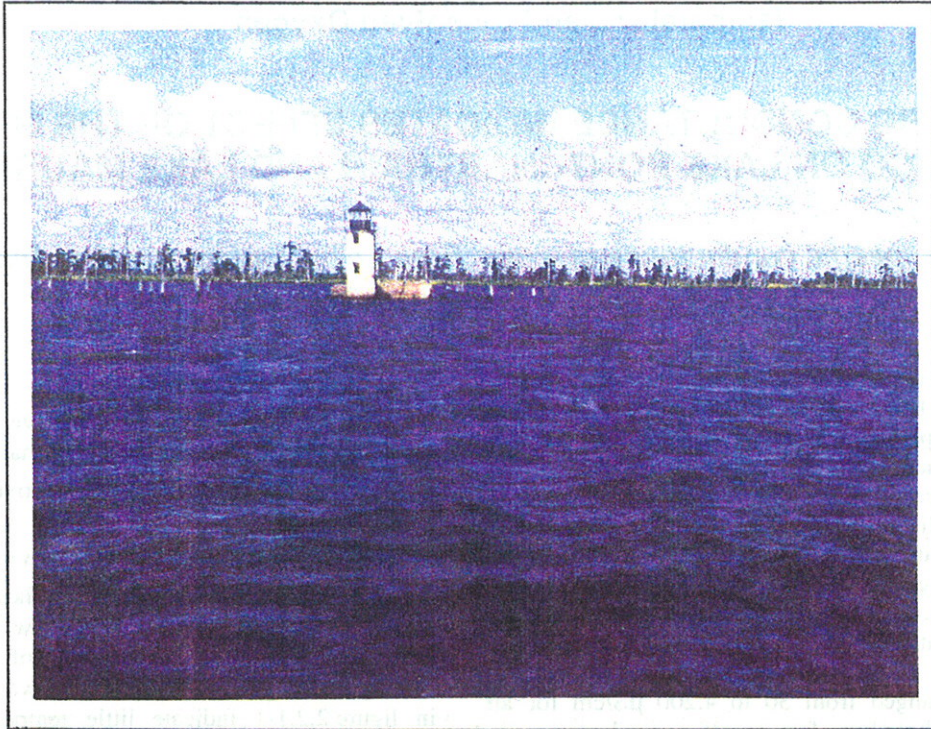


Figure 2.2-1. Water-quality data-collection site at Pass Manchac at Manchac, Louisiana.
(Photograph by Dennis K. Demcheck, U.S. Geological Survey.)

2.0 LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN IN LOUISIANA--continued

2.2 Surface-Water Quality--continued

2.2.1 Physical Properties--Specific Conductance, pH, Water Temperature, and Dissolved Oxygen

SPECIFIC CONDUCTANCE INDICATES EFFECT OF THE GULF OF MEXICO ON LAKE PONTCHARTRAIN AND LAKE MAUREPAS

Maximum specific conductance in water from Lake Pontchartrain at Inner Harbor Canal at New Orleans was 21,700 $\mu\text{S}/\text{cm}$.

Statistical summaries of water-quality data at 35 sites in the basin are presented in table 2.2-1 at the back of the report, and boxplots summarizing the specific conductance, pH, water temperature, and dissolved oxygen concentration data are presented in figure 2.2.1-1 for six of the sites. Specific conductance values for all sites in the Lake Pontchartrain-Lake Maurepas basin ranged from 17 $\mu\text{S}/\text{cm}$ at Amite River at 4-H Camp near Denham Springs, to 21,700 $\mu\text{S}/\text{cm}$ at Lake Pontchartrain at Inner Harbor Navigation Canal at New Orleans (table 2.2-1). The median values for specific conductance ranged from 30 to 4,200 $\mu\text{S}/\text{cm}$ for all sites. The boxplots for specific conductance in figure 2.2.1-1 indicate the influence of the Gulf of Mexico on Lakes Pontchartrain and Maurepas.

Values for pH in water from all sites in the basin ranged from 4.1 at Natalbany River at Baptist, to 10.0 at City Park Lake at Outflow at Baton Rouge. Most of the sites in the basin were within the secondary maximum contaminant level (SMCL) range of 5.0 to 9.0 for domestic water supply (U.S. Environmental Protection Agency, 1976; 1986). Median pH values in the Lake Pontchartrain-Lake Maurepas basin ranged from 6.1 to 9.0. The boxplots indicate that pH was less than 6.5, the lower limit of the U.S. Environmental Protection Agency recommended range for freshwater aquatic life (U.S. Environmental Protection Agency, 1976; 1986), in fewer than twenty-five percent of the samples from Lake Pontchartrain and Lake Maurepas. They also indicate that the median pH was higher at the lake sites than at the stream sites.

Values for water temperatures at all sites in the basin ranged from 5.0°C at Amite River at Port Vincent and Lake Pontchartrain at Pass Manchac near Manchac, to 33.5°C at Tchefuncte River near Covington. Median values ranged from 14.5 to 23.5°C. Maximum water temperatures at many sites in the basin were greater than the State's criterion of 32.2°C. These temperatures probably occurred during extreme low flow or on very hot days (Louisiana Department of Environmental Quality, 1984, p. 12). Boxplots for water temperatures in figure 2.2.1-1 indicate little temperature variance between water samples at the selected sites.

Dissolved oxygen concentrations in water from the basin ranged from 1.2 mg/L at Lake Pontchartrain at Tangipahoa River near Lee Landing, to 14.2 mg/L at Lake Pontchartrain at mouth of Bayou Lacombe near Lacombe. The median concentrations for dissolved oxygen ranged from 7.6 to 9.2 mg/L. Dissolved oxygen concentrations were greater than the State's minimum water-quality criterion of 5.0 mg/L in more than 75 percent of the samples analyzed at most sites. The U.S. Environmental Protection Agency's criterion for dissolved oxygen is 5.0 mg/L for freshwater aquatic life (U.S. Environmental Protection Agency, 1976; 1986). The boxplots for dissolved oxygen concentrations in figure 2.2.1-1 contrast the low dissolved oxygen concentrations at Lake Pontchartrain to the higher concentrations at the streams which flow into it.

2.0 LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN IN LOUISIANA--continued

2.2 Surface-Water Quality--continued

2.2.2 Relation Between Specific Conductance and Dissolved Solids

LOW CORRELATION BETWEEN SPECIFIC CONDUCTANCE AND DISSOLVED SOLIDS AT SOME SITES

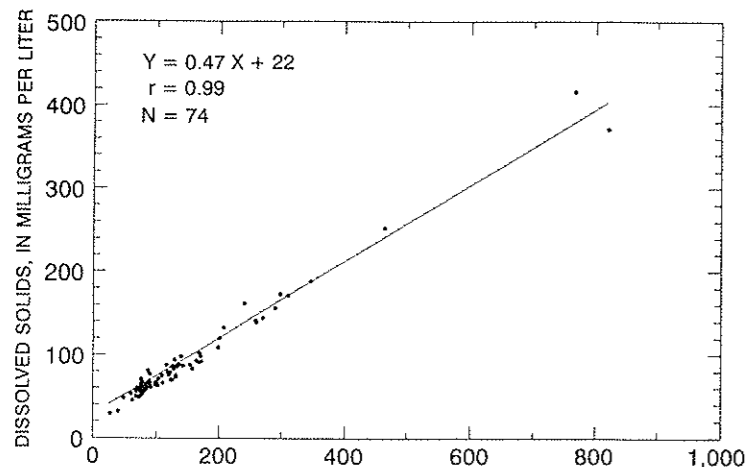
The correlation coefficient between dissolved solids and specific conductance for Tangipahoa River at Robert was 0.32.

Linear regression equations relating dissolved solids concentrations to specific conductance were calculated for six sites in the Lake Pontchartrain-Lake Maurepas basin (fig. 2.2.2-1). The correlation coefficient values, r , ranged from 0.32 at Tangipahoa River at Robert, to 1.00 at Pass Manchac at Manchac. The relatively weak correlation between specific conductance and dissolved solids concentrations at many of the sites is probably due to the extremely low (less than 100 $\mu\text{S}/\text{cm}$) specific conductance at those sites.

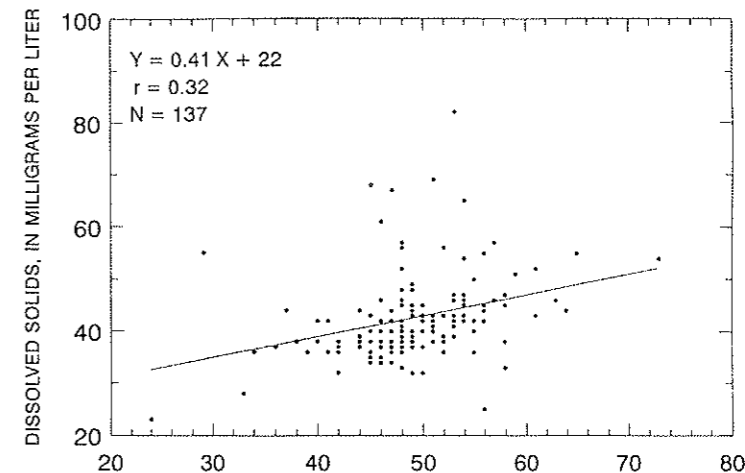
The regression equation for Amite River at Port Vincent, which was based on 74 chemical analyses,

indicates that dissolved solids concentrations at that site can exceed 500 mg/L when specific conductance values exceed 1,020 $\mu\text{S}/\text{cm}$. However, the boxplot for specific conductance for Amite River at Port Vincent (fig. 2.2.1-1) indicates that the maximum specific conductance value was 821 $\mu\text{S}/\text{cm}$. Although no State criteria for irrigation water quality are available for these streams or for the other streams for which regression equations were developed, the regression equations indicated that the streams in the basin generally met the U.S. Environmental Protection Agency's (1976) criterion for dissolved solids in irrigation water (500 mg/L).

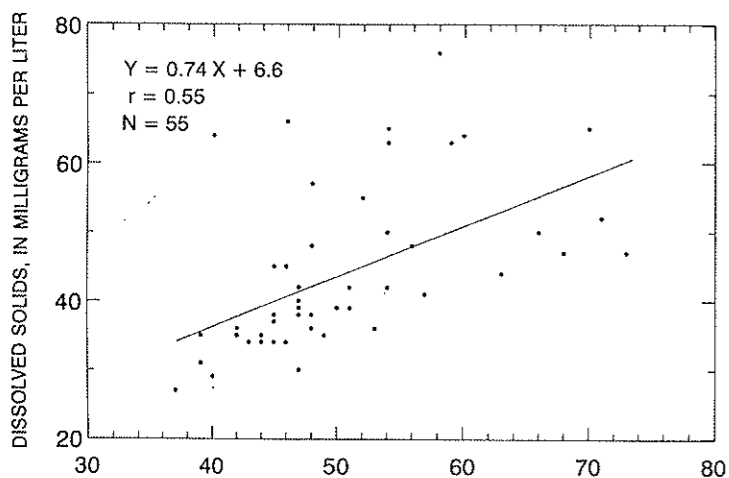
18 AMITE RIVER AT PORT VINCENT



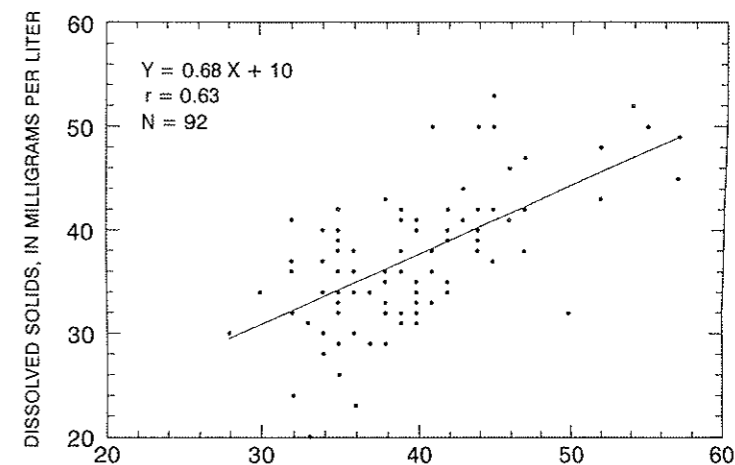
7 TANGIPAHOA RIVER AT ROBERT



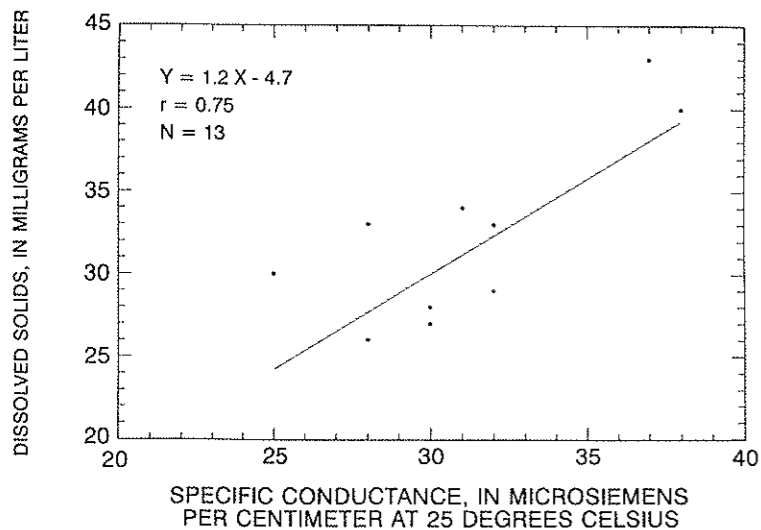
8 TANGIPAHOA RIVER AT LEE LANDING



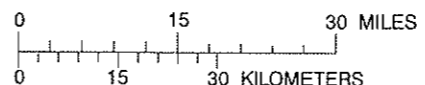
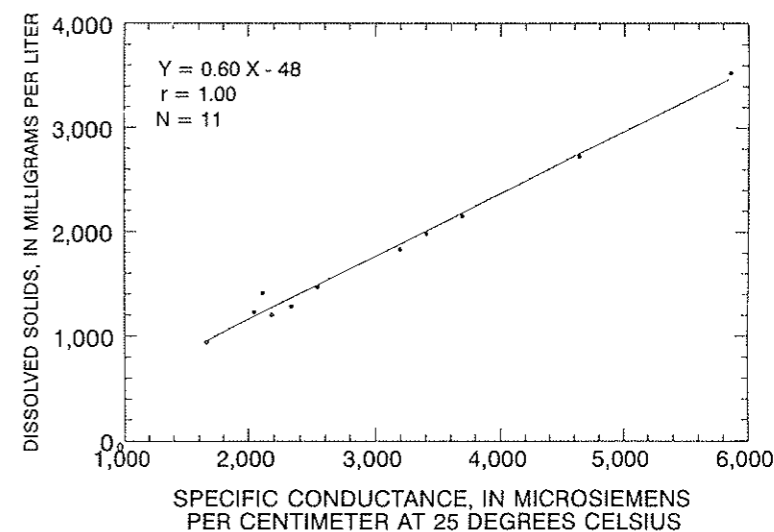
5 TCHEFUNCTE RIVER NEAR COVINGTON



4 TCHEFUNCTE RIVER NEAR FOLSUM



19 PASS MANCHAC AT MANCHAC



EXPLANATION
 2 ▾ WATER-QUALITY DATA-COLLECTION SITE

LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN

Figure 2.2.2-1. Water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and graphs showing relation between specific conductance and dissolved solids in water from selected sites.

2.0 LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN IN LOUISIANA--continued

2.2 Surface-Water Quality--continued

2.2.3 Major Inorganic Cations--Dissolved Calcium, Magnesium, Sodium, and Potassium

TIDAL INFLUENCE OF GULF OF MEXICO WAS REFLECTED IN CONCENTRATIONS OF CATIONS AT THE SITES ON LAKE PONTCHARTRAIN

Maximum value for sodium at Lake Pontchartrain north of Pointe Aux Herbes was 5,700 mg/L.

Calcium concentrations at all sites in the Lake Pontchartrain-Lake Maurepas basin ranged from 0.50 mg/L at Tchefuncte River near Folsom and Lake Pontchartrain at Tchefuncte River near Madisonville, to 190 mg/L at Pass Manchac at Manchac. Boxplots for six representative sites in the basin (fig. 2.2.3-1) show the median calcium concentration at Lake Pontchartrain was approximately five times greater than the median concentrations at the river sites. For example, the median concentration at Lake Pontchartrain at Tangipahoa River near Lee Landing was 10 mg/L, and the median concentration at Tangipahoa River at Robert was 2.3 mg/L.

Magnesium concentrations in the basin ranged from less than 0.10 mg/L at Tickfaw River at Liverpool and Amite River near Darlington, to 520 mg/L at Lake Pontchartrain at Inner Harbor Navigation Canal at New Orleans. Boxplots for six representative sites (fig. 2.2.3-1) show high magnesium concentrations at

Lake Pontchartrain at Tchefuncte River near Madisonville, which reflects the influence of the Gulf of Mexico.

The highest sodium concentration in water from the basin was at Lake Pontchartrain north of Pointe Aux Herbes (5,700 mg/L). The minimum sodium concentration (1.0 mg/L) occurred at Amite River at 4-H Camp near Denham Springs. Boxplots for six representative sites shown in fig. 2.2.3-1 show that although the median sodium concentration at Lake Pontchartrain at Tchefuncte River near Madisonville was less than 200 mg/L, maximum sodium concentrations were greater than 1,100 mg/L due to tidal influence of the Gulf of Mexico.

Concentrations of potassium in water from the basin ranged from less than 0.10 mg/L at Amite River at 4-H Camp near Denham Springs, to 140 mg/L at Lake Pontchartrain at Inner Harbor Navigation Canal at New Orleans. Boxplots for six representative sites (fig. 2.2.3-1) show tidal influence of the Gulf of Mexico on Lake Pontchartrain.

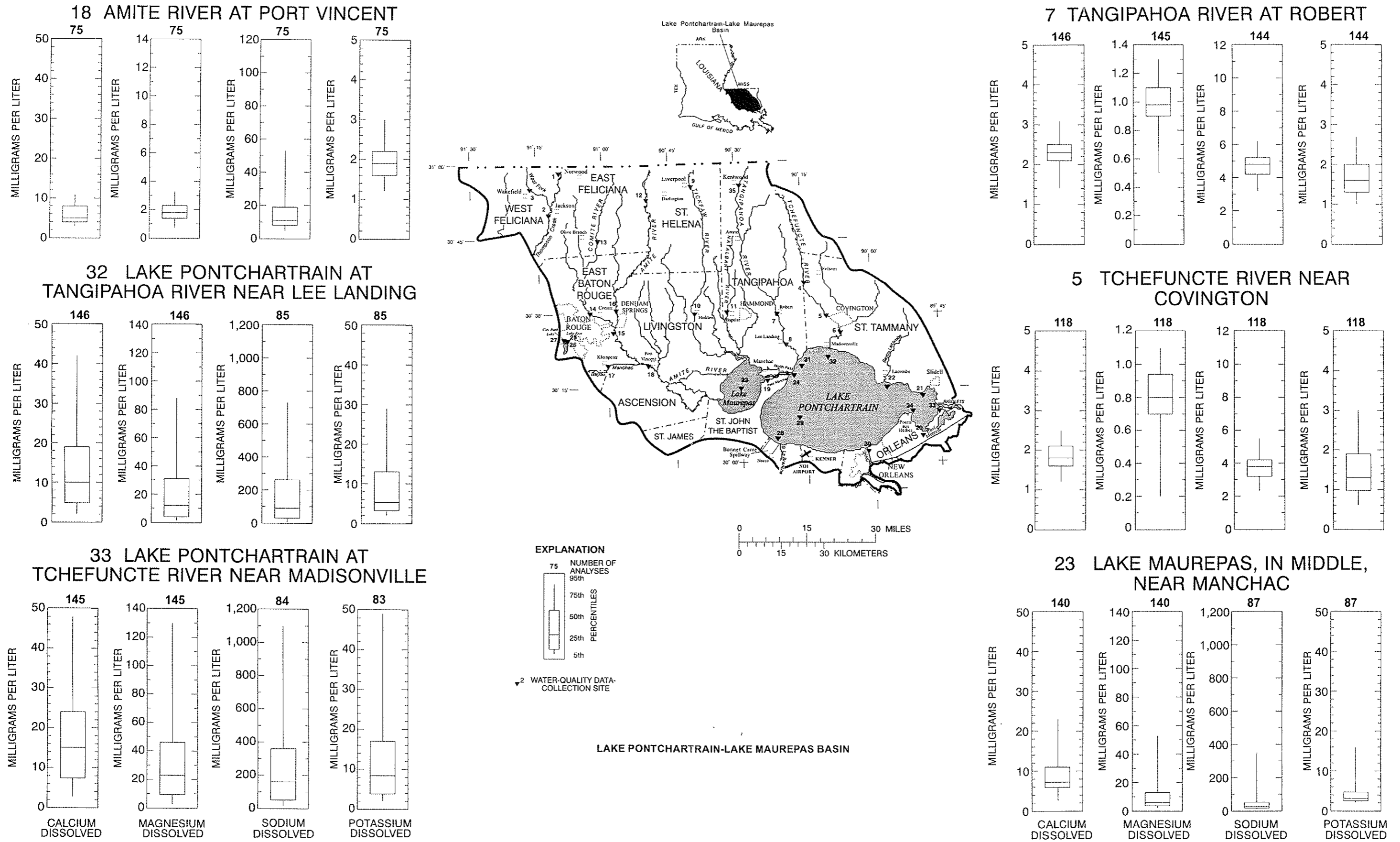


Figure 2.2.3-1. Water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and boxplots summarizing data for dissolved calcium, magnesium, sodium, and potassium concentrations in water from selected sites.

2.0 LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN IN LOUISIANA--continued

2.2 Surface-Water Quality--continued

2.2.4 Major Inorganic Anions--Total Alkalinity as Calcium Carbonate, Dissolved Sulfate, and Dissolved Chloride

TOTAL ALKALINITY CONCENTRATIONS AT TANGIPAHOA RIVER AT ROBERT ARE LOW

Alkalinity values in more than 95 percent of the samples analyzed at Tangipahoa River at Robert were less than 20 mg/L.

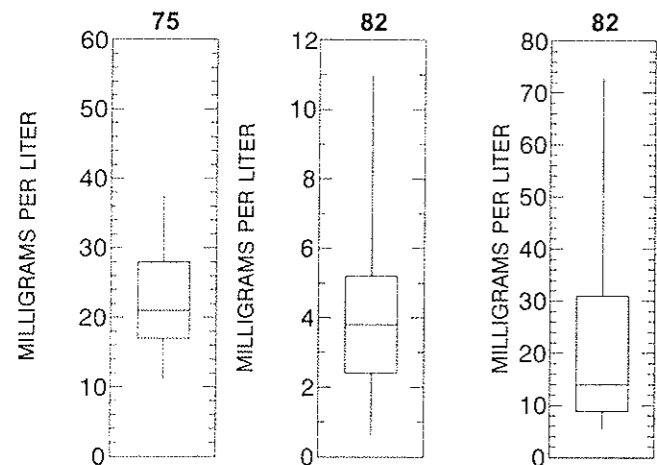
The data for major inorganic anions in water from the basin indicated that concentrations of major ions were below recommended levels for drinking water, for which such levels have been established. Alkalinity as calcium carbonate in water from the Lake Pontchartrain-Lake Maurepas basin ranged from less than 1 mg/L at Tchefuncte River below Covington and Natalbany River at Baptist, to 441 mg/L at City Park Lake in northwest corner at Baton Rouge. The lowest median concentration (7 mg/L) occurred at Tchefuncte River near Folsom. The maximum median alkalinity in the basin was 90 mg/L, which occurred at Bayou Manchac near Kleinpeter. The boxplots for six representative sites (fig. 2.2.4-1) show that alkalinity values in more than 95 percent of the samples analyzed at Tangipahoa River at Robert were less than 20 mg/L. The U.S. Environmental Protection Agency's minimum alkalinity criterion for freshwater aquatic life is 20 mg/L except where alkalinities for natural waters commonly are less (U.S. Environmental Protection Agency, 1976).

Concentrations of sulfate in water from the basin ranged from less than 0.1 mg/L at several sites on the Tchefuncte, Tangipahoa, Tickfaw, Amite, and Comite

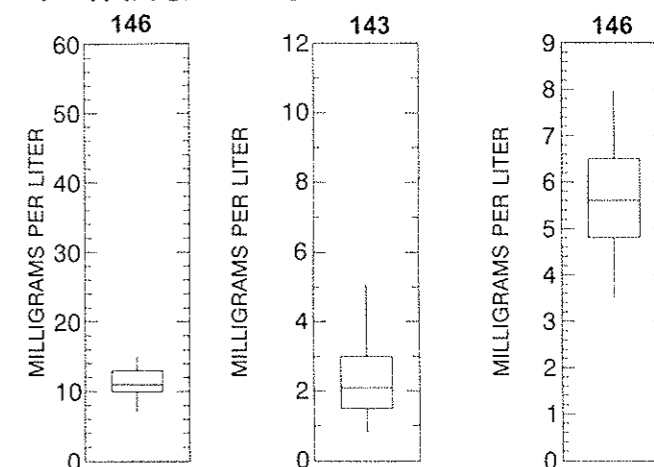
Rivers, to 1,100 mg/L at Lake Pontchartrain at Inner Harbor Navigation Canal at New Orleans. The SMCL for drinking water is 250 mg/L (U.S. Environmental Protection Agency, 1986; Louisiana Department of Environmental Quality, 1984). The boxplots for six representative sites (fig. 2.2.4-1) show high sulfate concentrations at Lake Pontchartrain.

Chloride concentrations in water from the basin ranged from 0.2 mg/L at Amite River at 4-H Camp near Denham Springs, to 7,500 mg/L at Lake Pontchartrain at Inner Harbor Navigation Canal at New Orleans. The SMCL for drinking water is 250 mg/L (U.S. Environmental Protection Agency, 1986; Louisiana Department of Environmental Quality, 1984). Median concentrations ranged from 4.0 mg/L at Tickfaw River at Liverpool and Tchefuncte River near Folsom, to 1,200 mg/L at Lake Pontchartrain Inner Harbor Navigation Canal at New Orleans. The boxplots summarizing the data for six representative sites in the basin (fig. 2.2.4-1) show high chloride concentrations at Lake Pontchartrain.

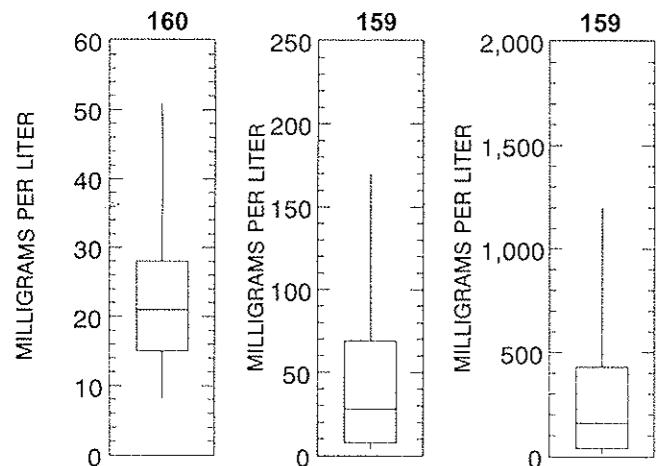
18 AMITE RIVER AT PORT VINCENT



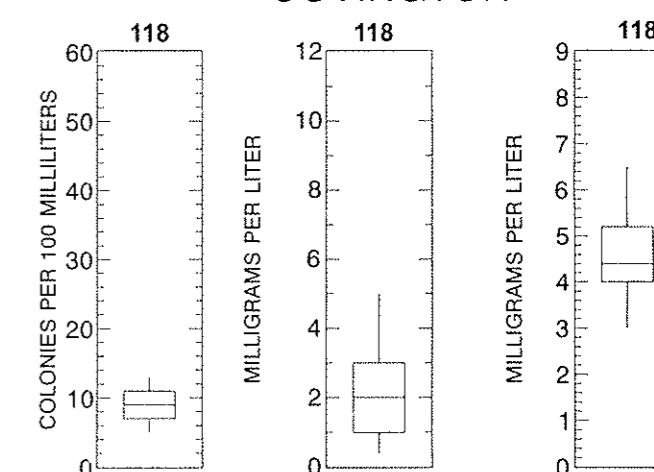
7 TANGIPAHOA RIVER AT ROBERT



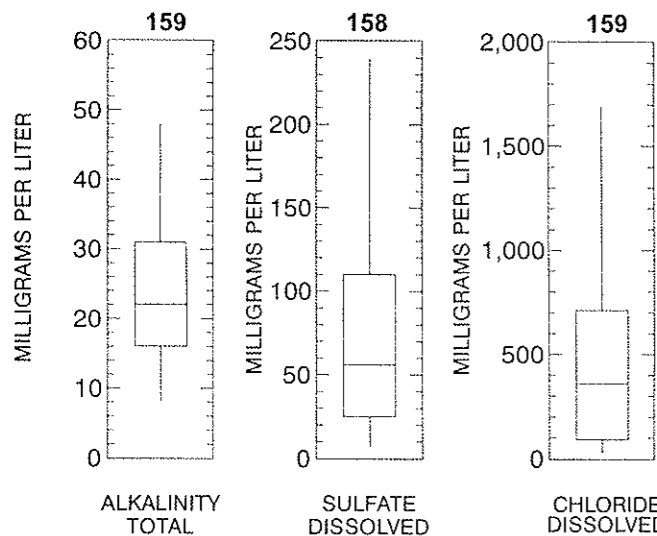
32 LAKE PONTCHARTRAIN AT TANGIPAHOA RIVER NEAR LEE LANDING



5 TCHEFUNCTE RIVER NEAR COVINGTON



33 LAKE PONTCHARTRAIN AT TCHEFUNCTE RIVER NEAR MADISONVILLE



23 LAKE MAUREPAS, IN MIDDLE, NEAR MANCHAC

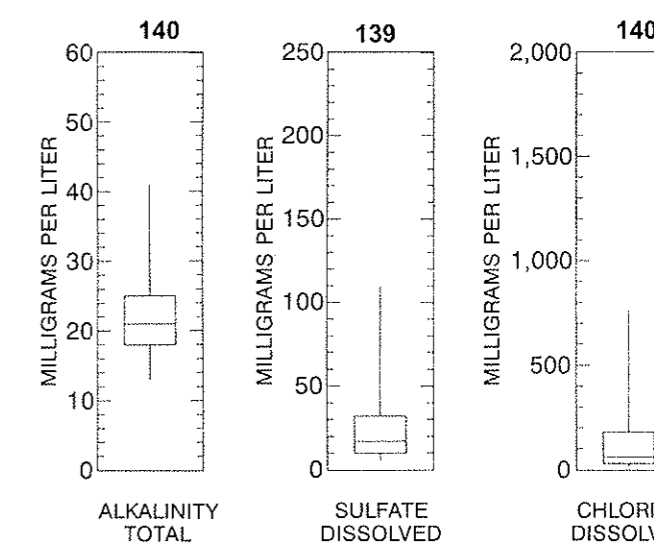


Figure 2.2.4-1. Water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and boxplots summarizing data for total alkalinity as calcium carbonate and dissolved sulfate and chloride concentrations in water from selected sites.

2.0 LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN IN LOUISIANA--continued

2.2 Surface-Water Quality--continued

2.2.5 Relation between Specific Conductance and Dissolved Chloride

LOW CORRELATION BETWEEN SPECIFIC CONDUCTANCE AND DISSOLVED CHLORIDE AT SOME SITES

The correlation coefficient between dissolved chloride and specific conductance for Tchefuncte River near Covington was 0.55.

Regression equations relating chloride concentrations to specific conductance values were calculated for six sites in the Lake Pontchartrain-Lake Maurepas basin (fig. 2.2.5-1). The correlation coefficient values, r , ranged from 0.55 at Tchefuncte River near Covington, to 1.00 at Lake Pontchartrain at Tchefuncte River near Madisonville and the middle of Lake Maurepas near Manchac.

The regression equations indicate a low correlation between specific conductance and dissolved chloride at Tangipahoa River at Robert and Tchefuncte River

near Covington due to the low specific conductance (less than 100 $\mu\text{S}/\text{cm}$). They also indicate that chloride constitutes a comparable percentage of the dissolved solids in water from Lake Pontchartrain, Lake Maurepas, and the Amite River. For example, application of the regression equations to specific conductance of 500 $\mu\text{S}/\text{cm}$ yields an estimated chloride concentration of 118 mg/L for Amite River at Port Vincent, 116 mg/L for Lake Pontchartrain at Tangipahoa River near Lee Landing, and 122 mg/L for the middle of Lake Maurepas near Manchac.

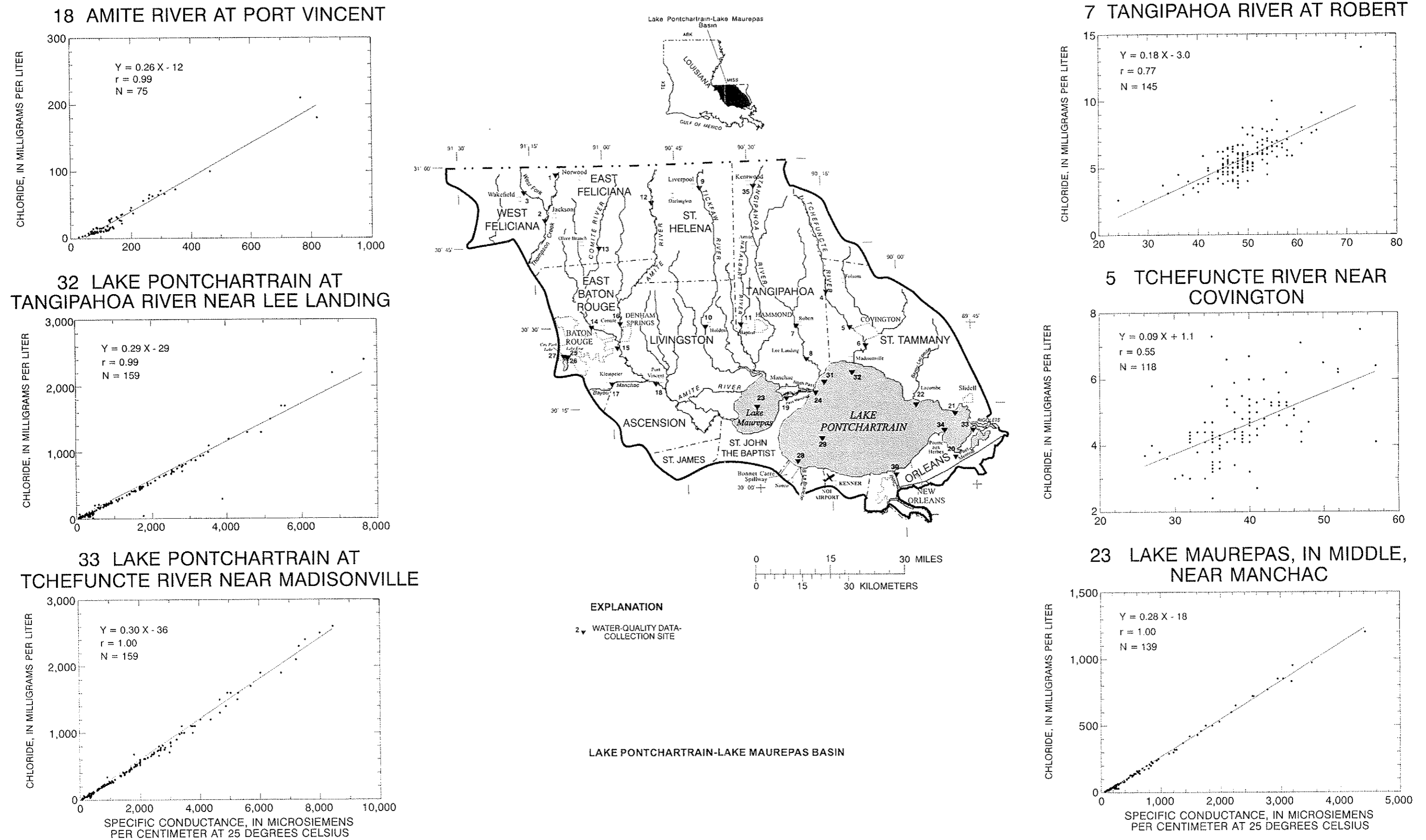


Figure 2.2.5-1. Water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and graphs showing relation between specific conductance and dissolved chloride in water from selected sites.

2.0 LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN IN LOUISIANA--continued

2.2 Surface-Water Quality--continued

2.2.6 Trace Metals²--Dissolved Copper, Iron, Lead, and Zinc

CONCENTRATIONS OF SELECTED DISSOLVED TRACE METALS WERE WITHIN THE U.S. ENVIRONMENTAL PROTECTION AGENCY'S RECOMMENDED LEVELS

Median concentrations of dissolved iron ranged from less than the detection level to 270 µg/L.

The available data for trace metals indicated that dissolved copper, lead, and zinc were less than the maximum contaminant levels of the U.S. Environmental Protection Agency's primary and secondary drinking water regulations (1976; 1986; 1994; 1996). Iron concentrations in water from the basin occasionally exceeded 300 µg/L (micrograms per liter), which is the criterion for domestic water supplies.

Concentrations of copper in water samples collected in the Lake Pontchartrain-Lake Maurepas basin ranged from less than the detection level at most sites, to 26 µg/L at Amite River at 4-H Camp near Denham Springs. The median copper concentrations ranged from less than the detection level to 4 µg/L at the 14 sites for which 10 or more samples were analyzed. Copper concentrations for six representative sites are summarized using boxplots in figure 2.2.6-1. The boxplots (fig. 2.2.6-1) illustrate that at the sites, at least 95 percent of the samples analyzed had copper concentrations of less than 12 µg/L.

Iron concentrations ranged from less than the detection level at many sites to 750 µg/L at Amite River at Port Vincent. Median iron concentrations in the basin ranged from less than 10 µg/L to 270 µg/L. Boxplots and tables (fig. 2.2.6-1) summarizing data for six repre-

sentative sites within the basin show that 95 percent of iron concentrations were less than 600 µg/L.

Concentrations of lead in water from the basin were generally low at all sites. The concentrations ranged from less than the detection level at all sites, to 27 µg/L at Lake Pontchartrain at the north shore near Slidell and Lake Pontchartrain at Pass Manchac near Manchac. The median concentrations were less than the detection level at all of the sites for which 10 or more samples were analyzed. Boxplots for six representative sites (fig. 2.2.6-1) show that at least 95 percent of the samples analyzed had lead concentrations of less than or equal to 6 µg/L.

Zinc concentrations in water from the Lake Pontchartrain-Lake Maurepas basin generally were low at all sites. However, the maximum zinc concentration at Tickfaw River at Holden was 280 µg/L. Zinc concentrations in the basin ranged from less than the detection level at all sites to 280 µg/L at Tickfaw River at Holden. Median zinc concentrations ranged from less than the detection level at most sites to 8 µg/L at Tchefoncté River near Covington and Amite River at Port Vincent. Boxplots for six representative sites (fig. 2.2.6-1) show that less than 25 percent of the zinc concentrations were greater than 20 µg/L in most of the samples analyzed.

²Traditionally, dissolved trace-element concentrations have been reported at the micrograms per liter level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Present data above the micrograms per liter level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols after the period of record associated with this report."

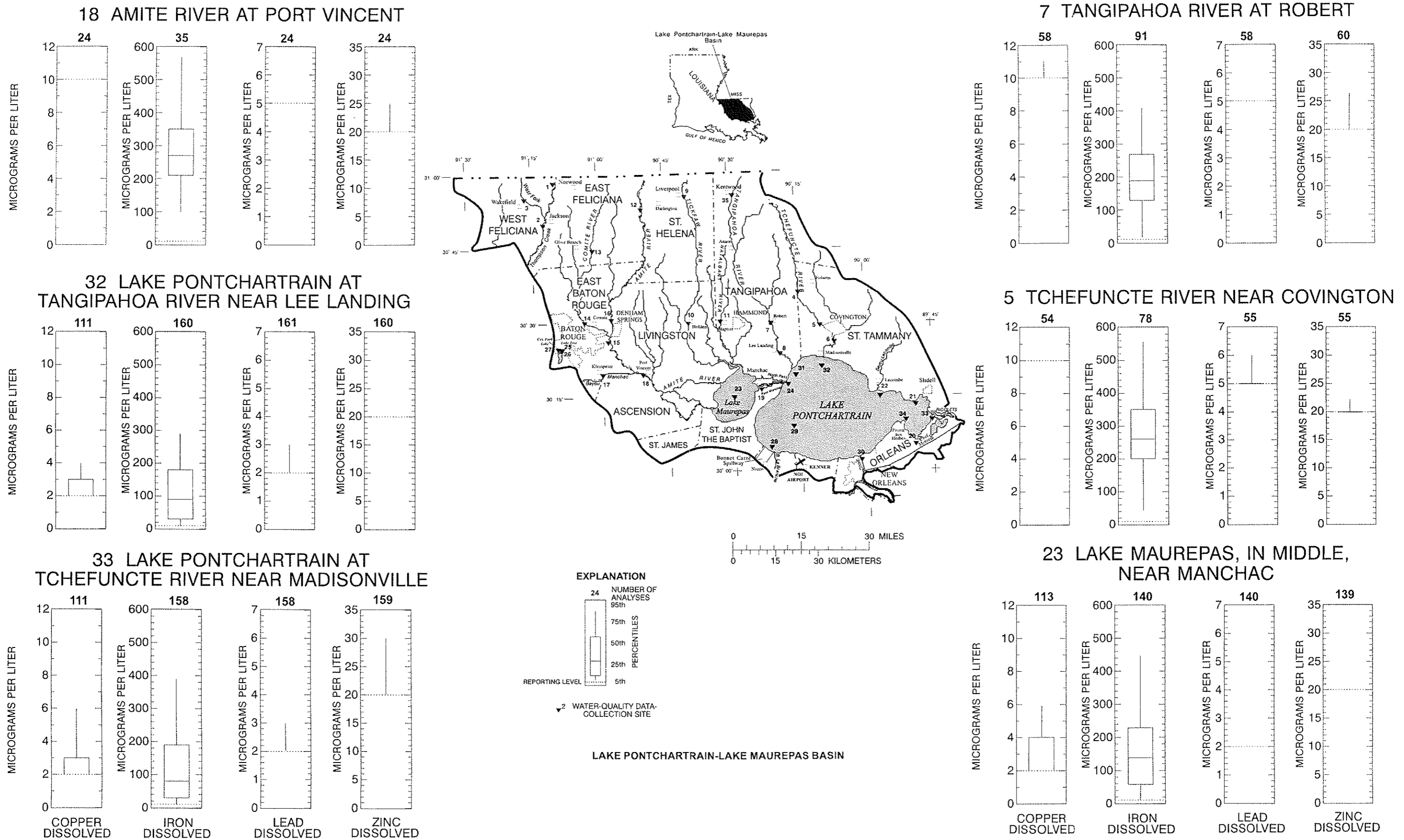


Figure 2.2.6-1. Water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and boxplots summarizing data for dissolved copper, iron, lead, and zinc concentrations in water from selected sites.

2.0 LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN IN LOUISIANA--continued

2.2 Surface-Water Quality--continued

2.2.7 Nutrients--Nitrogen and Phosphorus Constituents

HIGH NUTRIENT CONCENTRATIONS AT CITY PARK LAKE AT BATON ROUGE

Maximum ammonia plus organic nitrogen concentration in the Lake Pontchartrain-Lake Maurepas basin (9.9 mg/L) occurred at City Park Lake at Outflow at Baton Rouge.

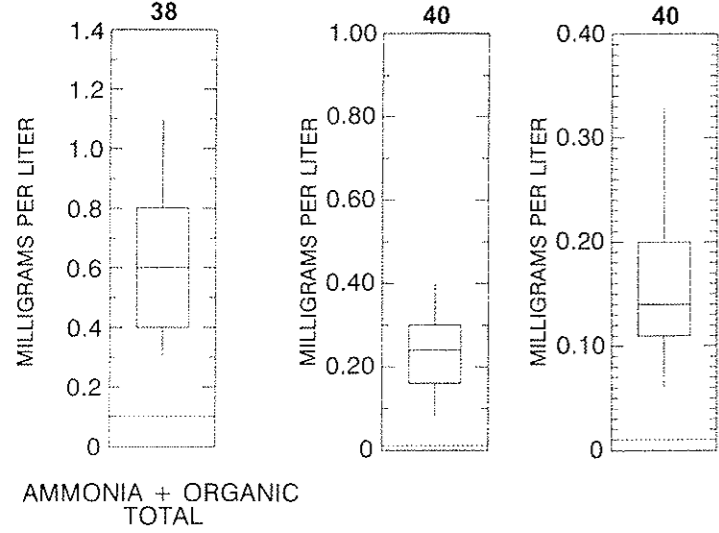
Concentrations of ammonia plus organic nitrogen in water from the basin ranged from less than the detection level at Tangipahoa River at Robert and Tchecunche River at Covington, to 9.9 mg/L at City Park Lake at Outflow at Baton Rouge. Median concentrations ranged from 0.4 to 0.6 mg/L. Boxplots indicate that concentrations of ammonia plus organic nitrogen were less than 0.8 mg/L in 75 percent of the samples analyzed (fig. 2.2.7-1).

Concentrations of nitrite plus nitrate as nitrogen in the Lake Pontchartrain-Lake Maurepas basin ranged from less than the detection level at many sites at Lake Pontchartrain, to 3.1 mg/L at Tangipahoa River at Rob-

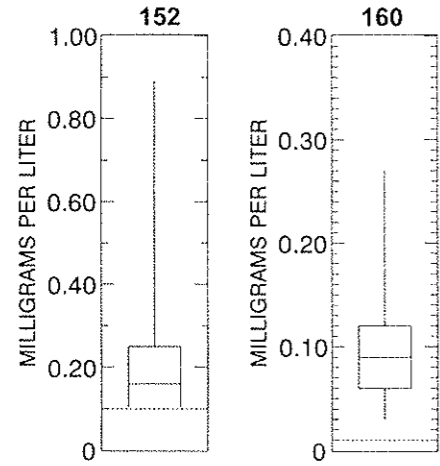
ert. Median nitrite plus nitrate nitrogen concentrations ranged from less than the detection level to 1.4 mg/L. Boxplots at six representative sites show that median concentrations at the river sites were slightly higher than at the lake sites (fig. 2.2.7-1).

Concentrations of total phosphorus in water in the Lake Pontchartrain-Lake Maurepas basin ranged from less than 0.01 mg/L at several sites, to 4.2 mg/L at Lake Pontchartrain at Pass Manchac near Manchac. Median concentrations ranged from 0.03 to 0.62 mg/L. Boxplots for six representative sites show that median phosphorus concentrations at Amite River at Port Vincent were higher than at the other sites (fig. 2.2.7-1).

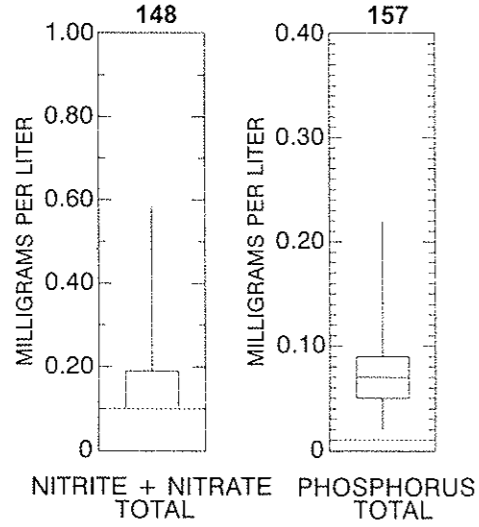
18 AMITE RIVER AT PORT VINCENT



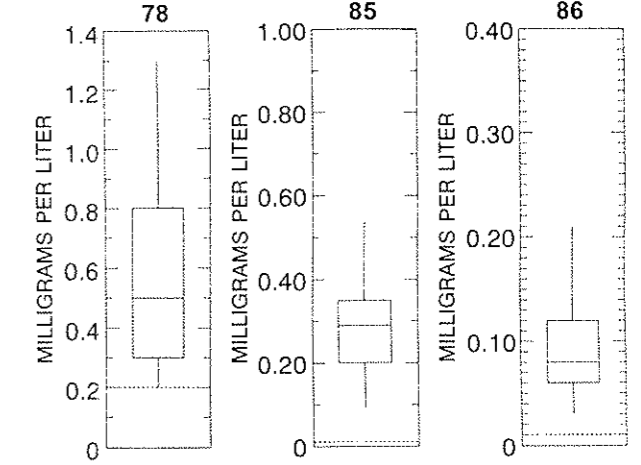
32 LAKE PONTCHARTRAIN AT TANGIPAHOA RIVER NEAR LEE LANDING



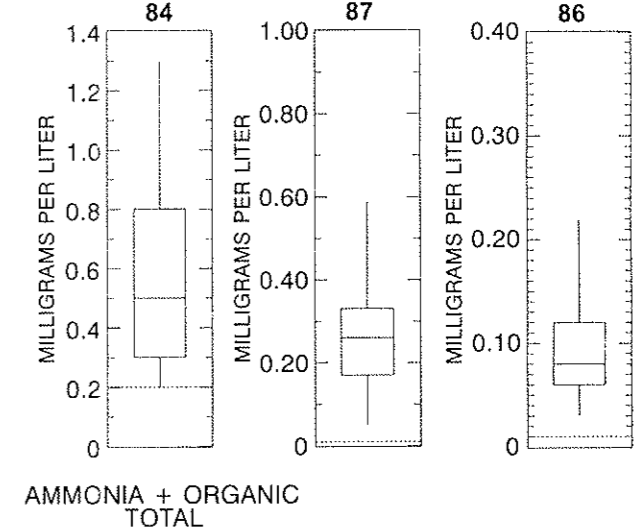
33 LAKE PONTCHARTRAIN AT TCHEFUNCTE RIVER NEAR MADISONVILLE



7 TANGIPAHOA RIVER AT ROBERT



5 TCHEFUNCTE RIVER NEAR COVINGTON



23 LAKE MAUREPAS, IN MIDDLE, NEAR MANCHAC

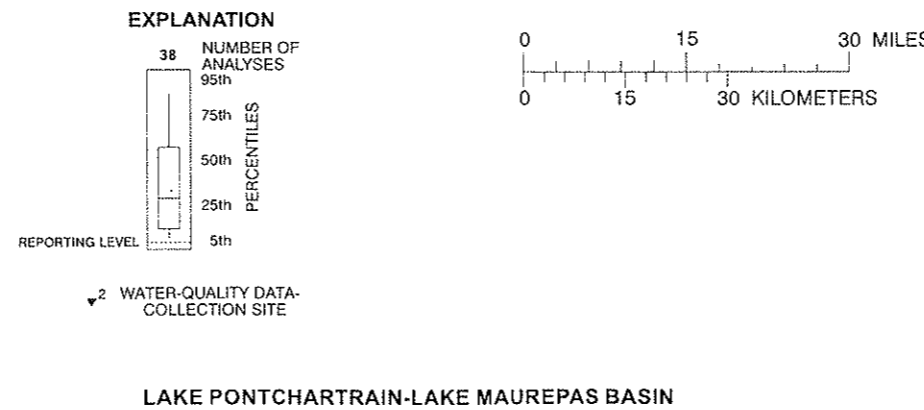
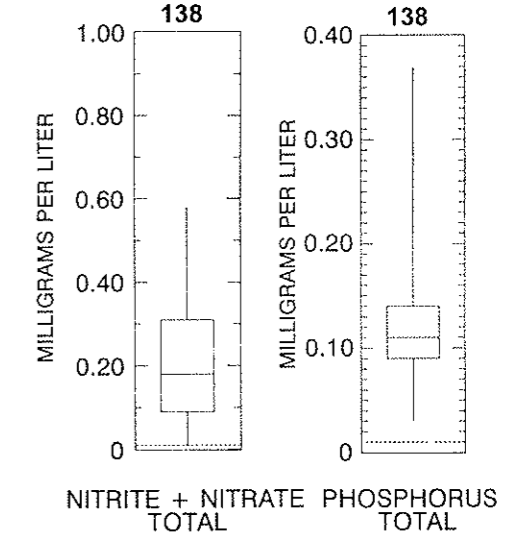


Figure 2.2.7-1. Water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and boxplots summarizing data for concentrations of nutrients in water from selected sites.

2.0 LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN IN LOUISIANA--continued

2.2 Surface-Water Quality--continued

2.2.8 Organic Compounds--Pesticides and PCB's

ORGANIC COMPOUNDS DETECTED IN SURFACE WATERS IN THE BASIN

The most commonly occurring organic compounds in the Lake Pontchartrain-Lake Maurepas basin were diazinon and 2,4-D.

Although low-level concentrations of organic compounds were occasionally detected in the Lake Pontchartrain-Lake Maurepas basin, diazinon was detected at more sites and with greater frequency than any of the other organic compounds that were analyzed, with the exception of 2,4-D. The highest diazinon concentration was 0.26 µg/L in a sample collected at Tangipahoa River at Robert. Diazinon was detected at least once at all of the 10 sites for which 10 or more samples were analyzed for the compound. Tables rather than boxplots are used to summarize occurrences of diazinon at six representative sites in figure 2.2.8-1, because the total number of samples analyzed for each site was less than 10 or the number of samples that contained organic compounds in concentrations greater than the reporting

level was equal to or less than 10. Of these six sites, diazinon was detected at all sites for which it was analyzed except Tchefuncte River near Covington, which was sampled only once for organic compounds.

The herbicide 2,4-D was detected at most of the 10 sites for which 10 or more samples were analyzed for the compound. The maximum concentration of 2,4-D in water from the basin was 0.42 µg/L, at Lake Pontchartrain north of Pointe Aux Herbes. The tables listing the number of samples in which organic compounds were detected for six representative sites in the basin indicate that 2,4-D was detected at all sites for which it was analyzed except Tchefuncte River near Covington, which was sampled only once for organic compounds (fig. 2.2.8-1).

15 AMITE RIVER NEAR DENHAM SPRINGS

ORGANIC COMPOUND TOTAL	TOTAL NUMBER OF ANALYSES	REPORTING LEVEL (µg/L)	NUMBER OF ANALYSES AT OR ABOVE REPORTING LEVEL
DDT	3	0.01	0
PCB	3	0.1	0
DIAZINON	3	0.01	2
LINDANE	3	0.01	0
CHLORDANE	3	0.1	0
MALATHION	3	0.01	0
ENDRIN	3	0.01	0
PARATHION	3	0.01	0
DIELDRIN	3	0.01	1
2,4-D	3	0.01	2

32 LAKE PONTCHARTRAIN AT TANGIPAHOA RIVER NEAR LEE LANDING

ORGANIC COMPOUND TOTAL	TOTAL NUMBER OF ANALYSES	REPORTING LEVEL (µg/L)	NUMBER OF ANALYSES AT OR ABOVE REPORTING LEVEL
DDT	149	0.001	3
PCB	149	0.1	2
DIAZINON	121	0.01	43
LINDANE	149	0.001	5
CHLORDANE	149	0.1	0
MALATHION	119	0.01	0
ENDRIN	149	0.001	0
PARATHION	120	0.01	1
DIELDRIN	149	0.001	8
ENDOSULFAN	83	0.001	1
2,4-D	82	0.01	66

33 LAKE PONTCHARTRAIN AT TCHEFUNCTE RIVER NEAR MADISONVILLE

ORGANIC COMPOUND TOTAL	TOTAL NUMBER OF ANALYSES	REPORTING LEVEL (µg/L)	NUMBER OF ANALYSES AT OR ABOVE REPORTING LEVEL
DDT	151	0.001	0
PCB	151	0.1	1
DIAZINON	117	0.01	47
LINDANE	151	0.001	7
CHLORDANE	151	0.1	0
MALATHION	117	0.01	0
ENDRIN	150	0.001	0
PARATHION	117	0.01	0
DIELDRIN	151	0.01	1
ENDOSULFAN	80	0.001	0
2,4-D	77	0.01	61

7 TANGIPAHOA RIVER AT ROBERT

ORGANIC COMPOUND TOTAL	TOTAL NUMBER OF ANALYSES	REPORTING LEVEL (µg/L)	NUMBER OF ANALYSES AT OR ABOVE REPORTING LEVEL
DDT	5	0.001	0
PCB	4	0.1	0
DIAZINON	5	0.01	2
LINDANE	5	0.001	0
CHLORDANE	5	0.1	0
MALATHION	5	0.01	0
ENDRIN	5	0.001	0
PARATHION	5	0.01	0
DIELDRIN	5	0.001	0
2,4-D	5	0.01	1

5 TCHEFUNCTE RIVER NEAR COVINGTON

ORGANIC COMPOUND TOTAL	TOTAL NUMBER OF ANALYSES	REPORTING LEVEL (µg/L)	NUMBER OF ANALYSES AT OR ABOVE REPORTING LEVEL
DDT	1	0.001	0
PCB	1	0.1	0
DIAZINON	1	0.01	0
LINDANE	1	0.001	0
CHLORDANE	1	0.1	0
MALATHION	1	0.01	0
ENDRIN	1	0.001	0
PARATHION	1	0.01	0
DIELDRIN	1	0.001	0
2,4-D	1	0.01	0

23 LAKE MAUREPAS, IN MIDDLE, NEAR MANCHAC

ORGANIC COMPOUND TOTAL	TOTAL NUMBER OF ANALYSES	REPORTING LEVEL (µg/L)	NUMBER OF ANALYSES AT OR ABOVE REPORTING LEVEL
DDT	133	0.001	2
PCB	133	0.1	1
DIAZINON	123	0.01	57
LINDANE	133	0.001	12
CHLORDANE	134	0.1	0
MALATHION	123	0.01	0
ENDRIN	133	0.001	0
PARATHION	123	0.01	1
DIELDRIN	133	0.001	10
ENDOSULFAN	87	0.001	1
2,4-D	86	0.01	78

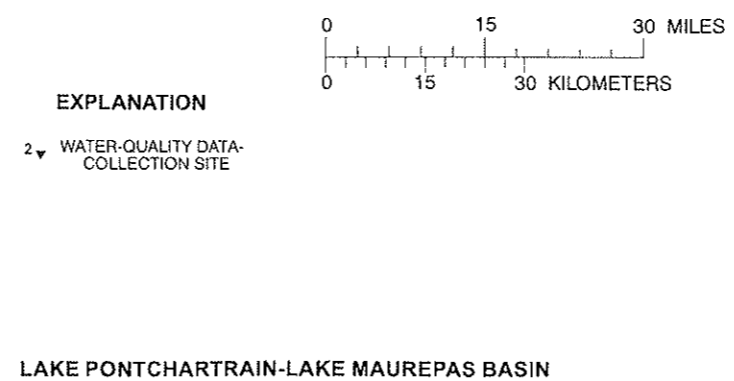


Figure 2.2.8-1. Water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and tables listing organic compounds detected in water from selected sites.

2.0 LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN IN LOUISIANA--continued

2.2 Surface-Water Quality--continued

2.2.9 Biological Constituents--Fecal Coliform and Fecal Streptococcus Bacteria and Phytoplankton

FECAL COLIFORM AND FECAL STREPTOCOCCUS BACTERIA CONCENTRATIONS VARIED GREATLY THROUGHOUT THE BASIN

Median fecal coliform bacteria concentrations ranged from less than the detection level to 720 cols/100 mL.

Concentrations of fecal coliform bacteria varied greatly at the 15 sites in the Lake Pontchartrain-Lake Maurepas basin for which data are available. Concentrations ranged from less than one col/100 mL at many sites, to 25,000 cols/100 mL at Tchefuncte River near Covington. Median concentrations ranged from less than the detection level, to 720 cols/100 mL. Although fecal coliform concentrations exceeded 200 cols/100 mL some of the time at most of the sites, additional data are needed to determine if the U.S. Environmental Protection Agency's (1976; 1986; 1996) maximum contaminant level is being exceeded. Boxplots of fecal coliform concentrations at six representative sites in the basin show that the samples collected at lakes generally had lower fecal coliform concentrations than at the other sites (fig. 2.2.9-1).

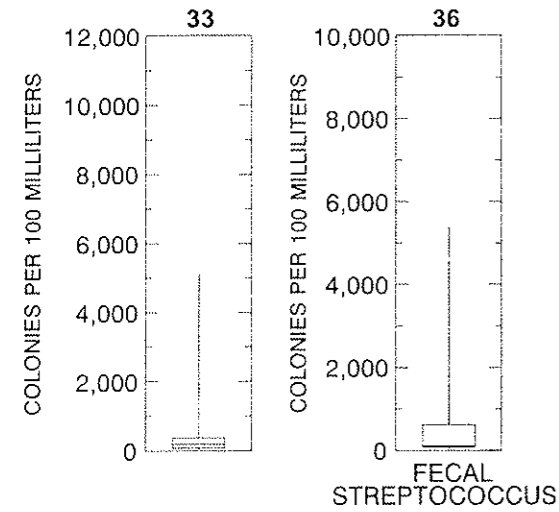
Concentrations of fecal streptococcus bacteria also varied greatly at sites in the basin. Concentrations ranged from 5 cols/100 mL at Tangipahoa River at Robert and Amite River at 4-H Camp near Denham Springs, to 29,000 cols/100 mL at Tchefuncte River near Covington. Median fecal streptococcus concentrations, which ranged from 100 to 300 cols/100 mL, generally were higher than the median fecal coliform concentrations.

Boxplots of fecal streptococcus concentrations at three representative sites show that greater than 75 percent of the samples collected at sites had fecal streptococcus concentrations less than 1,000 cols/100 mL (fig. 2.2.9-1).

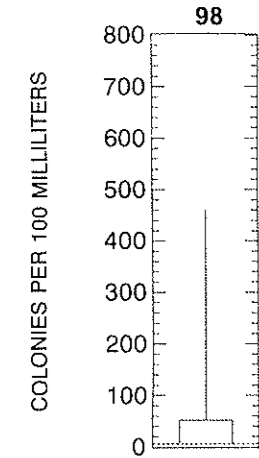
The median ratio of fecal coliform to fecal streptococcus bacteria was usually less than 0.7 at most of the sites sampled for analysis of bacteria concentrations in the Lake Pontchartrain-Lake Maurepas basin, indicating that sources of fecal coliform bacteria probably were livestock or poultry wastes (Millipore Corporation, 1972, p. 36). Additional study is needed to confirm these results.

Concentrations of phytoplankton varied greatly at sites in the basin due to the seasonal influence. Concentrations ranged from 13 to 74,000 cells/mL at Tchefuncte River near Covington. Median concentrations ranged from 1,500 to 1,800 cells/mL. Boxplots of phytoplankton concentrations at two representative sites show that less than 25 percent of the samples analyzed at Tchefuncte River near Covington had concentrations greater than 5,000 cells/mL (fig. 2.2.9-1).

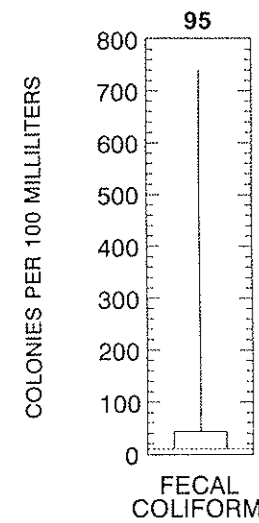
18 AMITE RIVER AT PORT VINCENT



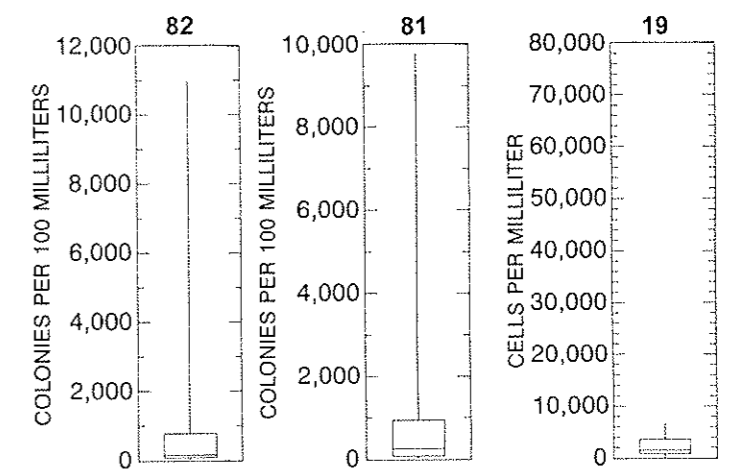
32 LAKE PONTCHARTRAIN AT TANGIPAHOA RIVER NEAR LEE LANDING



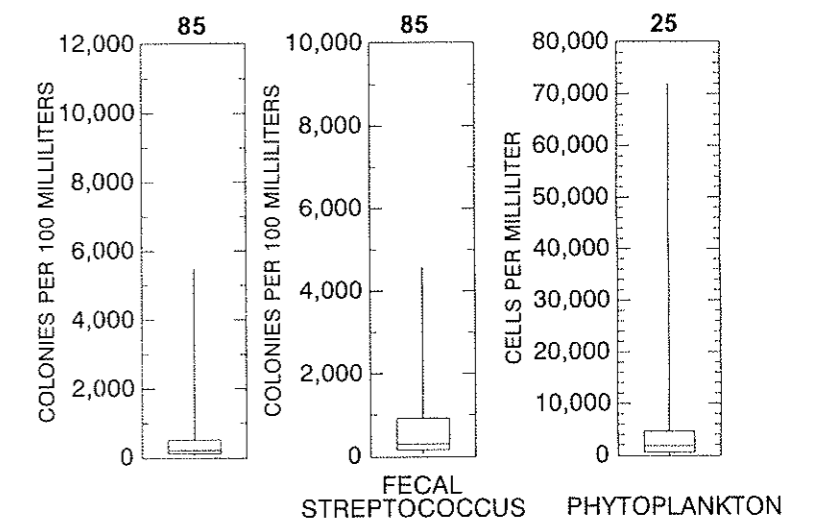
33 LAKE PONTCHARTRAIN AT TCHEFUNCTE RIVER NEAR MADISONVILLE



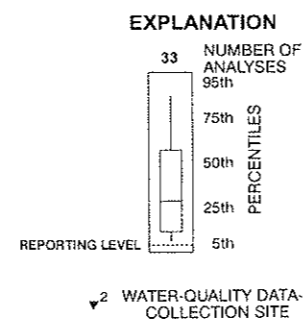
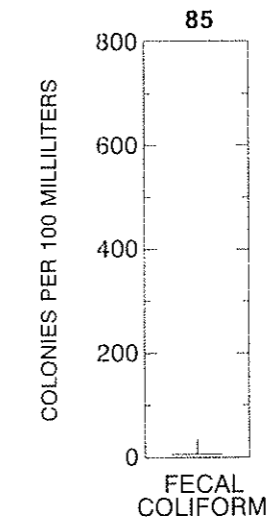
7 TANGIPAHOA RIVER AT ROBERT



5 TCHEFUNCTE RIVER NEAR COVINGTON



23 LAKE MAUREPAS, IN MIDDLE, NEAR MANCHAC



LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN

Figure 2.2.9-1. Water-quality data-collection sites in the Lake Pontchartrain-Lake Maurepas basin, Louisiana, and boxplots summarizing data for concentrations of fecal coliform and fecal streptococcus bacteria and phytoplankton in water from selected sites.

2.0 LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN IN LOUISIANA--continued

2.3 Summary and Conclusions

VALUES FOR pH GENERALLY WITHIN THE U.S. ENVIRONMENTAL PROTECTION AGENCY RANGE FOR FRESHWATER AQUATIC LIFE

Values for pH rarely were less than 6.5, the lower limit of the U.S. Environmental Protection Agency's recommended range for freshwater aquatic life.

The Lake Pontchartrain-Lake Maurepas basin in Louisiana is about 70 miles long and 100 miles wide. Most of the water from the basin mainly is used for industry and aquaculture. Lake Pontchartrain, Lake Maurepas, Tchefuncte River, Tangipahoa River, Amite River, Natalbany River, and Tickfaw River are the primary sources of surface water in the basin.

Water quality in the Lake Pontchartrain-Lake Maurepas basin in Louisiana was investigated as part of a statewide investigation to evaluate water-quality conditions in the major surface-water drainage basins in Louisiana. The water-quality conditions in the Lake Pontchartrain-Lake Maurepas basin were evaluated using data collected from 35 sites during the water years 1943-95. Data for 33 water-quality properties and constituents for analyses stored in the U.S. Geological Survey Water-Data Storage and Retrieval System (WATSTORE), a computerized data base, were used for the evaluation. Results are reported as boxplots, linear-regression plots, and tabulated data.

The data were statistically analyzed and summarized into seven categories of water-quality properties and constituents: (1) physical properties--specific conductance, pH, water temperature, and dissolved oxygen; (2) major inorganic cations--dissolved calcium, magnesium, sodium, and potassium; (3) major inorganic anions--total alkalinity as calcium carbonate, dissolved sulfate, and dissolved chloride; (4) trace metals--dissolved copper, iron, lead, and zinc; (5) nutrients--nitrogen and phosphorus constituents; (6) organic compounds--pesticides and PCB's; and (7) biological constituents--fecal coliform and fecal streptococcus bacteria and phytoplankton.

The physical properties varied for waters in the basin. The median values for specific conductance ranged from 30 to 4,200 $\mu\text{S}/\text{cm}$ (microsiemens per centimeter at 25 degrees Celsius). For pH, values were less than 6.5, the lower limit of the U.S. Environmental Protection Agency's recommended range for freshwater aquatic life, in fewer than 25 percent of the samples. Median values for water temperature ranged from 14.5 to 23.5 degrees Celsius. Dissolved oxygen concentrations were greater than the State's minimum water quality criterion of 5.0 mg/L (milligrams per liter) in more than 75 percent of the samples analyzed at most sites.

The data for major inorganic cations and anions in water from the basin indicated that concentrations of major ions were below recommended levels for drinking water, for which such levels have been established. However, there were high concentrations of sodium and chloride in some of the samples from the lake sites.

The available data for trace metals indicated that dissolved copper, lead, and zinc were less than the maximum contaminant levels of the U.S. Environmental Protection Agency's primary and secondary drinking water regulations. Iron concentrations in water from the basin occasionally exceeded 300 $\mu\text{g}/\text{L}$ (micrograms per liter), which is the criterion for domestic water supplies.

Median concentrations of ammonia plus organic nitrogen as nitrogen ranged from 0.4 to 0.6 mg/L. However, the maximum concentration of ammonia plus organic nitrogen as nitrogen in the Lake Pontchartrain-Lake Maurepas basin (9.9 mg/L) occurred at City Park Lake at Outflow at Baton Rouge. Median concentrations of total phosphorus in the basin ranged from 0.03 to 0.62 mg/L. However, the maximum phosphorus concentration in the Lake Pontchartrain-Lake Maurepas basin (4.2 mg/L) occurred at Lake Pontchartrain at Pass Manchac near Manchac.

Analysis of the available organic-chemical data indicated that diazinon and 2,4-D were detected at more sites and with greater frequency than any of the other organic compounds that were analyzed. However, low-level concentrations of other organic compounds were occasionally detected at other sites. Diazinon and 2,4-D were detected at least once at most of the sites for which 10 or more samples were analyzed for organic compounds.

The median ratios of fecal coliform to fecal streptococcus bacteria were less than 0.7 for most of the sites in the Lake Pontchartrain-Lake Maurepas basin, indicating that sources of fecal bacteria probably were predominantly livestock or poultry wastes. However, additional samples closer to the potential source of contamination need to be collected and analyzed to confirm these results. Phytoplankton concentrations varied greatly at sites in the basin due to the seasonal influence. Concentrations ranged from 13 to 74,000 cells per milliliter.

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TABLE 2.2-1. STATISTICAL SUMMARY OF WATER-QUALITY DATA
FOR THE LAKE PONTCHARTRAIN-LAKE MAUREPAS BASIN
IN LOUISIANA, 1943-95

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 [Number in parentheses with the site name is the map number shown in figure 2.0-1. Specific conductance is in microsiemens per centimeter at 25 degrees Celsius, water temperature is in degrees Celsius and other units are given. <, less than.]

Amite River at 4-H Camp near Denham Springs, Louisiana (16)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	131	(a)	(a)	335	17	55	34	48	54	59	68
pH (standard units)	122	(a)	(a)	7.5	5.4	6.5	5.7	6.2	6.5	6.9	7.2
Water temperature	120	(a)	(a)	32.0	7.0	20.8	9.5	14.6	21.0	27.0	30.5
Dissolved oxygen (milligrams per liter)	132	(a)	(a)	11.2	4.9	8.4	6.6	7.4	8.2	9.1	10.5
Dissolved solids (milligrams per liter)	95	(a)	(a)	196	24	49	36	42	46	52	70
Major cations (milligrams per liter)											
Calcium, dissolved	98	0.01	98	34	0.80	3.0	1.3	2.2	2.7	3.1	4.1
Magnesium, dissolved	98	.01	98	10	.20	1.2	.50	.92	1.1	1.3	1.6
Sodium, dissolved	96	.01	96	15	1.0	5.3	2.1	4.2	5.2	6.0	8.0
Potassium, dissolved	94	.01	93	2.8	<.10	(c)	1.1	1.4	1.8	2.1	2.6
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	122	1	122	106	3	13	7	10	13	15	17
Sulfate, dissolved	98	.1	98	22	.4	3.5	1.0	2.0	3.2	4.0	7.4
Chloride, dissolved	98	.1	98	26	.2	6.2	3.1	5.1	6.2	6.9	8.9
Nutrients (milligrams per liter)											
Nitrogen, ammonia plus organic, total as nitrogen	103	0.01	103	7.3	0.12	0.76	0.20	0.41	0.60	0.92	1.7
Nitrogen, nitrite plus nitrate, total as nitrogen	108	.10	108	1.0	.01	.19	.03	.11	.18	.25	.35
Phosphorus, total as phosphorus	110	.01	110	1.0	.01	.12	.04	.07	.09	.15	.25

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Amite River at 4-H Camp near Denham Springs, Louisiana (16)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Biological constituents											
Fecal coliform bacteria (colonies per 100 milliliters)	66	1	66	18,000	2	1,900	66	160	380	2,200	10,000
Fecal streptococcus bacteria (colonies per 100 milliliters)	67	1	67	19,000	5	2,600	68	250	630	3,400	14,000
Phytoplankton (cells per milliliter)	68	0	68	46,000	23	3,900	230	680	1,700	4,800	14,000
Trace metals (micrograms per liter)											
Copper, dissolved	49	20	1	26	<20	(c)	<20	<20	<20	<20	<20
Iron, dissolved	52	10	52	540	30	180	50	100	150	230	390
Lead, dissolved	51	2	21	13	<2	(c)	<2	<2	<2	3	6
Zinc, dissolved	50	20	10	160	<20	(c)	<20	<20	<20	<20	30

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Amite River at Port Vincent, Louisiana (18)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles										
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th			
Physical properties														
Specific conductance	75	(a)	(a)	821	27	147	57	77	108	162	370			
pH (standard units)	82	(a)	(a)	7.5	5.6	6.7	6.0	6.3	6.8	7.1	7.4			
Water temperature	71	(a)	(a)	33.0	5.0	21.8	10.8	17.0	22.0	27.0	30.7			
Dissolved oxygen (milligrams per liter)	40	(a)	(a)	11.8	3.4	7.7	4.8	6.4	7.8	9.5	10.6			
Dissolved solids (milligrams per liter)	81	(a)	(a)	416	29	97	48	62	76	102	210			
Major cations (milligrams per liter)														
Calcium, dissolved	75	0.01	75	16	1.5	6.0	2.9	4.0	5.0	8.0	11			
Magnesium, dissolved	75	.01	75	4.9	.20	1.9	.70	1.4	1.8	2.3	3.3			
Sodium, dissolved	75	.01	75	120	1.9	18	4.6	8.0	11	19	53			
Potassium, dissolved	75	.01	75	8.0	1.1	2.1	1.2	1.6	1.9	2.2	3.0			
Major anions (milligrams per liter)														
Alkalinity, total as CaCO ₃	75	1	75	39	4	23	11	17	21	28	38			
Sulfate, dissolved	82	.1	82	14	.2	4.3	.6	2.4	3.8	5.2	11			
Chloride, dissolved	82	.1	82	210	2.0	27	5.4	8.9	14	31	73			
Nutrients (milligrams per liter)														
Nitrogen, ammonia plus organic, total as nitrogen	38	0.1	38	1.5	0.2	0.6	0.3	0.4	0.6	0.8	1.1			
Nitrogen, nitrite plus nitrate, total as nitrogen	40	.01	40	.52	.05	.23	.08	.16	.24	.30	.40			
Phosphorus, total as phosphorus	40	.01	40	.37	.06	.16	.06	.11	.14	.20	.33			

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Amite River at Port Vincent, Louisiana (18)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Biological constituents--bacteria (colonies per 100 milliliters)											
Fecal coliform	33	1	33	6,100	20	600	21	70	180	360	5,100
Fecal streptococcus	36	1	36	6,800	16	740	18	64	100	610	5,400
Trace metals (micrograms per liter)											
Copper, dissolved	24	10	0	<10	<10	(c)	<10	<10	<10	<10	<10
Iron, dissolved	35	10	35	750	89	290	98	210	270	350	570
Lead, dissolved	24	5	1	6	<5	(c)	<5	<5	<5	<5	<5
Zinc, dissolved	24	20	4	100	<20	(c)	<20	<20	<20	<20	25
Organic compounds (micrograms per liter)											
DDT, total	1	0.01	0	<0.01	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
PCB, total	1	.1	0	<.1	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
Diazinon, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
Lindane, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
Chlordane, total	1	.1	0	<.1	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
Malthion, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
Endrin, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
Parathion, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
Dieldrin, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
2,4-D, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Amite River near Darlington, Louisiana (12)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles									
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th		
Physical properties													
Specific conductance	16	(a)	(a)	52	30	38	30	35	36	41	52		
pH (standard units)	16	(a)	(a)	6.9	5.6	6.5	5.6	6.1	6.6	6.8	6.9		
Water temperature	8	(a)	(a)	29.5	11.0	(b)	(b)	(b)	(b)	(b)	(b)		
Dissolved oxygen (milligrams per liter)	4	(a)	(a)	10.6	8.0	(b)	(b)	(b)	(b)	(b)	(b)		
Dissolved solids (milligrams per liter)	16	(a)	(a)	51	27	36	27	31	37	40	51		
Major cations (milligrams per liter)													
Calcium, dissolved	16	0.01	16	2.9	1.1	2.1	1.1	1.8	2.0	2.7	2.9		
Magnesium, dissolved	16	.01	15	.90	<.01	(c)	<.01	.20	.60	.80	.90		
Sodium, dissolved	16	.01	16	5.0	1.8	3.8	1.8	3.2	3.9	4.4	5.0		
Potassium, dissolved	16	.01	16	1.8	.60	1.1	.60	.82	1.0	1.1	1.8		
Major anions (milligrams per liter)													
Alkalinity, total as CaCO ₃	16	1	16	12	5	10	5	9	10	11	12		
Sulfate, dissolved	16	.1	15	2.5	<.1	(c)	<.1	.4	.6	1.1	2.5		
Chloride, dissolved	16	.1	16	9.1	3.0	4.7	3.0	3.9	4.2	5.2	9.1		
Nutrients (milligrams per liter)													
Nitrogen, ammonia plus organic, total as nitrogen	1	0.01	1	0.48	(d)	(b)	(b)	(b)	(b)	(b)	(b)		
Nitrogen, nitrite plus nitrate, total as nitrogen	4	.01	4	.38	.10	(b)	(b)	(b)	(b)	(b)	(b)		
Phosphorus, total as phosphorus	4	.01	4	.19	.02	(b)	(b)	(b)	(b)	(b)	(b)		

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95

Amite River near Darlington, Louisiana (12)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles						
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th
Trace metals (micrograms per liter)										
Copper, dissolved	2	4	1	4	<4	(b,c)	(b)	(b)	(b)	(b)
Iron, dissolved	2	10	2	200	160	(b)	(b)	(b)	(b)	(b)
Lead, dissolved	2	10	0	<10	<10	(b,c)	(b)	(b)	(b)	(b)
Zinc, dissolved	2	20	0	<20	<20	(b,c)	(b)	(b)	(b)	(b)
Organic compounds (micrograms per liter)										
DDT, total	1	0.01	0	<0.01	(d)	(b,c)	(b)	(b)	(b)	(b)
PCB, total	1	.1	0	<.1	(d)	(b,c)	(b)	(b)	(b)	(b)
Diazinon, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)
Lindane, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)
Chlordane, total	1	.1	0	<.1	(d)	(b,c)	(b)	(b)	(b)	(b)
Malathion, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)
Endrin, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)
Parathion, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)
Dieldrin, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)
2,4-D, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Amite River near Denham Springs, Louisiana (15)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	36	(a)	(a)	72	24	51	38	47	52	56	69
pH (standard units)	57	(a)	(a)	7.2	5.5	6.3	5.7	6.1	6.3	6.6	6.9
Water temperature	31	(a)	(a)	30.0	10.0	20.6	10.6	14.0	21.0	28.0	30.0
Dissolved oxygen (milligrams per liter)	2	(a)	(a)	9.8	9.2	(b)	(b)	(b)	(b)	(b)	(b)
Dissolved solids (milligrams per liter)	47	(a)	(a)	90	35	49	35	40	48	55	68
Major cations (milligrams per liter)											
Calcium, dissolved	36	0.01	36	5.4	1.4	2.9	1.8	2.6	2.8	3.2	4.2
Magnesium, dissolved	36	.01	36	1.4	.10	.83	.18	.60	.80	1.1	1.3
Sodium, dissolved	36	.01	36	8.9	1.8	5.1	2.0	4.1	5.4	6.0	7.5
Potassium, dissolved	36	.01	36	4.1	.90	1.7	.98	1.2	1.7	2.0	3.2
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	36	1	36	21	4	13	7	11	14	16	20
Sulfate, dissolved	58	.1	55	6.0	<.1	(c)	<.1	.8	1.8	2.8	5.0
Chloride, dissolved	59	.1	59	8.0	1.8	5.6	3.0	5.0	5.9	6.3	7.2

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Amite River near Denham Springs, Louisiana (15)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Maximum	Minimum	Mean	Percentiles				
							5th	25th	50th (median)	75th	95th
Trace metals (micrograms per liter)											
Copper, dissolved	2	10	0	<10	<10	(b,c)	(b)	(b)	(b)	(b)	(b)
Iron, dissolved	2	10	2	230	90	(b)	(b)	(b)	(b)	(b)	(b)
Lead, dissolved	2	5	1	6	<5	(b,c)	(b)	(b)	(b)	(b)	(b)
Zinc, dissolved	2	20	0	<20	<20	(b,c)	(b)	(b)	(b)	(b)	(b)
Organic compounds (micrograms per liter)											
DDT, total	3	0.01	0	<0.01	<0.01	(b,c)	(b)	(b)	(b)	(b)	(b)
PCB, total	3	.1	0	<.1	<.1	(b,c)	(b)	(b)	(b)	(b)	(b)
Diazinon, total	3	.01	2	.03	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Lindane, total	3	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Chlordane, total	3	.1	0	<.1	<.1	(b,c)	(b)	(b)	(b)	(b)	(b)
Malathion, total	3	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Endrin, total	3	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Parathion, total	3	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Dieldrin, total	3	.01	1	.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
2,4-D, total	3	.01	2	.11	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Bayou Manchac near Kleinpeter, Louisiana (17)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles										
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th			
Physical properties														
Specific conductance	16	(a)	(a)	11,700	334	1,410	334	436	666	1,060	11,700			
pH (standard units)	16	(a)	(a)	7.5	6.4	6.8	6.4	6.6	6.8	7.1	7.5			
Water temperature	13	(a)	(a)	30.0	8.0	21.5	8.0	16.8	21.0	29.0	30.0			
Dissolved solids (milligrams per liter)	15	(a)	(a)	870	191	413	191	266	333	568	870			
Major cations (milligrams per liter)														
Calcium, dissolved	16	0.01	16	160	20	40	20	26	31	41	160			
Magnesium, dissolved	16	.01	16	77	3.7	12	3.7	4.9	6.6	9.7	77			
Sodium, dissolved	16	.01	16	2,300	34	240	34	52	81	160	2,300			
Potassium, dissolved	16	.01	16	8.0	3.2	5.0	3.2	3.7	5.0	6.1	8.0			
Major anions (milligrams per liter)														
Alkalinity, total as CaCO ₃	16	1	16	135	66	90	66	72	90	100	135			
Sulfate, dissolved	16	.1	16	67	8.6	22	8.6	12	20	28	67			
Chloride, dissolved	16	.1	16	4,000	34	390	34	74	110	240	4,000			

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 City Park Lake at Outflow at Baton Rouge, Louisiana (26)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	30	(a)	(a)	193	84	159	86	160	168	173	188
pH (standard units)	30	(a)	(a)	10.0	7.0	8.9	7.0	8.4	9.0	9.5	9.8
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	30	1	30	356	26	75	30	52	59	65	352
Nutrients (milligrams per liter)											
Nitrogen, ammonia plus organic, total as nitrogen	3	0.1	3	9.9	1.9	(b)	(b)	(b)	(b)	(b)	(b)
Nitrogen, nitrite plus nitrate, total as nitrogen	30	.10	2	.56	<.10	(c)	<.10	<.10	<.10	<.10	.16
Phosphorus, total as phosphorus	29	.01	29	1.0	.16	.61	.20	.42	.62	.80	1.0

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 City Park Lake in northwest corner at Baton Rouge, Louisiana (27)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	29	(a)	(a)	352	88	224	92	163	219	288	346
pH (standard units)	29	(a)	(a)	8.9	6.9	7.8	7.0	7.2	7.7	8.3	8.8
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	29	1	29	441	26	103	30	53	77	121	406
Nutrients (milligrams per liter)											
Nitrogen, ammonia plus organic, total as nitrogen	3	0.1	3	6.1	1.9	(b)	(b)	(b)	(b)	(b)	(b)
Nitrogen, nitrite plus nitrate, total as nitrogen	28	.10	11	1.4	<.10	(c)	<.10	<.10	<.10	.19	.87
Phosphorus, total as phosphorus	29	.01	29	1.1	.43	.65	.44	.52	.62	.74	1.0

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Comite River near Comite, Louisiana (14)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	18	(a)	(a)	83	49	69	49	61	72	76	83
pH (standard units)	58	(a)	(a)	8.1	5.6	6.9	6.0	6.5	6.8	7.3	8.0
Water temperature	8	(a)	(a)	27.0	10.5	(b)	(b)	(b)	(b)	(b)	(b)
Dissolved solids (milligrams per liter)	58	(a)	(a)	84	26	65	37	54	69	74	81
Major cations (milligrams per liter)											
Calcium, dissolved	18	0.01	18	4.5	2.9	3.6	2.9	3.2	3.7	3.9	4.5
Magnesium, dissolved	18	.01	18	1.8	.10	1.1	.10	.88	1.2	1.4	1.8
Sodium, dissolved	19	.01	19	170	2.8	16	2.8	5.1	8.3	8.7	170
Potassium, dissolved	18	.01	18	3.0	1.1	1.8	1.1	1.2	1.8	2.3	3.0
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	10	1	10	18	8	14	8	12	14	18	18
Sulfate, dissolved	58	.1	58	6.6	.2	3.3	.6	2.8	3.2	3.9	4.9
Chloride, dissolved	58	.1	58	12	2.0	7.7	3.7	5.4	7.5	9.9	12
Nutrients (milligrams per liter)											
Nitrogen, nitrite plus nitrate, total as nitrogen	2	.10	2	1.9	1.2	(b)	(b)	(b)	(b)	(b)	(b)
Phosphorus, total as phosphorus	2	.01	2	.20	.15	(b)	(b)	(b)	(b)	(b)	(b)

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Comite River near Comite, Louisiana (14)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles						
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th
Trace metals (micrograms per liter)										
Copper, dissolved	2	20	0	<20	<20	(b,c)	(b)	(b)	(b)	(b)
Iron, dissolved	2	10	2	220	180	(b)	(b)	(b)	(b)	(b)
Lead, dissolved	2	10	0	<10	<10	(b,c)	(b)	(b)	(b)	(b)
Zinc, dissolved	2	10	0	<10	<10	(b,c)	(b)	(b)	(b)	(b)

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Comite River near Olive Branch, Louisiana (13)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	7	(a)	(a)	60	37	(b)	(b)	(b)	(b)	(b)	(b)
pH (standard units)	12	(a)	(a)	7.4	5.7	6.4	5.7	6.0	6.2	6.7	7.4
Water temperature	5	(a)	(a)	27.0	10.0	(b)	(b)	(b)	(b)	(b)	(b)
Dissolved solids (milligrams per liter)	12	(a)	(a)	65	36	45	36	40	42	48	65
Major cations (milligrams per liter)											
Calcium, dissolved	7	0.01	7	3.9	1.6	(b)	(b)	(b)	(b)	(b)	(b)
Magnesium, dissolved	7	.01	7	1.2	.10	(b)	(b)	(b)	(b)	(b)	(b)
Sodium, dissolved	7	.01	7	9.0	3.3	(b)	(b)	(b)	(b)	(b)	(b)
Potassium, dissolved	7	.01	7	2.0	.90	(b)	(b)	(b)	(b)	(b)	(b)
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	7	1	7	15	8	(b)	(b)	(b)	(b)	(b)	(b)
Sulfate, dissolved	12	.1	11	2.5	<.1	(c)	<.1	.2	.8	1.6	2.5
Chloride, dissolved	14	.1	14	11	5.1	8.1	5.1	7.0	8.5	9.2	11

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Erie at Outflow at Baton Rouge, Louisiana (25)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	21	(a)	(a)	206	85	160	86	148	162	178	206
pH (standard units)	21	(a)	(a)	8.7	6.6	7.7	6.6	7.4	7.6	8.0	8.7
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	21	1	21	370	7	87	10	51	66	78	366
Nutrients (milligrams per liter)											
Nitrogen, ammonia plus organic, total as nitrogen	3	0.1	3	8.3	1.5	(b)	(b)	(b)	(b)	(b)	(b)
Nitrogen, nitrite plus nitrate, total as nitrogen	21	.10	2	.14	<.10	(c)	<.10	<.10	<.10	<.10	.13
Phosphorus, total as phosphorus	21	.01	21	.81	.23	.52	.24	.38	.52	.66	.81

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Maurepas, in middle, near Manchac, Louisiana (23)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	139	(a)	(a)	4,420	56	628	92	159	281	684	2,780
pH (standard units)	140	(a)	(a)	7.9	6.1	7.1	6.7	7.0	7.2	7.3	7.6
Water temperature	33	(a)	(a)	32.5	7.5	21.3	8.9	16.8	21.5	26.5	31.1
Dissolved oxygen (milligrams per liter)	134	(a)	(a)	13.2	5.4	8.2	6.5	7.2	7.8	9.1	11.0
Major cations (milligrams per liter)											
Calcium, dissolved	140	0.01	140	38	0.90	9.3	2.7	5.9	7.2	11	23
Magnesium, dissolved	140	.01	140	87	1.3	12	2.1	3.6	5.8	13	53
Sodium, dissolved	87	.01	87	510	4.7	67	9.3	17	25	52	350
Potassium, dissolved	87	.01	87	54	1.4	4.7	2.0	2.5	3.1	4.7	16
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	140	1	140	59	8	23	13	18	21	25	41
Sulfate, dissolved	139	.1	139	180	2.7	28	5.5	10	17	32	110
Chloride, dissolved	140	.1	140	1,200	6.9	160	15	29	60	180	770
Nutrients (milligrams per liter)											
Nitrogen, nitrite plus nitrate, total as nitrogen	138	0.01	136	1.3	<0.01	(c)	0.01	0.09	0.18	0.31	0.58
Phosphorus, total as phosphorus	138	.01	137	1.7	<.01	(c)	.03	.09	.11	.14	.37

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Maurepas, in middle, near Manchac, Louisiana (23)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles						
				Maximum	Minimum	Mean	5th	25th (median)	75th	95th
Biological constituents--bacteria (colonies per 100 milliliters)										
Fecal coliform	85	5	15	1,400	<5	(c)	<5	<5	<5	34
Trace metals (micrograms per liter)										
Copper, dissolved	113	2	71	9	<2	(c)	<2	<2	2	4
Iron, dissolved	140	10	1,300	10	170	(c)	10	50	140	230
Lead, dissolved	140	2	16	26	<2	(c)	<2	<2	<2	2
Zinc, dissolved	139	20	19	30	<20	(c)	<20	<20	<20	20
Organic compounds (micrograms per liter)										
DDT, total	133	0.001	2	0.001	<0.001	(c)	<0.001	<0.001	<0.001	<0.001
PCB, total	133	.1	1	.4	<.1	(c)	<.1	<.1	<.1	<.1
Diazinon, total	123	.01	57	.03	<.01	(c)	<.01	<.01	<.01	.01
Lindane, total	133	.001	12	.002	<.001	(c)	<.001	<.001	<.001	.001
Chlordane, total	134	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1
Malathion, total	123	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01
Endrin, total	133	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001
Parathion, total	123	.01	1	.03	<.01	(c)	<.01	<.01	<.01	<.01
Dieldrin, total	133	.001	10	.003	<.001	(c)	<.001	<.001	<.001	.001
Endosulfan, total	87	.001	1	.002	<.001	(c)	<.001	<.001	<.001	<.001
2,4-D, total	86	.01	78	.37	<.01	(c)	<.01	.03	.04	.11

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain 2.2 miles north northwest of Chef Menteur, Louisiana (20)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	68	(a)	(a)	16,700	298	3,660	313	418	2,200	4,700	12,700
pH (standard units)	68	(a)	(a)	8.4	6.5	7.7	7.1	7.6	7.8	7.9	8.2
Dissolved oxygen (milligrams per liter)	69	(a)	(a)	11.3	6.4	8.1	6.6	7.5	8.0	8.6	10.3
Major cations (milligrams per liter)											
Calcium, dissolved	68	0.01	68	130	12	43	25	29	32	43	99
Magnesium, dissolved	68	.01	68	380	4.7	78	9.2	12	39	91	280
Sodium, dissolved	68	.01	68	3,100	17	620	19	36	340	760	2,400
Potassium, dissolved	68	.01	68	110	3.1	27	3.2	3.9	16	33	90
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	68	1	68	85	18	60	29	48	65	74	82
Sulfate, dissolved	68	.1	68	710	30	180	34	40	100	210	570
Chloride, dissolved	68	.1	68	5,600	23	1,100	30	54	600	1,400	4,300
Nutrients (milligrams per liter)											
Nitrogen, nitrite plus nitrate, total as nitrogen	67	0.10	67	1.7	<0.10	(c)	<0.10	<0.10	0.55	1.6	1.7
Phosphorus, total as phosphorus	67	.01	67	.25	.02	.07	.02	.05	.07	.09	.16

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain 2.2 miles north northwest of Chef Menteur, Louisiana (20)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Biological constituents--bacteria (colonies per 100 milliliters)											
Fecal coliform	68	5	30	160	<5	(c)	<5	<5	<5	12	28
Trace metals (micrograms per liter)											
Copper, dissolved	68	2	20	4	<2	(c)	<2	<2	<2	2	3
Iron, dissolved	68	10	31	70	<10	(c)	<10	<10	<10	20	40
Lead, dissolved	68	2	5	2	<2	(c)	<2	<2	<2	<2	2
Zinc, dissolved	68	20	7	20	<20	(c)	<20	<20	<20	<20	20
Organic compounds (micrograms per liter)											
DDT, total	57	0.001	1	0.005	<0.001	(c)	<0.001	<0.001	<0.001	<0.001	0.001
PCB, total	57	.1	1	.1	<.1	(c)	<.1	<.1	<.1	<.1	.1
Diazinon, total	57	.01	32	.03	<.01	(c)	<.01	<.01	.01	.01	.02
Lindane, total	57	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001
Chlordane, total	57	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1
Malathion, total	57	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01
Endrin, total	57	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001
Parathion, total	57	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01
Dieldrin, total	57	.001	5	.002	<.001	(c)	<.001	<.001	<.001	<.001	.001
Endosulfan, total	57	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001
2,4-D, total	45	.01	41	.30	<.01	(c)	<.01	.01	.02	.03	.05

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain 2.25 miles northwest of Bayou La Branche at Norco, Louisiana (28)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	11	(a)	(a)	1,410	261	432	261	268	283	509	1,410
pH (standard units)	11	(a)	(a)	8.1	7.5	7.8	7.5	7.7	7.8	8.0	8.1
Water temperature	6	(a)	(a)	23.0	15.5	(b)	(b)	(b)	(b)	(b)	(b)
Dissolved oxygen (milligrams per liter)	11	(a)	(a)	9.7	7.3	9.0	7.3	8.6	9.2	9.5	9.7
Major cations (milligrams per liter)											
Calcium, dissolved	11	0.01	11	33	19	27	19	25	28	28	33
Magnesium, dissolved	11	.01	11	25	7.5	11	7.5	7.9	8.4	12	25
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	11	1	11	85	30	69	30	70	71	75	85
Sulfate, dissolved	11	.1	11	57	30	35	30	30	32	37	57
Chloride, dissolved	11	.1	11	360	11	62	11	13	22	75	360
Nutrients (milligrams per liter)											
Nitrogen, nitrite plus nitrate, total as nitrogen	11	0.10	11	1.1	0.40	0.98	0.40	0.95	1.0	1.1	1.1
Phosphorus, total as phosphorus	11	.01	11	.21	.08	.14	.08	.10	.15	.19	.21

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain 2.25 miles northwest of Bayou La Branche at Norco, Louisiana (28)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th	Percentiles	
												50th	95th
Trace metals (micrograms per liter)													
Iron, dissolved	11	10	3	50	<10	(c)	<10	<10	<10	40	50		
Lead, dissolved	11	2	1	2	<2	(c)	<2	<2	<2	<2	2		
Zinc, dissolved	11	20	0	<20	<20	(c)	<20	<20	<20	<20	<20		
Organic compounds (micrograms per liter)													
DDT, total	11	0.01	0	<0.01	<0.01	(c)	<0.01	<0.01	<0.01	<0.01	<0.01		
PCB, total	11	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1		
Lindane, total	11	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01		
Chlordane, total	11	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1		
Malathion, total	11	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01		
Endrin, total	11	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01		
Dieldrin, total	11	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01		

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain 10 miles northeast of Moisant Airport near Kenner, Louisiana (29)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	50	(a)	(a)	2,680	172	655	283	328	433	664	2,150
pH (standard units)	50	(a)	(a)	8.1	6.8	7.6	7.1	7.5	7.7	7.9	8.0
Dissolved oxygen (milligrams per liter)	50	(a)	(a)	9.0	6.5	7.8	6.7	7.4	7.8	8.3	8.7
Major cations (milligrams per liter)											
Calcium, dissolved	50	0.01	50	48	5.8	27	11	22	28	32	34
Magnesium, dissolved	50	.01	50	55	1.5	15	6.1	10	11	14	40
Sodium, dissolved	50	.01	50	420	10	78	11	18	36	90	340
Potassium, dissolved	50	.01	19	19	2.6	5.5	2.9	3.1	4.1	5.6	15
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	50	1	50	90	15	65	21	44	74	84	88
Sulfate, dissolved	50	.1	50	130	11	44	27	35	38	44	93
Chloride, dissolved	50	.1	50	720	14	130	16	24	55	150	590
Nutrients (milligrams per liter)											
Nitrogen, nitrite plus nitrate, total as nitrogen	50	0.10	50	1.9	0.15	1.2	0.30	0.77	1.4	1.7	1.9
Phosphorus, total as phosphorus	50	.01	50	.43	.01	.13	.04	.10	.12	.16	.26

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain 10 miles northeast of Moisant Airport near Kenner, Louisiana (29)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles								
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th	
Biological constituents--bacteria (colonies per 100 milliliters)												
Fecal coliform	210	10	17	210	<10	(c)	<10	<10	<10	<10	14	130
Trace metals (micrograms per liter)												
Copper, dissolved	50	2	16	4	<2	(c)	<2	<2	<2	<2	2	4
Iron, dissolved	50	10	26	510	<10	(c)	<10	<10	<10	20	30	80
Lead, dissolved	50	2	2	4	<2	(c)	<2	<2	<2	<2	<2	<2
Zinc, dissolved	50	20	1	20	<20	(c)	<20	<20	<20	<20	<20	<20
Organic compounds (micrograms per liter)												
DDT, total	44	0.001	2	0.003	<0.001	(c)	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
PCB, total	44	.1	1	.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1	<.1
Diazinon, total	44	.01	21	.02	<.01	(c)	<.01	<.01	<.01	<.01	.01	.01
Lindane, total	44	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
Chlordane, total	44	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1	<.1
Malathion, total	45	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01	<.01
Endrin, total	44	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
Parathion, total	45	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01	<.01
Dieldrin, total	44	.001	8	.003	<.001	(c)	<.001	<.001	<.001	<.001	<.001	.003
Endosulfan, total	44	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
2,4-D, total	35	.01	28	.10	<.01	(c)	<.01	<.01	.01	.02	.03	.08

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain at Inner Harbor Navigation Canal at New Orleans, Louisiana (30)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	161	(a)	(a)	21,700	292	4,760	306	1,510	4,200	6,960	11,500
pH (standard units)	161	(a)	(a)	8.6	6.4	7.7	7.2	7.4	7.6	7.8	8.2
Water temperature	39	(a)	(a)	31.5	8.0	20.1	9.5	15.5	19.0	24.5	30.5
Dissolved oxygen (milligrams per liter)	158	(a)	(a)	13.6	6.0	8.7	6.9	7.8	8.2	9.4	11.0
Major cations (milligrams per liter)											
Calcium, dissolved	147	0.01	147	150	4.4	47	29	32	38	53	91
Magnesium, dissolved	147	.01	147	520	7.9	94	9.0	25	82	130	240
Sodium, dissolved	84	.01	84	3,300	9.3	570	15	22	340	980	1,600
Potassium, dissolved	84	.01	84	140	2.8	25	3.0	3.4	14	41	68
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	161	1	161	105	12	55	34	43	50	70	82
Sulfate, dissolved	160	.1	160	1,100	18	210	35	74	180	280	520
Chloride, dissolved	161	.1	161	7,500	18	1,400	24	380	1,200	2,100	3,800
Nutrients (milligrams per liter)											
Nitrogen, ammonia plus organic, total as nitrogen	3	0.01	3	0.54	0.44	(b)	(b)	(b)	(b)	(b)	(b)
Nitrogen, nitrite plus nitrate, total as nitrogen	152	.10	87	1.9	<.10	(c)	<.10	<.10	.14	1.0	1.8
Phosphorus, total as phosphorus	160	.01	158	2.7	<.01	(c)	.03	.05	.08	.12	.22

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain at Inner Harbor Navigation Canal at New Orleans, Louisiana (30)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Biological constituents--bacteria (colonies per 100 milliliters)											
Fecal coliform	82	4	72	12,000	<4	(c)	<4	9	24	100	660
Trace metals (micrograms per liter)											
Copper, dissolved	111	2	74	9	<2	(c)	<2	<2	2	3	6
Iron, dissolved	161	10	69	250	<10	(c)	<10	<10	<10	20	40
Lead, dissolved	161	2	24	10	<2	(c)	<2	<2	<2	<2	3
Zinc, dissolved	161	20	37	40	<20	(c)	<20	<20	<20	<20	30
Organic compounds (micrograms per liter)											
DDT, total	150	0.001	0	<0.001	<0.001	(c)	<0.001	<0.001	<0.001	<0.001	<0.001
PCB, total	150	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1
Diazinon, total	120	.01	64	.04	<.01	(c)	<.01	<.01	.01	.01	.02
Lindane, total	150	.001	15	.002	<.001	(c)	<.001	<.001	<.001	<.001	.001
Chlordane, total	150	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1
Malathion, total	120	.01	3	.04	<.01	(c)	<.01	<.01	<.01	<.01	<.01
Endrin, total	150	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001
Parathion, total	120	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01
Dieldrin, total	150	.001	12	.002	<.001	(c)	<.001	<.001	<.001	<.001	.001
Endosulfan, total	84	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001
2,4-D, total	82	.01	73	.33	<.01	(c)	<.01	.02	.03	.04	.08

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain at mouth of Bayou Lacombe near Lacombe, Louisiana (22)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	158	(a)	(a)	10,100	82	3,540	927	1,450	3,080	4,880	8,940
pH (standard units)	159	(a)	(a)	8.3	6.0	7.3	6.6	7.1	7.4	7.6	7.9
Water temperature	44	(a)	(a)	30.5	8.0	20.7	10.0	16.5	21.8	25.0	30.2
Dissolved oxygen (milligrams per liter)	157	(a)	(a)	14.2	3.9	8.3	5.4	7.4	8.1	9.2	10.9
Major cations (milligrams per liter)											
Calcium, dissolved	144	0.01	144	80	3.1	31	7.7	20	28	38	68
Magnesium, dissolved	144	.01	144	220	4.2	70	12	26	58	90	190
Sodium, dissolved	80	.01	80	1,800	50	510	140	200	360	680	1,500
Potassium, dissolved	80	.01	80	71	3.3	23	6.9	11	18	35	59
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	159	1	159	170	6	36	17	28	35	41	54
Sulfate, dissolved	156	.1	156	450	11	150	25	70	130	200	380
Chloride, dissolved	156	.1	156	3,400	60	1,000	240	380	880	1,400	2,900
Nutrients (milligrams per liter)											
Nitrogen, ammonia plus organic, total as nitrogen	3	0.01	3	0.82	0.34	(b)	(b)	(b)	(b)	(b)	(b)
Nitrogen, nitrite plus nitrate, total as nitrogen	148	.10	45	1.6	<.10	(c)	<.10	<.10	<.10	.12	.76
Phosphorus, total as phosphorus	156	.01	154	2.5	<.01	(c)	.02	.03	.04	.06	.24

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain at mouth of Bayou Lacombe near Lacombe, Louisiana (22)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Biological constituents--bacteria (colonies per 100 milliliters)											
Fecal coliform	93	10	32	680	<10	(c)	<10	<10	<10	16	100
Trace metals (micrograms per liter)											
Copper, dissolved	108	2	60	9	<2	(c)	<2	<2	2	3	5
Iron, dissolved	157	10	106	330	<10	(c)	<10	<10	30	70	230
Lead, dissolved	157	2	24	12	<2	(c)	<2	<2	<2	<2	3
Zinc, dissolved	157	20	28	40	<20	(c)	<20	<20	<20	<20	20
Organic compounds (micrograms per liter)											
DDT, total	150	0.001	1	0.001	<0.001	(c)	<0.001	<0.001	<0.001	<0.001	<0.001
PCB, total	150	.1	1	.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1
Diazinon, total	116	.01	33	.02	<.01	(c)	<.01	<.01	<.01	.01	.01
Lindane, total	150	.001	9	.002	<.001	(c)	<.001	<.001	<.001	<.001	.001
Chlordane, total	150	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1
Malathion, total	116	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01
Endrin, total	150	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001
Parathion, total	116	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01
Dieldrin, total	150	.001	2	.010	<.001	(c)	<.001	<.001	<.001	<.001	<.001
Endosulfan, total	80	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001
2,4-D, total	76	.01	56	.31	<.01	(c)	<.01	<.01	.02	.03	.21

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain at north shore near Slidell, Louisiana (21)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	27	(a)	(a)	14,500	410	5,390	640	2,680	3,750	9,110	14,100
pH (standard units)	27	(a)	(a)	8.6	6.7	7.5	6.9	7.3	7.4	7.7	8.5
Water temperature	21	(a)	(a)	30.5	6.0	21.6	6.2	19.5	21.5	27.0	30.5
Dissolved oxygen (milligrams per liter)	27	(a)	(a)	12.3	5.8	8.8	5.8	7.5	8.7	9.6	12.3
Major cations (milligrams per liter)											
Calcium, dissolved	26	0.01	26	110	21	48	21	28	36	75	110
Magnesium, dissolved	26	.01	26	330	10	120	17	54	74	220	310
Sodium, dissolved	14	.01	14	2,700	45	1,300	45	450	1,600	2,000	2,700
Potassium, dissolved	14	.01	14	110	4.2	49	4.2	18	56	70	110
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	26	1	26	75	27	43	27	35	40	49	72
Sulfate, dissolved	26	.1	26	650	35	250	46	120	160	450	620
Chloride, dissolved	26	.1	26	5,100	65	1,700	180	780	1,100	3,200	4,800
Nutrients (milligrams per liter)											
Nitrogen, nitrite plus nitrate, total as nitrogen	26	0.10	9	0.60	<0.10	(c)	<0.10	<0.10	<0.10	0.18	0.39
Phosphorus, total as phosphorus	26	.01	26	.10	.01	.04	.01	.03	.04	.05	.10

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain at north shore near Slidell, Louisiana (21)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Biological constituents--bacteria (colonies per 100 milliliters)											
Fecal coliform	12	2	10	100	<2	(c)	<2	3	6	40	100
Trace metals (micrograms per liter)											
Copper, dissolved	14	1	14	11	1	4	1	3	4	5	11
Iron, dissolved	26	10	21	140	<10	(c)	<10	10	30	60	120
Lead, dissolved	26	2	9	27	<2	(c)	<2	<2	<2	3	4
Zinc, dissolved	26	20	8	30	<20	(c)	<20	<20	<20	20	30
Organic compounds (micrograms per liter)											
DDT, total	26	0.001	3	0.020	<0.001	(c)	<0.001	<0.001	<0.001	<0.001	0.004
PCB, total	26	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1
Diazinon, total	14	.01	9	.13	<.01	(c)	<.01	<.01	.01	.02	.13
Lindane, total	26	.001	1	.110	<.001	(c)	<.001	<.001	<.001	<.001	<.001
Chlordane, total	26	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1
Malathion, total	14	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01
Endrin, total	26	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001
Parathion, total	14	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01
Dieldrin, total	26	.001	1	.003	<.001	(c)	<.001	<.001	<.001	<.001	<.001
Endosulfan, total	14	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001
2,4-D, total	14	.01	11	.20	<.01	(c)	<.01	.01	.02	.03	.20

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain at Pass Manchac near Manchac, Louisiana (24)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	177	(a)	(a)	8,940	55	1,440	155	316	790	1,990	4,800
pH (standard units)	177	(a)	(a)	8.0	6.1	7.1	6.5	6.9	7.1	7.4	7.8
Water temperature	57	(a)	(a)	33.0	5.0	20.5	8.4	16.0	21.5	25.2	31.1
Dissolved oxygen (milligrams per liter)	173	(a)	(a)	13.0	4.4	8.0	6.2	6.9	7.7	8.8	11.2
Major cations (milligrams per liter)											
Calcium, dissolved	163	0.01	163	90	1.4	16	3.4	6.7	11	21	40
Magnesium, dissolved	163	.01	163	200	1.2	28	3.3	6.5	13	37	96
Sodium, dissolved	99	.01	99	1,600	9.6	200	18	30	68	260	780
Potassium, dissolved	99	.01	99	52	1.7	9.8	2.5	3.2	4.8	14	34
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	177	1	177	87	10	27	13	19	24	31	56
Sulfate, dissolved	177	.1	177	400	5.3	63	7.4	17	36	86	210
Chloride, dissolved	177	.1	177	2,800	13	400	28	58	190	550	1,400
Nutrients (milligrams per liter)											
Nitrogen, ammonia plus organic, total as nitrogen	3	0.1	3	1.1	0.5	(b)	(b)	(b)	(b)	(b)	(b)
Nitrogen, nitrite plus nitrate, total as nitrogen	168	.10	133	1.4	<.10	(c)	<.10	.11	.18	.27	.83
Phosphorus, total as phosphorus	177	.01	175	4.2	<.01	(c)	.03	.07	.09	.12	.21

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain at Pass Manchac near Manchac, Louisiana (24)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles								
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th	
Biological constituents--bacteria (colonies per 100 milliliters)												
Fecal coliform	111	13	48	3,000	<13	(c)	<13	<13	<13	<13	24	110
Fecal streptococcus	1	1	1	110	(d)	(b)	(b)	(b)	(b)	(b)	(b)	(b)
Trace metals (micrograms per liter)												
Copper, dissolved	126	2	88	23	<2	(c)	<2	<2	<2	2	4	6
Iron, dissolved	176	10	155	490	<10	(c)	<10	30	80	160	300	300
Lead, dissolved	175	2	34	27	<2	(c)	<2	<2	<2	<2	<2	4
Zinc, dissolved	175	20	27	54	<20	(c)	<20	<20	<20	<20	<20	20
Organic compounds (micrograms per liter)												
DDT, total	170	0.001	1	0.001	<0.001	(c)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PCB, total	170	.1	2	.6	<.1	(c)	<.1	<.1	<.1	<.1	<.1	<.1
Diazinon, total	135	.01	52	.06	<.01	(c)	<.01	<.01	<.01	<.01	.01	.02
Lindane, total	170	.001	7	.002	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
Chlordane, total	170	.1	1	.7	<.1	(c)	<.1	<.1	<.1	<.1	<.1	<.1
Malathion, total	135	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01	<.01
Endrin, total	170	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
Parathion, total	135	.01	2	6.0	<.01	(c)	<.01	<.01	<.01	<.01	<.01	<.01
Dieldrin, total	170	.001	7	.005	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
Endosulfan, total	100	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
2,4-D, total	96	.01	87	.14	<.01	(c)	<.01	.02	.03	.05	.08	.08

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain at Tangipahoa River near Lee Landing, Louisiana (31)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	160	(a)	(a)	7,660	44	1,170	68	205	576	1,670	4,070
pH (standard units)	160	(a)	(a)	8.1	5.8	7.1	6.3	6.8	7.1	7.4	7.7
Water temperature	43	(a)	(a)	33.0	7.5	20.3	9.1	16.0	20.5	25.0	31.1
Dissolved oxygen (milligrams per liter)	156	(a)	(a)	12.4	1.2	7.6	4.2	6.8	7.6	8.6	10.4
Major cations (milligrams per liter)											
Calcium, dissolved	146	0.01	146	75	0.80	14	2.0	4.8	10	19	42
Magnesium, dissolved	146	.01	146	170	.60	23	1.4	4.0	12	31	88
Sodium, dissolved	85	.01	85	1,200	5.5	190	6.9	29	89	260	730
Potassium, dissolved	85	.01	85	52	1.6	9.5	2.0	3.2	5.3	13	29
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	160	1	160	78	6	24	8	15	21	28	51
Sulfate, dissolved	159	.1	159	350	1.4	50	3.5	7.9	28	69	170
Chloride, dissolved	159	.1	159	2,400	6.0	310	11	39	160	430	1,200
Nutrients (milligrams per liter)											
Nitrogen, ammonia plus organic, total as nitrogen	3	0.01	3	0.93	0.41	(b)	(b)	(b)	(b)	(b)	(b)
Nitrogen, nitrite plus nitrate, total as nitrogen	152	.10	107	1.4	<.10	(c)	<.10	<.10	.16	.25	.89
Phosphorus, total as phosphorus	160	.01	159	1.0	<.01	(c)	.03	.06	.09	.12	.27

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain at Tangipahoa River near Lee Landing, Louisiana (31)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th (median)	75th	95th	
Biological constituents--bacteria (colonies per 100 milliliters)											
Fecal coliform	98	5	51	2,000	<5	(c)	<5	<5	6	52	460
Trace metals (micrograms per liter)											
Copper, dissolved	111	2	62	6	<2	(c)	<2	<2	2	3	4
Iron, dissolved	160	10	138	530	<10	(c)	<10	30	90	180	290
Lead, dissolved	161	2	27	12	<2	(c)	<2	<2	<2	<2	3
Zinc, dissolved	160	20	17	30	<20	(c)	<20	<20	<20	<20	20
Organic compounds (micrograms per liter)											
DDT, total	149	0.001	3	0.001	<0.001	(c)	<0.001	<0.001	<0.001	<0.001	<0.001
PCB, total	149	.1	2	.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1
Diazinon, total	121	.01	43	.03	<.01	(c)	<.01	<.01	<.01	.01	.02
Lindane, total	149	.001	5	.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001
Chlordane, total	149	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1
Malathion, total	119	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01
Endrin, total	149	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001
Parathion, total	120	.01	1	.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01
Dieldrin, total	149	.001	8	.003	<.001	(c)	<.001	<.001	<.001	<.001	.001
Endosulfan, total	83	.001	1	.003	<.001	(c)	<.001	<.001	<.001	<.001	<.001
2,4-D, total	82	.01	66	.18	<.01	(c)	<.01	.01	.03	.04	.12

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain at Tchefuncte River near Madisonville, Louisiana (32)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	159	(a)	(a)	8,450	56	1,790	110	380	1,360	2,580	5,710
pH (standard units)	159	(a)	(a)	8.3	5.7	7.1	6.3	6.8	7.1	7.4	7.8
Water temperature	43	(a)	(a)	32.0	9.5	20.4	10.1	15.5	21.0	26.0	30.3
Dissolved oxygen (milligrams per liter)	155	(a)	(a)	13.4	3.7	7.6	4.3	6.4	7.7	8.7	11.1
Major cations (milligrams per liter)											
Calcium, dissolved	145	0.01	145	69	0.50	17	2.7	7.4	15	24	48
Magnesium, dissolved	145	.01	145	180	1.4	35	2.8	9.4	23	46	130
Sodium, dissolved	84	.01	84	1,300	5.8	270	16	52	160	360	1,100
Potassium, dissolved	83	.01	83	69	1.5	14	2.0	3.8	8.4	17	49
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	159	1	159	71	3	24	8	16	22	31	48
Sulfate, dissolved	158	.1	158	360	1.5	77	6.4	25	56	110	240
Chloride, dissolved	159	.1	159	2,600	7.0	510	24	92	360	710	1,700
Nutrients (milligrams per liter)											
Nitrogen, ammonia plus organic, total as nitrogen	3	0.01	3	0.57	0.50	(b)	(b)	(b)	(b)	(b)	(b)
Nitrogen, nitrite plus nitrate, total as nitrogen	148	.10	73	1.3	<.10	(c)	<.10	<.10	.10	.19	.59
Phosphorus, total as phosphorus	157	.01	155	1.1	<.01	(c)	.02	.05	.07	.09	.22

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain at Tchefuncte River near Madisonville, Louisiana (32)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Biological constituents--bacteria (colonies per 100 milliliters)											
Fecal coliform	95	10	49	3,400	<10	(c)	<10	<10	10	44	740
Trace metals (micrograms per liter)											
Copper, dissolved	111	2	67	8	<2	(c)	<2	<2	2	3	6
Iron, dissolved	158	10	140	580	<10	(c)	<10	30	80	190	390
Lead, dissolved	158	2	22	16	<2	(c)	<2	<2	<2	<2	3
Zinc, dissolved	159	20	31	40	<20	(c)	<20	<20	<20	<20	30
Organic compounds (micrograms per liter)											
DDT, total	151	0.001	0	<0.001	<0.001	(c)	<0.001	<0.001	<0.001	<0.001	<0.001
PCB, total	151	.1	1	.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1
Diazinon, total	117	.01	47	.03	<.01	(c)	<.01	<.01	<.01	.01	.01
Lindane, total	151	.001	7	.001	<.001	(c)	<.001	<.001	<.001	<.001	.001
Chlordane, total	151	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1
Malathion, total	117	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01
Endrin, total	150	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001
Parathion, total	117	.01	0	.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01
Dieldrin, total	151	.01	1	.30	<.01	(c)	<.01	<.01	<.01	<.01	<.01
Endosulfan, total	80	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001
2,4-D, total	77	.01	61	.40	<.01	(c)	<.01	.01	.02	.06	.26

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain at West Rigolets near Slidell, Louisiana (33)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	69	(a)	(a)	15,600	337	3,260	396	798	2,120	4,060	12,500
pH (standard units)	69	(a)	(a)	8.1	6.4	7.6	7.0	7.4	7.7	7.8	8.0
Dissolved oxygen (milligrams per liter)	69	(a)	(a)	11.4	6.5	8.0	6.8	7.4	7.9	8.4	10.3
Major cations (milligrams per liter)											
Calcium, dissolved	68	0.01	68	120	12	36	17	24	27	38	97
Magnesium, dissolved	68	.01	68	360	10	69	11	17	42	80	280
Sodium, dissolved	68	.01	68	2,900	18	560	31	100	360	700	2,200
Potassium, dissolved	68	.01	68	120	3.9	25	4.0	7.1	18	29	87
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	69	1	69	84	5	49	21	36	50	60	78
Sulfate, dissolved	68	.1	68	710	32	160	38	49	100	200	520
Chloride, dissolved	69	.1	69	5,300	39	980	48	180	570	1,200	4,200
Nutrients (milligrams per liter)											
Nitrogen, nitrite plus nitrate, total as nitrogen	67	0.10	41	1.7	<0.10	(c)	<0.10	<0.10	0.27	1.0	1.7
Phosphorus, total as phosphorus	67	.01	65	.14	<.01	(c)	.02	.04	.06	.08	.11

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain at West Rigolets near Slidell, Louisiana (33)---continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles								
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th	
Biological constituents--bacteria (colonies per 100 milliliters)												
Fecal coliform	69	5	20	100	<5	(c)	<5	<5	<5	<5	6	24
Trace metals (micrograms per liter)												
Copper, dissolved	67	2	24	4	<2	(c)	<2	<2	<2	<2	2	3
Iron, dissolved	68	10	40	70	<10	(c)	<10	<10	<10	20	30	60
Lead, dissolved	68	2	5	2	<2	(c)	<2	<2	<2	<2	<2	2
Zinc, dissolved	68	20	7	40	<20	(c)	<20	<20	<20	<20	<20	20
Organic compounds (micrograms per liter)												
DDT, total	59	0.001	0	<0.001	<0.001	(c)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PCB, total	59	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1	<.1
Diazinon, total	59	.01	28	.01	<.01	(c)	<.01	<.01	<.01	<.01	.01	.01
Lindane, total	59	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
Chlordane, total	59	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1	<.1
Malathion, total	59	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01	<.01
Endrin, total	59	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
Parathion, total	59	.01	0	.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01	<.01
Dieldrin, total	59	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
Endosulfan, total	45	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
2,4-D, total	45	.01	41	.06	<.01	(c)	<.01	.01	.02	.03	.05	.05

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain north of Pointe Aux Herbes, Louisiana (34)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	50	(a)	(a)	3,880	970	1,840	1,030	1,260	1,420	2,600	3,800
pH (standard units)	50	(a)	(a)	8.4	7.0	7.7	7.2	7.5	7.6	7.8	8.0
Dissolved oxygen (milligrams per liter)	50	(a)	(a)	11.5	6.9	8.1	7.1	7.7	8.0	8.4	9.4
Major cations (milligrams per liter)											
Calcium, dissolved	48	0.01	48	56	15	24	17	20	23	27	35
Magnesium, dissolved	49	.01	49	77	12	34	18	24	26	48	72
Sodium, dissolved	49	.01	49	5,700	130	390	140	180	210	420	620
Potassium, dissolved	49	.01	49	35	5.6	14	8.2	9.7	11	20	28
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	50	1	50	59	25	41	27	34	41	48	56
Sulfate, dissolved	49	.1	49	170	53	86	56	62	69	120	160
Chloride, dissolved	49	.1	49	1,100	230	500	250	320	370	740	1,000
Nutrients (milligrams per liter)											
Nitrogen, nitrite plus nitrate, total as nitrogen	49	0.10	35	1.2	<0.10	(c)	<0.10	<0.10	0.24	0.50	1.0
Phosphorus, total as phosphorus	49	.01	49	.07	.02	.04	.02	.03	.03	.05	.07

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Lake Pontchartrain north of Pointe Aux Herbes, Louisiana (34)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles								
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th	
Biological constituents--bacteria (colonies per 100 milliliters)												
Fecal coliform	49	4	13	120	<4	(c)	<4	<4	<4	<4	4	14
Trace metals (micrograms per liter)												
Copper, dissolved	49	2	11	3	<2	(c)	<2	<2	<2	<2	<2	3
Iron, dissolved	49	10	18	50	<10	(c)	<10	<10	<10	<10	20	40
Lead, dissolved	49	2	2	2	<2	(c)	<2	<2	<2	<2	<2	<2
Zinc, dissolved	49	20	3	20	<20	(c)	<20	<20	<20	<20	<20	20
Organic compounds (micrograms per liter)												
DDT, total	43	0.001	0	<0.001	<0.001	(c)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
PCB, total	43	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1	<.1
Diazinon, total	43	.01	17	.10	<.01	(c)	<.01	<.01	<.01	<.01	.01	.02
Lindane, total	43	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
Chlordane, total	43	.1	0	<.1	<.1	(c)	<.1	<.1	<.1	<.1	<.1	<.1
Malathion, total	43	.01	0	<.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01	<.01
Endrin, total	43	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
Parathion, total	43	.01	0	.01	<.01	(c)	<.01	<.01	<.01	<.01	<.01	<.01
Dieldrin, total	43	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
Endosulfan, total	43	.001	0	<.001	<.001	(c)	<.001	<.001	<.001	<.001	<.001	<.001
2,4-D, total	30	.01	28	.42	<.01	(c)	<.01	.02	.02	.02	.03	.32

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Natalbany River at Baptist, Louisiana (11)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	17	(a)	(a)	120	54	78	54	68	72	89	120
pH (standard units)	19	(a)	(a)	7.0	4.1	6.2	4.1	5.9	6.2	6.5	7.0
Water temperature	10	(a)	(a)	29.0	10.0	20.1	10.0	14.2	19.8	27.1	29.0
Dissolved solids (milligrams per liter)	15	(a)	(a)	93	50	68	50	57	63	80	93
Major cations (milligrams per liter)											
Calcium, dissolved	17	0.01	17	4.5	2.2	3.6	2.2	3.2	3.5	4.0	4.5
Magnesium, dissolved	17	.01	17	2.0	1.1	1.5	1.1	1.3	1.4	1.6	2.0
Sodium, dissolved	17	.01	17	12	4.2	8.4	4.2	6.7	8.0	10	12
Potassium, dissolved	17	.01	17	4.0	.90	1.9	.90	1.5	1.7	2.1	4.0
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	17	1	16	23	<1	(c)	<1	12	13	22	23
Sulfate, dissolved	19	.1	19	12	2.2	6.7	2.2	5.8	6.4	8.0	12
Chloride, dissolved	21	.1	21	10	4.4	7.7	4.5	6.8	7.9	9.2	10
Trace metals (micrograms per liter)											
Iron, dissolved	4	10	2	250	<10	(b,c)	(b)	(b)	(b)	(b)	(b)

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Pass Manchac at Manchac, Louisiana (19)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	11	(a)	(a)	5,860	1,660	3,070	1,660	2,120	2,550	3,700	5,860
pH (standard units)	11	(a)	(a)	7.2	5.5	6.6	5.5	6.5	6.6	6.8	7.2
Dissolved solids (milligrams per liter)	11	(a)	(a)	3,530	943	1,790	943	1,230	1,470	2,150	3,530
Major cations (milligrams per liter)											
Calcium, dissolved	11	0.01	11	190	18	42	18	20	24	38	190
Magnesium, dissolved	11	.01	11	120	7.3	56	7.3	36	46	72	120
Sodium, dissolved	11	.01	11	990	240	480	240	320	410	590	990
Potassium, dissolved	11	.01	11	33	2.6	18	2.6	11	15	30	33
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	2	1	2	25	2	(b)	(b)	(b)	(b)	(b)	(b)
Sulfate, dissolved	11	.1	11	530	63	160	63	89	120	150	530
Chloride, dissolved	11	.1	11	1,800	240	860	240	580	720	1,100	1,800

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Tangipahoa River at Lee Landing, Louisiana (8)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	56	(a)	(a)	77	37	50	39	45	48	54	71
pH (standard units)	55	(a)	(a)	6.9	5.7	6.4	5.9	6.2	6.4	6.7	6.9
Dissolved solids (milligrams per liter)	55	(a)	(a)	76	27	43	29	35	39	48	65
Major cations (milligrams per liter)											
Calcium, dissolved	55	0.01	55	4.1	1.5	2.8	1.7	2.4	2.8	3.2	4.0
Magnesium, dissolved	55	.01	55	1.4	.10	.63	.10	.40	.60	.90	1.2
Sodium, dissolved	55	.01	55	8.7	2.3	4.9	2.7	4.4	4.8	5.5	7.8
Potassium, dissolved	55	.01	55	2.2	.17	1.3	.72	1.1	1.4	1.6	2.0
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	55	1	55	17	5	11	7	10	12	13	16
Sulfate, dissolved	55	.1	47	5.2	<.1	(c)	<.1	.4	1.6	2.4	3.8
Chloride, dissolved	56	.1	56	13	2.3	5.8	3.2	4.5	5.4	6.5	11
Trace metals (micrograms per liter)											
Iron, dissolved	55	10	52	440	<10	(c)	<10	20	50	70	160

Table 2.2-1. Statistical summary of water-quality data for the Lake Ponchartrain-Lake Maurepas basin in Louisiana, 1943-95
Tangipahoa River at Robert, Louisiana (7)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th (median)	75th	95th	
Physical properties											
Specific conductance	146	(a)	(a)	73	24	49	38	46	49	53	59
pH (standard units)	143	(a)	(a)	7.2	5.3	6.5	5.8	6.2	6.5	6.9	7.1
Water temperature	138	(a)	(a)	31.0	7.0	20.3	9.5	15.5	21.5	25.6	28.5
Dissolved oxygen (milligrams per liter)	111	(a)	(a)	12.4	5.6	8.7	6.9	7.7	8.6	9.5	11.0
Dissolved solids (milligrams per liter)	138	(a)	(a)	82	23	43	32	38	42	46	57
Major cations (milligrams per liter)											
Calcium, dissolved	146	0.01	146	3.9	1.0	2.3	1.4	2.1	2.3	2.5	3.1
Magnesium, dissolved	145	.01	145	2.7	.10	.96	.50	.90	.98	1.1	1.3
Sodium, dissolved	144	.01	144	8.9	1.9	4.7	3.2	4.2	4.8	5.2	6.2
Potassium, dissolved	144	.01	144	3.3	.40	1.7	1.0	1.3	1.6	2.0	2.7
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	146	1	146	17	3	11	7	10	11	13	15
Sulfate, dissolved	143	.1	139	13	<.1	(c)	.8	1.5	2.1	3.0	5.1
Chloride, dissolved	146	.1	146	14	2.5	5.7	3.5	4.8	5.6	6.5	8.0
Nutrients (milligrams per liter)											
Nitrogen, ammonia plus organic, total as nitrogen	78	0.2	72	2.2	<0.2	(c)	<0.2	0.3	0.5	0.8	1.3
Nitrogen, nitrite plus nitrate, total as nitrogen	85	.01	85	3.1	.02	.32	.09	.20	.29	.35	.54
Phosphorus, total as phosphorus	86	.01	86	.27	.03	.09	.03	.06	.08	.12	.21

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Tangipahoa River at Robert, Louisiana (7)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Biological constituents											
Fecal coliform bacteria (colonies per 100 milliliters)	82	1	82	20,000	4	1,500	21	87	160	780	11,000
Fecal streptococcus bacteria (colonies per 100 milliliters)	81	1	81	16,000	5	1,400	20	82	260	940	9,800
Phytoplankton (cells per milliliter)	19	0	19	6,800	64	2,300	64	810	1,500	3,600	6,800
Trace metals (micrograms per liter)											
Copper, dissolved	58	10	5	21	<10	(c)	<10	<10	<10	<10	11
Iron, dissolved	91	10	90	470	<10	(c)	20	130	190	270	410
Lead, dissolved	58	5	2	12	<5	(c)	<5	<5	<5	<5	<5
Zinc, dissolved	60	20	9	170	<20	(c)	<20	<20	<20	<20	26
Organic compounds (micrograms per liter)											
DDT, total	5	0.001	0	<0.001	<0.001	(b,c)	(b)	(b)	(b)	(b)	(b)
PCB, total	4	.1	0	<.1	<.1	(b,c)	(b)	(b)	(b)	(b)	(b)
Diazinon, total	5	.01	2	.26	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Lindane, total	5	.001	0	<.001	<.001	(b,c)	(b)	(b)	(b)	(b)	(b)
Chlordane, total	5	.1	0	<.1	<.1	(b,c)	(b)	(b)	(b)	(b)	(b)
Malathion, total	5	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Endrin, total	5	.001	0	<.001	<.001	(b,c)	(b)	(b)	(b)	(b)	(b)
Parathion, total	5	.01	0	.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Dieldrin, total	5	.001	0	<.001	<.001	(b,c)	(b)	(b)	(b)	(b)	(b)
2,4-D, total	5	.01	1	.06	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Tangipahoa River near Kentwood, Louisiana (35)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	10	(a)	(a)	68	38	50	38	45	50	54	68
pH (standard units)	10	(a)	(a)	6.6	5.5	6.0	5.5	5.6	6.1	6.1	6.6
Water temperature	6	(a)	(a)	26.0	9.0	(b)	(b)	(b)	(b)	(b)	(b)
Dissolved solids (milligrams per liter)	7	(a)	(a)	46	37	(b)	(b)	(b)	(b)	(b)	(b)
Major cations (milligrams per liter)											
Calcium, dissolved	10	0.01	10	3.5	1.9	2.5	1.9	2.3	2.4	2.6	3.5
Magnesium, dissolved	10	.01	10	1.0	.10	.73	.10	.50	.85	.90	1.0
Sodium, dissolved	10	.01	10	5.8	3.9	4.8	3.9	4.0	4.7	5.5	5.8
Potassium, dissolved	10	.01	10	1.4	.80	1.1	.80	1.0	1.2	1.2	1.4
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	10	1	10	11	8	10	8	8	10	10	11
Sulfate, dissolved	10	.1	10	3.0	.4	1.5	.4	.6	1.4	2.3	3.0
Chloride, dissolved	10	.1	10	10	4.5	7.1	4.5	5.6	7.0	8.4	10
Trace metals (micrograms per liter)											
Iron, dissolved	2	10	2	40	<10	(b,c)	(b)	(b)	(b)	(b)	(b)

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Tchefuncte River below Covington, Louisiana (6)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	104	(a)	(a)	8,060	30	954	45	111	510	1,350	2,860
pH (standard units)	62	(a)	(a)	7.7	4.3	6.4	4.3	6.2	6.5	6.8	7.3
Dissolved solids (milligrams per liter)	60	(a)	(a)	2,250	20	400	34	62	172	614	1,600
Major cations (milligrams per liter)											
Calcium, dissolved	62	0.01	62	75	0.70	11	1.2	2.6	6.0	11	50
Magnesium, dissolved	62	.01	62	70	.10	10	.12	.68	2.6	11	43
Sodium, dissolved	62	.01	62	660	2.3	110	3.6	8.2	52	170	460
Potassium, dissolved	62	.01	62	25	.50	5.0	.62	1.1	2.9	7.4	20
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	60	1	58	46	<1	(c)	1.0	8.2	20	26	39
Sulfate, dissolved	62	.1	60	170	<.1	(c)	.4	3.0	14	34	88
Chloride, dissolved	104	.1	104	2,600	3.3	270	3.8	8.9	120	370	840
Trace metals (micrograms per liter)											
Iron, dissolved	60	10	56	260	<10	(c)	<10	20	40	80	200

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Tchefuncte River near Covington, Louisiana (5)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	118	(a)	(a)	57	26	39	29	35	38	42	52
pH (standard units)	118	(a)	(a)	7.4	5.2	6.4	5.7	6.1	6.4	6.7	7.1
Water temperature	92	(a)	(a)	33.5	6.0	19.0	8.6	15.0	19.0	24.0	28.2
Dissolved oxygen (milligrams per liter)	89	(a)	(a)	12.4	6.2	8.7	7.0	7.7	8.7	9.4	11.2
Dissolved solids (milligrams per liter)	92	(a)	(a)	53	20	37	27	33	36	41	50
Major cations (milligrams per liter)											
Calcium, dissolved	118	0.01	118	2.7	1.1	1.8	1.2	1.6	1.8	2.1	2.5
Magnesium, dissolved	118	.01	118	1.2	.10	.76	.20	.70	.80	.94	1.1
Sodium, dissolved	118	.01	118	7.8	1.6	3.8	2.3	3.2	3.8	4.2	5.5
Potassium, dissolved	118	.01	118	3.9	.40	1.5	.60	.98	1.3	1.9	3.0
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	118	1	118	18	2	9	5	7	9	11	13
Sulfate, dissolved	118	.1	109	10	<.1	(c)	.4	1.0	2.0	3.0	5.0
Chloride, dissolved	118	.1	18	7.5	2.4	4.6	3.0	4.0	4.4	5.2	6.5
Nutrients (milligrams per liter)											
Nitrogen, ammonia plus organic, total as nitrogen	84	0.2	77	2.7	<0.2	(c)	<0.2	0.3	0.5	0.8	1.3
Nitrogen, nitrite plus nitrate, total as nitrogen	87	.01	87	2.2	.02	.30	.05	.17	.26	.33	.59
Phosphorus, total as phosphorus	86	.01	86	.35	.02	.10	.03	.06	.08	.12	.22

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Tchefuncte River near Covington, Louisiana (5)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Biological constituents											
Fecal coliform bacteria (colonies per 100 milliliters)	85	1	85	25,000	4	940	36	120	210	520	5,500
Fecal streptococcus bacteria (colonies per 100 milliliters)	85	1	85	29,000	10	1,200	53	160	300	920	4,600
Phytoplankton (cells per milliliter)	25	0	25	74,000	13	9,700	32	570	1,800	4,600	72,000
Trace metals (micrograms per liter)											
Copper, dissolved	54	10	0	<10	<10	(c)	<10	<10	<10	<10	<10
Iron, dissolved	78	10	78	590	30	260	60	180	240	330	550
Lead, dissolved	55	5	7	8	<5	(c)	<5	<5	<5	<5	6
Zinc, dissolved	55	20	6	27	<20	(c)	<20	<20	<20	<20	22
Organic compounds (micrograms per liter)											
DDT, total	1	0.001	0	<0.001	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
PCB, total	1	.1	0	<.1	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
Diazinon, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
Lindane, total	1	.001	0	<.001	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
Chlordane, total	1	.1	0	<.1	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
Malathion, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
Endrin, total	1	.001	0	<.001	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
Parathion, total	1	.01	0	.01	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
Dieldrin, total	1	.001	0	<.001	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)
2,4-D, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)	(b)

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Tchefuncte River near Folsom, Louisiana (4)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles									
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th		
Physical properties													
Specific conductance	34	(a)	(a)	38	25	30	25	27	30	31	37		
pH (standard units)	32	(a)	(a)	6.8	5.6	6.2	5.6	6.0	6.2	6.4	6.7		
Water temperature	8	(a)	(a)	24.0	9.0	(b)	(b)	(b)	(b)	(b)	(b)		
Dissolved solids (milligrams per liter)	13	(a)	(a)	43	26	31	26	27	29	34	43		
Major cations (milligrams per liter)													
Calcium, dissolved	32	0.01	32	2.3	0.50	1.5	0.63	1.2	1.6	2.0	2.3		
Magnesium, dissolved	32	.01	32	1.2	.10	.59	.10	.40	.60	.70	1.2		
Sodium, dissolved	32	.01	32	4.1	1.5	2.7	1.5	2.5	2.8	3.0	3.7		
Potassium, dissolved	32	.01	32	1.8	.40	.85	.40	.52	.75	1.1	1.6		
Major anions (milligrams per liter)													
Alkalinity, total as CaCO ₃	35	1	35	12	3	7	5	7	7	8	11		
Sulfate, dissolved	32	.1	22	4.8	<.1	(c)	<.1	<.1	.4	.8	2.6		
Chloride, dissolved	34	.1	34	6.1	2.9	4.2	3.1	3.8	4.0	4.7	5.7		

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Tchefuncte River near Folsom, Louisiana (4)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Biological constituents--bacteria (colonies per 100 milliliters)											
Fecal coliform	1	1	1	130	(d)	(b)	(b)	(b)	(b)	(b)	(b)
Fecal streptococcus	1	1	1	74	(d)	(b)	(b)	(b)	(b)	(b)	(b)
Trace metals (micrograms per liter)											
Iron, dissolved	15	10	12	150	<10	(c)	<10	20	60	110	150

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Thompson Creek at Jackson, Louisiana (2)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	10	(a)	(a)	88	54	70	54	62	69	79	88
pH (standard units)	10	(a)	(a)	8.1	5.8	6.9	5.8	6.6	6.8	7.2	8.1
Water temperature	8	(a)	(a)	29.0	5.5	(b)	(b)	(b)	(b)	(b)	(b)
Dissolved oxygen (milligrams per liter)	8	(a)	(a)	12.3	5.6	(b)	(b)	(b)	(b)	(b)	(b)
Dissolved solids (milligrams per liter)	7	(a)	(a)	71	47	(b)	(b)	(b)	(b)	(b)	(b)
Major cations (milligrams per liter)											
Calcium, dissolved	10	0.01	10	5.9	3.0	4.1	3.0	3.4	3.8	4.7	5.9
Magnesium, dissolved	10	.01	10	1.8	.90	1.4	.90	1.2	1.5	1.7	1.8
Sodium, dissolved	10	.01	10	7.9	4.4	6.4	4.4	5.6	6.5	7.0	7.9
Potassium, dissolved	10	.01	10	3.3	1.2	2.1	1.2	1.3	1.9	2.6	3.3
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	10	1	10	23	11	18	11	15	18	21	23
Sulfate, dissolved	10	.1	10	8.9	.2	3.5	.2	1.7	3.5	4.6	8.9
Chloride, dissolved	10	.1	10	11	5.1	8.1	5.1	7.2	8.0	9.2	11
Nutrients (milligrams per liter)											
Nitrogen, ammonia plus organic, total as nitrogen	5	0.01	5	0.45	0.09	(b)	(b)	(b)	(b)	(b)	(b)
Nitrogen, nitrite plus nitrate, total as nitrogen	8	.01	8	.32	.06	(b)	(b)	(b)	(b)	(b)	(b)
Phosphorus, total as phosphorus	8	.01	8	.12	.02	(b)	(b)	(b)	(b)	(b)	(b)

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95

Thompson Creek at Jackson, Louisiana (2)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles						
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th
Biological constituents--bacteria (colonies per 100 milliliters)										
Fecal coliform	7	1	7	15,000	20	(b)	(b)	(b)	(b)	(b)
Fecal streptococcus	5	1	5	2,700	84	(b)	(b)	(b)	(b)	(b)
Trace metals (micrograms per liter)										
Copper, dissolved	2	1	2	5	3	(b)	(b)	(b)	(b)	(b)
Iron, dissolved	2	10	2	80	30	(b)	(b)	(b)	(b)	(b)
Lead, dissolved	2	2	0	<2	<2	(b,c)	(b)	(b)	(b)	(b)
Zinc, dissolved	2	30	1	30	<30	(b,c)	(b)	(b)	(b)	(b)
Organic compounds (micrograms per liter)										
DDT, total	2	0.001	0	<0.001	<0.001	(b,c)	(b)	(b)	(b)	(b)
PCB, total	2	.1	0	<.1	<.1	(b,c)	(b)	(b)	(b)	(b)
Diazinon, total	2	.01	1	.02	<.01	(b,c)	(b)	(b)	(b)	(b)
Lindane, total	2	.001	0	<.001	<.001	(b,c)	(b)	(b)	(b)	(b)
Chlordane, total	2	.1	0	<.1	<.1	(b,c)	(b)	(b)	(b)	(b)
Malathion, total	2	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)
Endrin, total	2	.001	0	<.001	<.001	(b,c)	(b)	(b)	(b)	(b)
Parathion, total	2	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)
Dieldrin, total	2	.001	0	<.001	<.001	(b,c)	(b)	(b)	(b)	(b)
2,4-D, total	2	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Thompson Creek near Norwood, Louisiana (1)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles									
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th		
Physical properties													
Specific conductance	25	(a)	(a)	85	21	67	28	62	71	77	84		
pH (standard units)	25	(a)	(a)	7.7	5.3	6.8	5.5	6.4	6.9	7.3	7.6		
Water temperature	25	(a)	(a)	29.5	7.0	20.7	7.2	16.0	21.5	27.0	29.5		
Dissolved oxygen (milligrams per liter)	24	(a)	(a)	12.2	7.8	9.4	7.8	8.5	9.2	10.5	12.1		
Dissolved solids (milligrams per liter)	24	(a)	(a)	73	29	59	31	54	62	69	73		
Major cations (milligrams per liter)													
Calcium, dissolved	25	0.01	25	5.1	1.2	3.5	1.6	3.0	3.6	4.2	4.9		
Magnesium, dissolved	25	.01	25	2.5	.05	1.5	.19	1.4	1.6	1.7	2.3		
Sodium, dissolved	25	.01	25	8.4	1.8	6.3	2.4	5.6	6.4	7.4	8.3		
Potassium, dissolved	25	.01	25	3.0	1.3	1.9	1.3	1.6	1.9	2.2	2.8		
Major anions (milligrams per liter)													
Alkalinity, total as CaCO ₃	25	1	25	22	1	15	3	12	16	20	22		
Sulfate, dissolved	25	.1	25	8.0	2.4	4.6	2.5	3.3	4.2	6.0	7.8		
Chloride, dissolved	25	.1	25	10	2.2	7.6	3.0	7.0	7.8	8.9	9.8		
Nutrients (milligrams per liter)													
Nitrogen, ammonia plus organic, total as nitrogen	25	0.1	25	3.4	0.1	0.6	0.1	0.2	0.3	0.6	2.9		
Nitrogen, nitrite plus nitrate, total as nitrogen	25	.10	8	.30	<.10	(c)	<.10	<.10	<.10	.11	.20		
Phosphorus, total as phosphorus	25	.01	22	.22	<.01	(c)	<.01	.03	.04	.06	.12		

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
Thompson Creek near Norwood, Louisiana (1)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Biological constituents--bacteria (colonies per 100 milliliters)											
Fecal coliform	25	1	25	14,000	11	1,000	14	80	160	900	11,000
Fecal streptococcus	25	1	25	18,000	6	1,900	15	140	340	1,200	15,000
Trace metals (micrograms per liter)											
Copper, dissolved	6	1	6	5	1	(b)	(b)	(b)	(b)	(b)	(b)
Iron, dissolved	6	10	6	200	90	(b)	(b)	(b)	(b)	(b)	(b)
Lead, dissolved	6	5	0	<5	<5	(b,c)	(b)	(b)	(b)	(b)	(b)
Zinc, dissolved	6	10	1	20	<10	(b,c)	(b)	(b)	(b)	(b)	(b)
Organic compounds (micrograms per liter)											
DDT, total	6	0.01	0	<0.01	<0.01	(b,c)	(b)	(b)	(b)	(b)	(b)
PCB, total	6	.1	0	<.1	<.1	(b,c)	(b)	(b)	(b)	(b)	(b)
Diazinon, total	6	.01	1	.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Lindane, total	6	.01	1	.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Chlordane, total	6	.1	0	<.1	<.1	(b,c)	(b)	(b)	(b)	(b)	(b)
Malathion, total	6	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Endrin, total	6	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Parathion, total	6	.01	0	.01	.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Dieldrin, total	6	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Endosulfan, total	6	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
2,4-D, total	6	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Tickfaw River at Holden, Louisiana (10)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles										
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th			
Physical properties														
Specific conductance	49	(a)	(a)	50	31	35	31	32	34	36	45			
pH (standard units)	49	(a)	(a)	7.4	5.5	6.3	5.7	6.0	6.4	6.6	7.2			
Water temperature	20	(a)	(a)	29.5	10.0	20.4	10.1	13.2	23.0	25.4	29.4			
Dissolved oxygen (milligrams per liter)	16	(a)	(a)	11.0	7.1	8.6	7.1	7.4	8.5	9.8	11.0			
Dissolved solids (milligrams per liter)	22	(a)	(a)	60	16	38	17	32	35	47	59			
Major cations (milligrams per liter)														
Calcium, dissolved	49	0.01	49	3.2	0.90	1.8	0.95	1.4	1.8	2.0	2.8			
Magnesium, dissolved	49	.01	49	1.3	.40	.74	.40	.55	.70	.90	1.1			
Sodium, dissolved	48	.01	48	5.0	2.3	3.5	2.3	3.3	3.5	3.7	4.6			
Potassium, dissolved	49	.01	49	2.6	.20	1.1	.35	.90	1.0	1.3	2.2			
Major anions (milligrams per liter)														
Alkalinity, total as CaCO ₃	49	1	49	13	5	9	7	8	9	10	11			
Sulfate, dissolved	49	.1	44	9.8	<.1	(c)	<.1	.4	.7	1.7	3.2			
Chloride, dissolved	49	.1	49	6.0	3.3	4.5	3.5	4.0	4.5	4.7	6.0			
Nutrients (milligrams per liter)														
Nitrogen, ammonia plus organic, total as nitrogen	1	0.01	1	0.63	(d)	(b)	(b)	(b)	(b)	(b)	(b)			
Nitrogen, nitrite plus nitrate, total as nitrogen	7	.01	7	.42	.06	(b)	(b)	(b)	(b)	(b)	(b)			
Phosphorus, total as phosphorus	8	.01	8	.15	.02	(b)	(b)	(b)	(b)	(b)	(b)			

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Tickfaw River at Holden, Louisiana (10)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Trace metals (micrograms per liter)											
Copper, dissolved	8	2	5	15	<2	(b,c)	(b)	(b)	(b)	(b)	(b)
Iron, dissolved	14	10	12	460	<10	150	<10	60	110	220	460
Lead, dissolved	8	3	2	5	<3	(b,c)	(b)	(b)	(b)	(b)	(b)
Zinc, dissolved	9	20	1	280	<20	(b,c)	(b)	(b)	(b)	(b)	(b)
Organic compounds (micrograms per liter)											
DDT, total	4	0.01	0	<0.01	<0.01	(b,c)	(b)	(b)	(b)	(b)	(b)
PCB, total	3	.1	0	<.1	<.1	(b,c)	(b)	(b)	(b)	(b)	(b)
Diazinon, total	4	.01	2	.15	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Lindane, total	4	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Chlordane, total	4	.1	0	<.1	<.1	(b,c)	(b)	(b)	(b)	(b)	(b)
Malathion, total	4	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Endrin, total	4	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Parathion, total	4	.01	0	.01	.01	(b,c)	(b)	(b)	(b)	(b)	(b)
Dieldrin, total	4	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)
2,4-D, total	4	.01	0	<.01	<.01	(b,c)	(b)	(b)	(b)	(b)	(b)

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Tickfaw River at Liverpool, Louisiana (9)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles										
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th			
Physical properties														
Specific conductance	15	(a)	(a)	52	29	34	29	29	29	31	38	52		
pH (standard units)	14	(a)	(a)	6.9	5.8	6.4	5.8	6.2	6.3	6.3	6.6	6.9		
Water temperature	8	(a)	(a)	25.0	10.5	(b)	(b)	(b)	(b)	(b)	(b)	(b)		
Dissolved oxygen (milligrams per liter)	4	(a)	(a)	10.3	7.8	(b)	(b)	(b)	(b)	(b)	(b)	(b)		
Dissolved solids (milligrams per liter)	10	(a)	(a)	49	27	34	27	29	30	30	40	49		
Major cations (milligrams per liter)														
Calcium, dissolved	15	0.01	15	5.5	0.70	2.1	0.70	1.4	1.7	2.0	2.0	5.5		
Magnesium, dissolved	15	.01	14	1.0	<.01	(c)	<.01	.50	.70	.70	.70	1.0		
Sodium, dissolved	15	.01	15	4.3	2.5	3.4	2.5	2.6	3.4	3.4	3.9	4.3		
Potassium, dissolved	15	.01	15	2.9	.30	.90	.30	.60	.70	.90	.90	2.9		
Major anions (milligrams per liter)														
Alkalinity, total as CaCO ₃	15	1	15	20	7	10	7	8	8	10	10	20		
Sulfate, dissolved	15	.1	13	6.4	<.1	(c)	<.1	.2	.2	.2	1.6	6.4		
Chloride, dissolved	15	.1	15	5.0	2.8	4.1	2.8	3.7	4.0	4.9	4.9	5.0		
Nutrients (milligrams per liter)														
Nitrogen, ammonia plus organic, total as nitrogen	1	0.01	1	0.57	(d)	(b)	(b)	(b)	(b)	(b)	(b)	(b)		
Nitrogen, nitrite plus nitrate, total as nitrogen	4	.01	4	.41	.11	(b)	(b)	(b)	(b)	(b)	(b)	(b)		
Phosphorus, total as phosphorus	4	.01	4	.19	.03	(b)	(b)	(b)	(b)	(b)	(b)	(b)		

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
 Tickfaw River at Liverpool, Louisiana (9)--continued

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles						
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th
Trace metals (micrograms per liter)										
Copper, dissolved	1	1	1	3	(d)	(b)	(b)	(h)	(b)	(h)
Iron, dissolved	5	10	5	160	10	(b)	(b)	(b)	(b)	(b)
Lead, dissolved	1	10	0	<10	(d)	(b,c)	(b)	(h)	(b)	(b)
Zinc, dissolved	1	20	0	<20	(d)	(b,c)	(h)	(b)	(b)	(b)
Organic compounds (micrograms per liter)										
DDT, total	1	0.01	0	<0.01	(d)	(b,c)	(b)	(b)	(b)	(b)
PCB, total	1	.1	0	<.1	(d)	(b,c)	(b)	(b)	(b)	(b)
Diazinon, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)
Lindane, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)
Chlordane, total	1	.1	0	<.1	(d)	(b,c)	(b)	(b)	(b)	(b)
Malathion, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)
Endrin, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)
Parathion, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)
Dieldrin, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)
2,4-D, total	1	.01	0	<.01	(d)	(b,c)	(b)	(b)	(b)	(b)

Table 2.2-1. Statistical summary of water-quality data for the Lake Pontchartrain-Lake Maurepas basin in Louisiana, 1943-95
West Fork Thompson Creek near Wakefield, Louisiana (3)

Water-quality property or constituent	Number of analyses	Reporting level	Number of analyses greater than or equal to reporting level	Percentiles							
				Maximum	Minimum	Mean	5th	25th	50th (median)	75th	95th
Physical properties											
Specific conductance	16	(a)	(a)	109	66	86	66	82	86	89	109
pH (standard units)	16	(a)	(a)	7.9	5.8	6.6	5.8	6.2	6.6	6.9	7.9
Water temperature	7	(a)	(a)	25.5	10.0	(b)	(b)	(b)	(b)	(b)	(b)
Dissolved solids (milligrams per liter)	15	(a)	(a)	75	47	63	47	60	62	67	75
Major cations (milligrams per liter)											
Calcium, dissolved	16	0.01	16	6.1	1.2	4.6	1.2	4.2	4.8	5.2	6.1
Magnesium, dissolved	16	.01	16	4.4	1.4	2.0	1.4	1.7	1.8	2.2	4.4
Sodium, dissolved	16	.01	16	9.7	4.6	7.4	4.6	6.5	7.6	8.7	9.7
Potassium, dissolved	16	.01	16	3.4	1.6	2.5	1.6	2.3	2.6	2.9	3.4
Major anions (milligrams per liter)											
Alkalinity, total as CaCO ₃	6	1	6	24	20	(b)	(b)	(b)	(b)	(b)	(b)
Sulfate, dissolved	16	.1	16	9.2	5.0	7.6	5.0	6.5	7.9	8.8	9.2
Chloride, dissolved	16	.1	16	10	5.2	7.7	5.2	6.8	7.9	8.5	10

a Not applicable.

b Not calculated because sample size was less than 10.

c Not calculated because data base contained remarked values.

d Only one sample in data base.



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Water Resources Cooperative Program

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