TRENDS AND COMPARISON OF WATER QUALITY AND BOTTOM MATERIAL OF NORTHEASTERN ARKANSAS STREAMS, 1974-85, AND EFFECTS OF PLANNED DIVERSIONS

By James C. Petersen

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CONVERSION FACTORS

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

Multiply inch-pound unit	By	To obtain metric unit
foot (ft)	0.3048	meter (m)
foot per year (ft/yr)	0.3048	meter per year (m/yr)
cubic foot per second (ft^3/s)	0.02832	cubic meter per second (m^3/s)
inch (in.)	25.4	millimeter (mm)
million gallon per day (Mgal/d)	0.04381	cubic meter per second (m^3/s)
mile (mi)	1.609	kilometer (km)
square mile (mi^2)	2.590	square kilometer (km^2)
ton, short	0.9072	megagram (Mg)
ton per day (ton/d)	0.9072	megagram per day (Mg/d)

Temperature in degrees Fahrenheit (°F) as follows:

$$°F = 1.8 \times °C + 32$$

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ABSTRACT

Water quality of several rivers was statistically summarized and compared. Relative to the other rivers, the Arkansas River is more mineralized but is lower in nutrient, iron, manganese and turbidity values. Bayou Meto and Bayou Two Prairie are relatively high in concentrations of chloride, nitrogen and manganese and relatively low in concentrations of dissolved solids, alkalinity and hardness. The Black River and Current River have the best water quality in the study area. Values of several properties, including nutrients, bacteria, turbidity, and some metals, are lower than in all or almost all rivers in the area. Cache River and Bayou DeView are relatively high in values of turbidity, phosphorus, biochemical oxygen demand, fecal-coliform bacteria, and some pesticides and low in concentrations of dissolved constituents. The St. Francis River is relatively high in suspended sediment concentration. Tributaries of the St. Francis River are relatively high in concentrations of common dissolved constituents, phosphorus, several pesticides and trace metals, and suspended sediment. The White River generally has relatively low concentrations of major dissolved constituents, nutrients, and bacteria.

In bottom material, organochlorine pesticides were detected much more frequently than organophosphorus pesticides. Concentrations tend to be higher in rivers with bottoms of fine-grained particles.

Time trends in data for seven properties were examined using the Seasonal Kendall test. Trends in specific conductance, sodium adsorption ratio, chloride, and phosphorus usually were not detectable. Sulfate concentrations were increasing at approximately one-half of the stations while fecal-coliform bacteria and ammonia concentrations decreased at approximately one-half of the stations.

Most potentially detrimental effects upon water quality resulting from surface-water diversions detected were related to increases of common dissolved constituents. Available data indicate the largest of these increases would be caused by diversion from the Arkansas River.

Use of some surface waters for artificial recharge of the alluvial aquifer may have some detrimental effects upon the recharge systems or the aquifer. Possible effects include injection well and aquifer plugging and unknown effects upon the aquifer as a source of drinking water.

INTRODUCTION

Increased usage of surface water is being considered in response to higher pumping costs due to declining ground-water levels and deterioration of ground-water quality in some areas of northeastern Arkansas. The Eastern Arkansas Region Comprehensive Study is a multi-agency investigation of surface-water and ground-water conjunctive use options and related problems. Two of these options (examined by the U.S. Army Corps of Engineers and the Arkansas Soil and Water Conservation Commission) are diversion of surface water for irrigation and diversion of surface water into wells or surface pits for artificial recharge of ground water. These options include interbasin transfer of surface water. Tasks of the Eastern Arkansas Region Comprehensive Study include a description of existing water and bottom-material quality, assessment of effects of diversion on existing water and bottom-material quality, and assessment of the feasibility of artificial recharge. This report addresses these tasks and was prepared in cooperation with the Arkansas Soil and Water Conservation Commission.

Purpose and Scope

The purposes of this report are to: (1) describe and statistically summarize the water-quality, bottom-material quality, and suspended-sediment and bed-material data from streams and rivers in northeastern Arkansas (fig. 1); (2) assess possible effects of surface-water diversions on existing water-quality conditions in receiving streams; and (3) assess possible effects of use of selected surface waters for artificial recharge of ground water.

The summarization and assessments are based primarily upon data from stations (fig. 2, tables 1-2) operated by the Arkansas Department of Pollution Control and Ecology (ADPCE) and the U.S. Geological Survey collected between October 1, 1974, and September 30, 1985. Properties statistically summarized include discharge, dissolved oxygen, pH, specific conductance, total alkalinity, total hardness, common dissolved constituents, phosphorus, nitrogen, biochemical oxygen demand, bacteria, turbidity, suspended sediment concentration and size fractions, trace metals, pesticides, bed-material size fractions, and pesticides in bottom material. Some data collected at stations (fig. 3) that are not part of the Arkansas Department of Pollution Control and Ecology or U.S. Geological Survey networks were also used.

The most complete summarizations were performed upon water-quality and bottom-material data for surface-water stations that have been operated for at least 6 years during the period October 1974 through September 1985, and for some stations operated for a shorter period of time between 1974 and 1985 as part of a network of sediment-data stations operated for the Corps of Engineers. Less complete statistical summarizations were performed upon data for a few other stations with short periods of record. Data were retrieved from the U.S. Geological Survey's National Water Information System (NWIS) computer data base. ADPCE data are transferred annually into NWIS from the U.S. Environmental Protection Agency's STORET computer data base. Exact location descriptions of all stations can be found in the Geological Survey's annual Water-Data Reports for Arkansas (U.S. Geological Survey, 1976; 1977; 1978; 1979; 1980; 1981; 1982; Lamb and others, 1983; 1984; 1985; 1986).

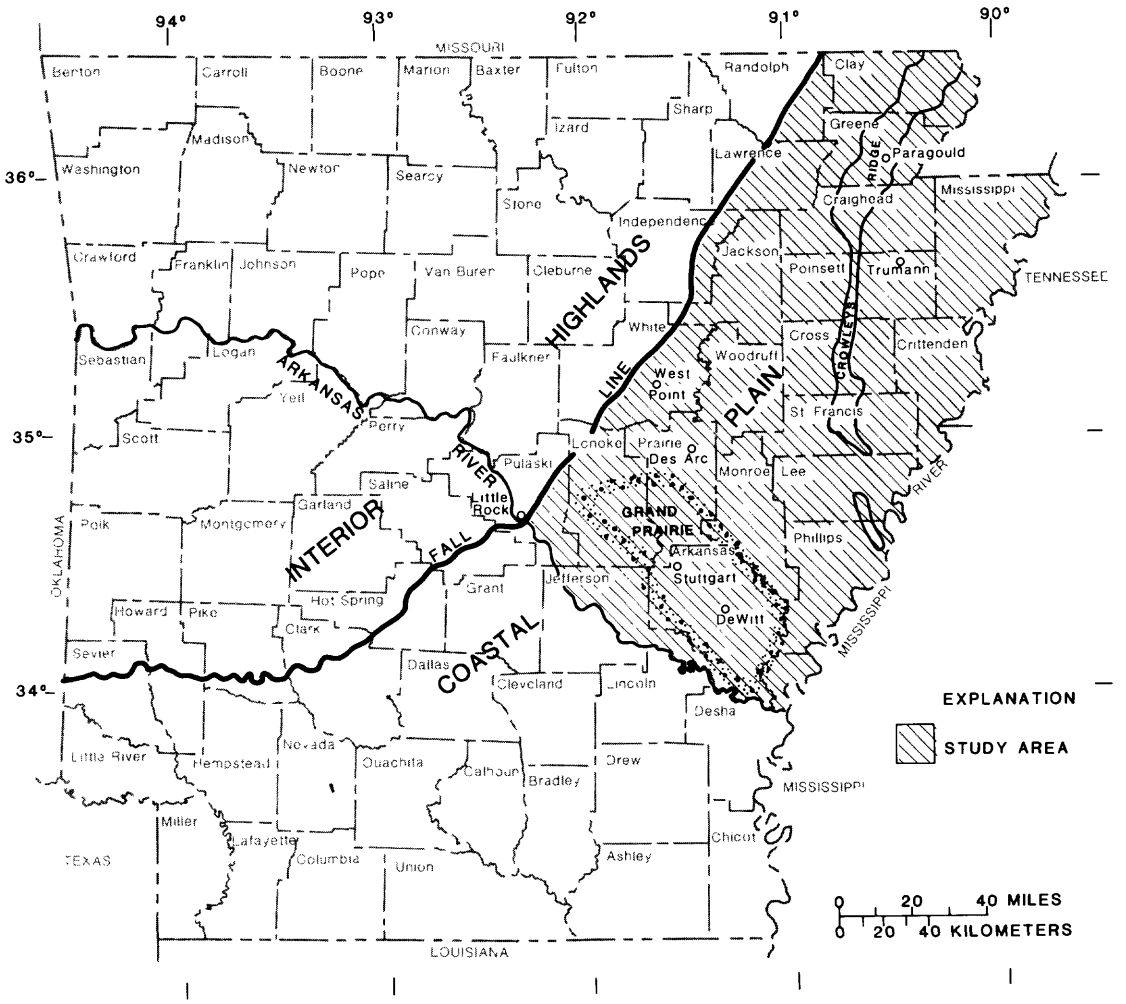
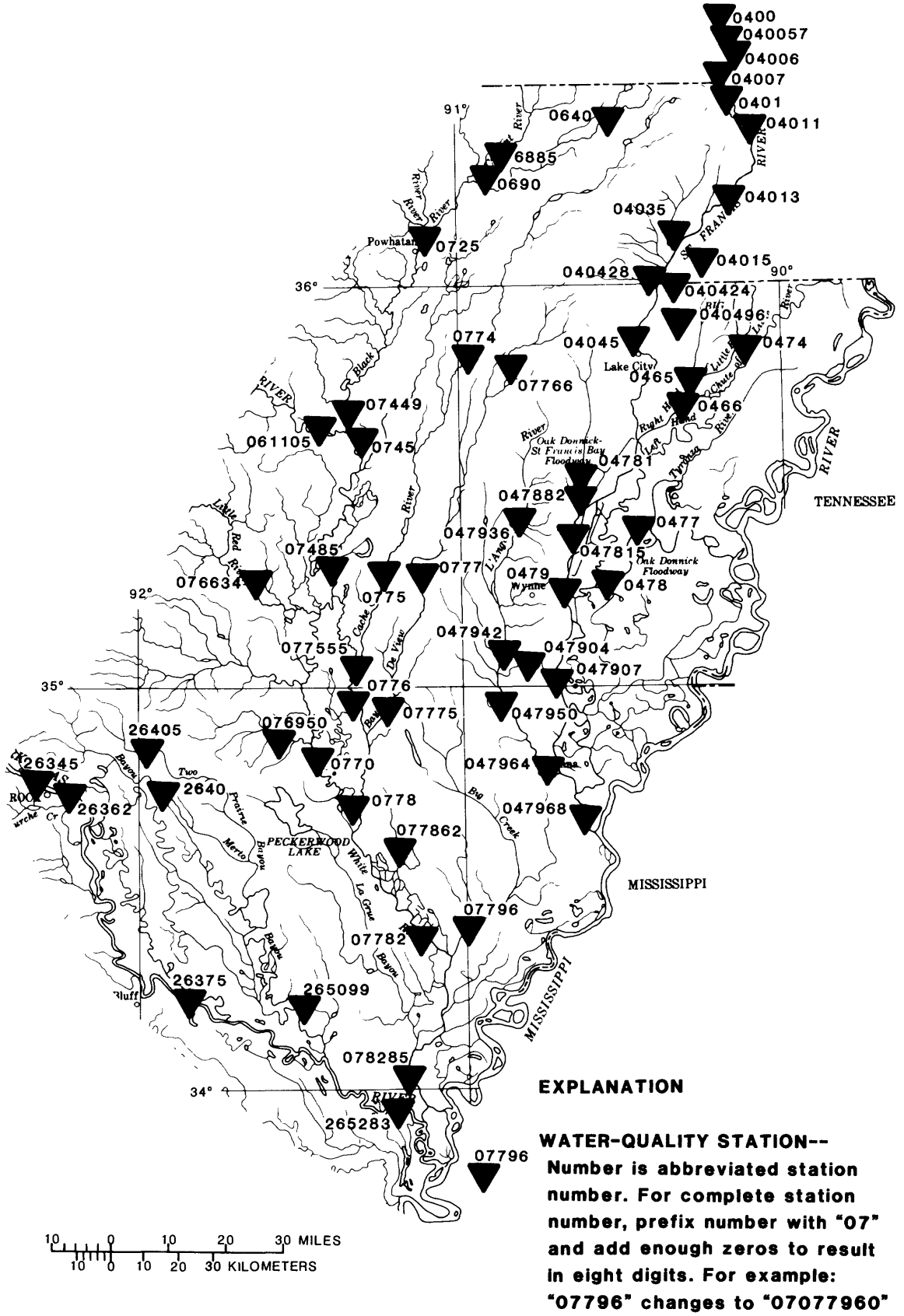


Figure 1.--Location of study area.



EXPLANATION

WATER-QUALITY STATION-- Number is abbreviated station number. For complete station number, prefix number with "07" and add enough zeros to result in eight digits. For example: "07796" changes to "07077960"

Figure 2.--Location of water-quality network stations operated by Arkansas Department of Pollution Control and Ecology and U.S. Geological Survey.

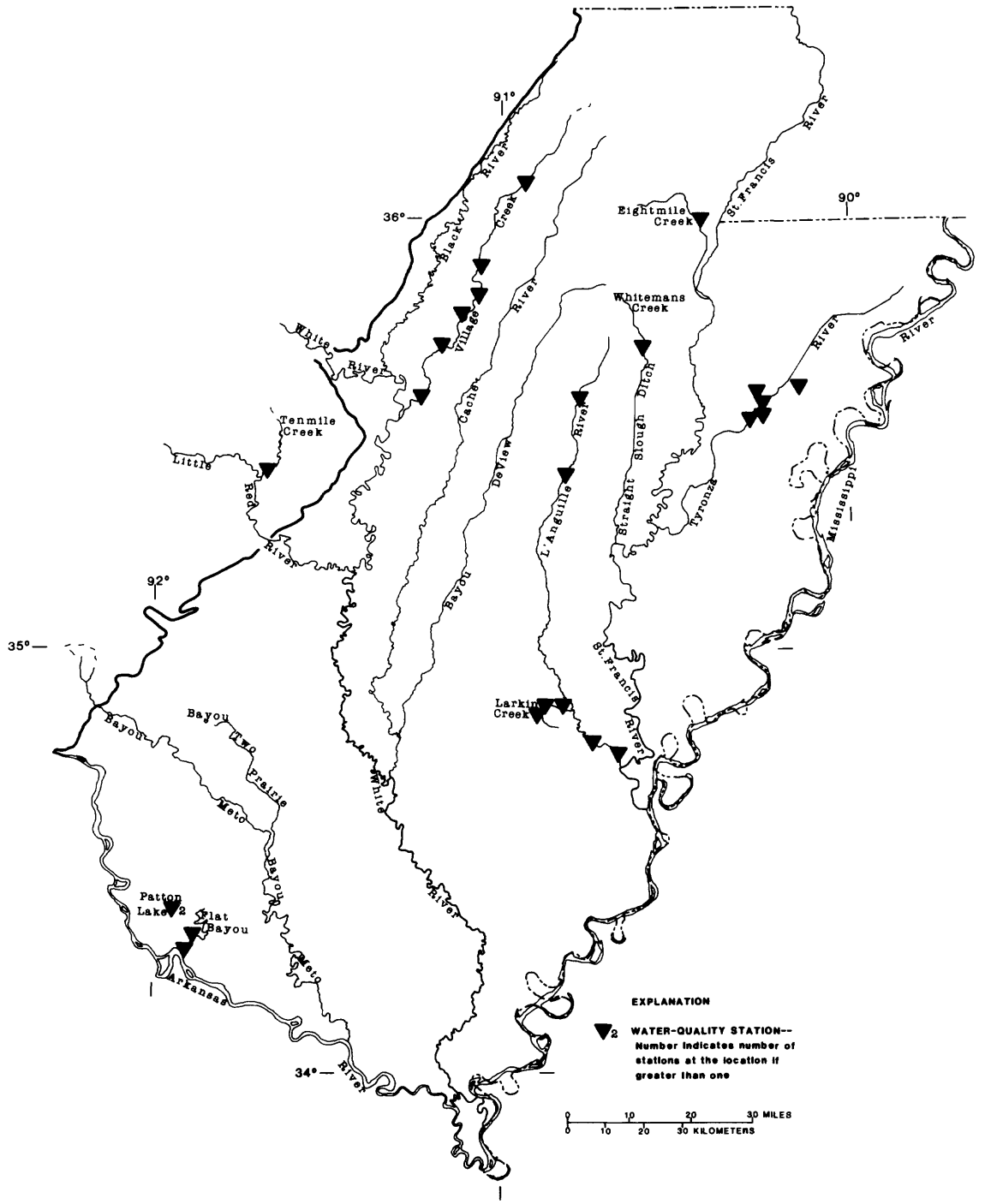


Figure 3.--Location of water-quality stations that are not part of Arkansas Department of Pollution Control and Ecology or U.S. Geological Survey networks.

The ADPCE collected and analyzed the water-quality samples at most of the stations (table 1). The U.S. Geological Survey performed all other water-quality sampling and analyses, although some sampling was in cooperation with the Arkansas Geological Commission or the U.S. Army Corps of Engineers. Both laboratories have quality-assurance programs (Friedman and Erdmann, 1982; Arkansas Department of Pollution Control and Ecology, 1986b) and use comparable methods (Guy, 1969; Greeson and others, 1977; Skougstad and others, 1979; Arkansas Department of Pollution Control and Ecology, 1986b; Wershaw and others, 1987).

The statistical summarization includes descriptive distributional statistics and (for a limited number of properties) an analysis of time trends using the Seasonal Kendall trend test. Because much of the agriculture-related usage of surface water would occur during the irrigation season, data collected during June through September were summarized separately. This period corresponds closely with rice and soybean irrigation periods identified by Gilmour and others (1981) and Peralta and Dutram (1984).

Study Area Description

The study area is bounded by the Arkansas-Missouri State line on the north, the Mississippi River on the east, the Arkansas River on the south, and the Fall Line between the Coastal Plain and the Interior Highlands on the west (fig. 1). The study area lies entirely within the Mississippi Alluvial Plain physiographic section (Fenneman, 1938). Agriculture is the most common land use in the area. Rice, soybeans, winter wheat, and cotton are the most common crops. Average rainfall ranges from about 47 to 51 inches per year. March, April, and May generally are the wettest months of the year; June, August, and October generally are the driest months (Freiwald, 1985).

Some surface-water quality properties of the Mississippi Alluvial Plain of Arkansas previously have been compared to other physiographic sections in the State (Petersen, 1988). The streams in the Mississippi Alluvial Plain generally are the most turbid in Arkansas. Nutrient and fecal coliform concentrations are some of the largest in Arkansas.

The Mississippi River Valley alluvial aquifer (hereafter referred to as the alluvial aquifer), which underlies the entire study area, is the major source of water for eastern Arkansas. In 1985, approximately 3,000 million gallons per day (Mgal/d) was withdrawn from the alluvial aquifer, mostly for agricultural purposes. Ground-water availability and quality problems are becoming important concerns in parts of the study area (Bryant and others, 1985; Morris and Bush, 1986; Plafcan and Edds, 1986; Plafcan and Fugitt, 1987).

Previous Investigations

Previous investigators have summarized statistically water-quality data in the study area (table 1). Ward (1963) summarized data for nitrate, common dissolved constituents, specific conductance, iron, pH, color, temperature and streamflow from eight stations for the period 1946 through 1960. Jeffus and others (1967) updated Ward's report to include data through 1965. Steele

(1971) presented a more detailed statistical and graphical summary of data for three of the stations summarized by Ward (1963) and by Jeffus and others (1967). Data summaries were chiefly of the same properties but were for the period 1946 through 1969. Petersen (1988) summarized the water quality of streams and rivers in Arkansas and described the relation between specific conductance and selected dissolved constituents and also total alkalinity. Many of the descriptive statistics included in that report are reproduced in this report.

Briggs and Ficke (1977) and Britton and others (1983) summarized statistically stream-quality data from four of the U.S. Geological Survey's National Stream Quality Accounting Network (NASQAN) stations in the study area during the 1975 and 1976 water years. Properties summarized include specific conductance, pH, common dissolved constituents, trace metals, dissolved solids, hardness, nutrients, suspended sediment, turbidity, temperature, fecal coliform and fecal streptococcal bacteria, phytoplankton and periphyton.

The Geological Survey has conducted several nationwide studies of water-quality time trends at NASQAN stations using the Seasonal Kendall trend test (Crawford and others, 1983), a nonparametric test that considers seasonal and streamflow effects on water quality. A study of trends during 1972 through 1979 of total phosphorus measurements at NASQAN stations (Smith and others, 1982) included four stations on the Arkansas River. There was no trend in raw phosphorus concentrations, nor in flow-adjusted phosphorus concentrations. Phosphorus transport either decreased or there was no significant trend. Trend analyses for water years 1975 through 1981 of raw and flow-adjusted values of several properties at NASQAN stations, including four in the study area, were conducted by Smith and Alexander (1983, 1985). Stoner (1985) detected increasing flow-adjusted dissolved-solids concentrations for water years 1968 through 1982 at two of the three stations (Arkansas River at Dam 13 near Van Buren and Arkansas River at David D. Terry Lock and Dam below Little Rock) on the Arkansas River.

Wells and Schertz (1983) summarized daily temperature, conductance, streamflow and monthly dissolved solids data for water years 1972 through 1981 for six NASQAN stations in the study area. Daily dissolved oxygen and pH data were summarized for one of the six stations.

The ADPCE periodically publishes a water-quality inventory report (Arkansas Department of Pollution Control and Ecology, 1974; 1975; 1976; 1977; 1980; 1982; 1984; 1986a). These reports summarize annual water-quality data by water-quality planning segments or occasionally by station. The 1984 and 1986 reports include time trends calculated by linear regression of water quality and time for data collected during February, March, and April, and during July, August, and September. Mean, standard deviation, and maximum and minimum values also are reported. Properties summarized include temperature, dissolved oxygen, pH, dissolved chloride, dissolved sulfate, dissolved solids, total phosphorus, total nitrite plus nitrate, turbidity, trace metals, and fecal coliform bacteria. The 1980 report compares the 1969 through 1974 means with the 1975 through 1979 means of several properties at individual stations.

Several investigations of surface-water quality have yielded specific data, generally collected during a short period of time. Reports describing

these investigations include Lamb (1978a, 1978b); Bryant and others (1979); Lamb (1979); Lamb and Newsom (1979); Petersen (1981a, 1981b); Bennett and others (1987); Giese and others (1987); and Shateri-Mirabadi (1987).

Acknowledgments

Jeff J. Atkins of the Memphis District of the U.S. Army Corps of Engineers provided unpublished water-quality data. Kenneth M. Bright of the Memphis District of the U.S. Army Corps of Engineers and Barry J. Bruchman of the Vicksburg District of the U.S. Army Corps of Engineers provided maps and descriptions of locations of proposed surface-water diversions.

DATA SUMMARIZED

The properties summarized were selected on the basis of the number of analyses available, environmental or water-use significance, and data variability. The ADPCE and the U.S. Geological Survey water-quality data summarized in this report previously have been assigned parameter code numbers and stored in the U.S. Environmental Protection Agency's STORET and the Geological Survey's NWIS computerized data bases. The properties (parameters), associated parameter codes, and water years summarized are listed in table 2.

Sample collection methods of the Geological Survey and ADPCE differ. Most samples collected by the Geological Survey are composite cross-sectional samples collected by using the equal transit rate method (Guy and Norman, 1970). One station (Black River at Black Rock) is sampled by collecting a single or point sample near the river bank. ADPCE collects samples at midstream, or at quarter points, and at middepth or 5 feet, whichever is less (Arkansas Department of Pollution Control and Ecology, 1986b).

Values for some similar properties were combined. Values of laboratory-measured total alkalinity and field-measured total alkalinity were considered to be equivalent. When mean daily discharge values were available and instantaneous discharge values were unavailable, the mean daily values were substituted for the instantaneous discharge values.

The Geological Survey and ADPCE currently use different methods for analysis of both fecal coliform and fecal streptococcal bacteria. These results are stored in NWIS using different parameter codes. The codes and a brief description of the differences in methods are listed below:

31616 (fecal coliform bacteria) - 0.45 micrometer pore-diameter filter
31625 (fecal coliform bacteria) - 0.7 micrometer pore-diameter filter
31679 (fecal streptococcal bacteria) - m-enterococcus agar
31673 (fecal streptococcal bacteria) - KF agar.

Fecal coliform bacteria counts using a 0.7 micrometer filter typically are higher than counts using a 0.45 micrometer filter (G.E. Mallard, U.S. Geological Survey, oral commun., 1985). Because counts resulting from the two fecal coliform methods are not comparable and because the fecal streptococcal counts may not be comparable, data were not combined.

The discharge data summarized in the tables are for instantaneous or mean daily measurements that correspond to a water-quality sample. Therefore, these measurements rarely, if ever, include measurements of the actual maximum or minimum discharges. For several stations, statistical summaries (monthly and annual) of continuously measured discharge are available in the U.S. Geological Survey's annual Water-Data Reports (U.S. Geological Survey, 1976; 1977; 1978; 1979; 1980; 1981; 1982; Lamb and others, 1983; 1984; 1985; 1986).

At stations that are part of the network of sediment stations operated for the U.S. Army Corps of Engineers in the St. Francis River basin (table 1), main-channel and overbank water often were sampled separately. Discharge and water-quality data for main-channel and overbank samples were not combined into single values.

At most stations, dissolved oxygen measurements were made during routine sampling visits. However, data included for some stations are nighttime measurements made during more intensive studies. Nighttime dissolved oxygen concentrations often are less than daytime concentrations. Stations for which nighttime dissolved oxygen concentration data (Bryant and others, 1979) were included are L'Anguille River near Colt (07047942) and L'Anguille River at Marianna (07047964).

At several U.S. Geological Survey stations during 1985, water samples were collected nearly simultaneously at numerous cross-section locations at each station. Values of pH, dissolved oxygen concentration, specific conductance, and suspended-sediment concentrations associated with these cross-section samples were determined and are stored in NWIS. These values were not included in the statistical analyses for this report.

Some suspended-sediment and bed-material particle-size data were generated after the available data were retrieved from NWIS. These data were generated when the percent suspended sediment or bed material for a given particle size was 100, thereby making reporting of percentages for larger particle sizes redundant. For example, if the reported value for suspended sediment, fall diameter percent finer than 0.250 millimeter (mm) was 100 percent, the values for percent finer than 0.50 mm and 1.00 mm were changed from not reported to 100 percent for statistical purposes.

CALCULATION AND REPORTING OF DESCRIPTIVE STATISTICS

P-STAT[1] (P-STAT, Inc., 1986) and the UNIVARIATE procedure of the Statistical Analysis System (SAS Institute, 1982a and 1982b) were used for calculation of the descriptive statistics. The Statistical Analysis System was also used to prepare many of the tables. The data sets summarized commonly contained a large number of values reported as "less than" some value, that value being the analytical detection limit. These data are referred to as "censored" data. This necessitated using some method for estimation of the mean and standard deviations of data sets containing censored data. Several

[1]Use of a firm name in this report is for identification purposes only and does not constitute endorsement by the U.S. Geological Survey.

methods have been compared (Gilliom and Helsel, 1986; Helsel and Gilliom, 1986). These authors reported that the best of the methods evaluated for the estimation of mean and standard deviation assumes that censored data follow the zero-to-detection limit part of a log-normal distribution fit to observations above the detection limit by least-squares regression. A procedure using this method for estimating means and standard deviations has been developed (Helsel and Cohn, 1988) and was used for estimating these values. Because of the uncertainty involved with estimating means and standard deviations when censored values compose greater than about 75 percent of the total values, estimated mean and standard deviation are not reported when greater than 75 percent of data are censored.

Values of several of the summarized properties have been reported in the published literature as zero. For many properties, detection limits have changed during the period 1975 through 1985. To make the data for a station more uniform and because it was required for the estimation of means and standard deviations, the greatest detection limit for each property was determined and used. All values less than this detection limit (DL) were changed to <DL (less than DL). For example, if detection limits of 1 and 2 were used during the period of summary, values of <1 and 1 were changed to <2. These properties and detection limits are shown in table 3.

Censored values also are reported for bacteria analyses but, because the detection limit is dependent on the volume of sample filtered, the number of detection limits can be relatively large. Therefore, bacteria values reported as less than some number were arbitrarily multiplied by 0.5 and treated as uncensored for the statistical analysis. The procedure for estimation of means and standard deviations of censored data was not used for analyzing bacteria data. Bacteria count values also can be reported as "greater than" or "nonideal plate count." Values qualified by these two remarks were set equal to the unremarked value for calculation of all statistics. Because means and standard deviations are the most likely statistical parameters to be biased by these procedures, they are not reported in the tables.

In the summary tables, the minimum, median, maximum, and quartiles may be shown as less than some number. This can be used to approximate the number of censored values in the data set. For example if the minimum and 25th percentile values are reported as "<" some number, then between 25 and 50 percent of the data were either censored values or detected values less than the greatest detection limit used during the summary period.

WATER-QUALITY TIME TRENDS

Testing historical water-quality data for time trends is another component of water-quality data examination. Although historical trends may not persist into the future, knowledge of their existence, particularly when coupled with possible causal factors, can be helpful to water managers.

Methods

The Kendall's Tau test (Kendall, 1975) is the basis of the Seasonal Kendall test used in water-quality trend testing (Smith and others, 1982).

Both tests are nonparametric tests and do not require that data are distributed normally. Because water-quality data can vary seasonally the Seasonal Kendall test compares data only with other data collected during the same "season." In this study, the water year was divided into six seasons of approximately 61 days beginning on October 1. In the Seasonal Kendall test used in this study median values are computed for each season. These medians are then ranked within season and compared with all other medians in the same season. If the number of comparisons with larger medians occurring later in time (x_i) minus the number of comparisons with larger medians occurring earlier in time (x_d) is sufficiently different from zero ($x_i - x_d \neq 0$) a statistically significant trend exists.

Water quality varies with discharge. For example, total phosphorus concentration may increase or decrease as discharge increases depending upon the relative influence of factors such as erosion and dilution. Thus a detected trend in water quality may be the result of changing discharge resulting from climatic conditions (Smith and others, 1982).

The relation between discharge and water quality can often mask or enhance trends resulting from changes in processes (such as land use and point-source water discharge) affecting introduction of water-quality constituents into streams. Because it generally will be at least as important to examine trends resulting from processes affecting the introduction of phosphorus, for example, into a stream as it is to examine trends in phosphorus concentration, a flow-adjustment procedure was used to look for trends in flow-adjusted concentrations. Flow-adjusted concentrations are less affected by climate, and therefore, relatively more affected by processes affecting introduction of constituents into streams.

Several common regression models (Crawford and others, 1983) were used for flow adjustment:

$\hat{C} = a + bQ$	linear	(1)
$\hat{C} = a + b(\ln Q)$	log-linear	(2)
$\hat{C} = a + b(1/Q)$	inverse	(3)
$\hat{C} = a + b_1 Q + b_2 Q^2$	quadratic	(4)
$\ln \hat{C} = a + b(\ln Q)$	log-log	(5)
$\ln \hat{C} = a + b_1(\ln Q) + b_2(\ln Q)^2$	log-quadratic log	(6)
$\hat{C} = a + b \frac{1}{(1+B(1/Q))}$	hyperbolic 1-hyperbolic 8	(7-14)

where $\hat{C}$ = predicted concentration
a = intercept of the regression line
b = slope of the regression line
Q = discharge
$B = 10^{-x}$ to $10^{(-x+3.5)}$, where x is equal to 2.5 + integer of $\log_{10}$ of the mean discharge (Crawford and others, 1983; German and Schiffer, 1988) and is incremented by $10^{0.5}$ seven times. (Hyperbolic 1 for $B = 10^{-x}$ to hyperbolic 8 for $B = 10^{(-x+3.5)}$.

The most appropriate of the 14 models was selected by the following criteria:

(1) Probability value of the F or t statistics associated with the regression must be <0.10.

(2) Plot of residual versus predicted concentration indicates that the variance is relatively constant throughout the range of predicted concentration. The residual is the difference between the actual value of the dependent variable and the dependent variable value predicted by the regression model.

(3) Equation with largest value of coefficient of determination (r^2) of equations meeting the first two criteria is selected. However, r^2 values of models based on log concentration (equations 5 and 6) were not compared with the values from models based on concentration. In this case the model that best met criterion 2 was selected.

After the flow-adjustment model was selected, the residuals were tested for trend with the Seasonal Kendall test.

Some of the data analyzed with the Seasonal Kendall test were modified so they could be used in the test. Some values of dissolved sulfate, fecal-coliform bacteria, total phosphorus, and total ammonia were censored data; they were reported as less than some detection limit. These values were set equal to one-half the detection limit. Because (except for the fecal coliform bacteria data) detection limit values often decreased during the study period, the presence in a data set of more than one detection limit may introduce a slight decreasing trend bias to the Seasonal Kendall test. At each station, the influence of these censored data was evaluated graphically by plotting concentration against time and highlighting the values reported as less than the detection limit. Factors considered were actual number of values reported as less than each detection limit, temporal distribution of these values, the distribution of concentration values with time (i.e., the magnitude and slope of the trend), and the trend probability calculated by the Seasonal Kendall test. The percent of actual censored values was small (generally less than 5 percent) and the number of censored data which differed from other censored data because of the detection limit was extremely small. This graphical evaluation indicated that the censored data did not substantially affect trend results (except for total ammonia at Current River near Pocahontas, table 16). Fecal-coliform bacteria values were also censored as estimated, greater than, and non-ideal plate count values. These values were deleted, used as reported, and used as reported, respectively. If the censored concentration data-discharge data pairs to be used for flow adjustment exceeded 5 percent of the concentration data-discharge data pairs, no flow adjustment was attempted (except for fecal-coliform bacteria) because of the potential invalidity of the resulting flow-adjustment model.

To estimate the magnitude of identified trends the Seasonal Kendall Slope Estimator (Smith and others, 1982) was calculated. This value is the median of the differences (expressed as slopes per year) of the pairs of data values used in the Seasonal Kendall test. It is an estimate of the trend rate of increase or decrease and for many water-quality properties is expressed as mg/L per year.

Trends in water-quality data were tested only when data were available for 5 or more years. These years often were not consecutive.

Specific Conductance

At most stations statistically significant ($p<0.10$) trends in specific conductance or flow-adjusted specific conductance were not detected in January through December data or in June through September data (tables 4-40). The four stations (White River at Oil Trough, 07061105; White River near Augusta, 07074850; Little Red River at Judsonia, 07076634; and Cache River near Cash, 07077400) for which a significant trend in the raw January through December data was detected are clustered near the central part of the northwestern border of the study area (fig. 2). The trends of data at these four stations were increasing at rates of approximately 3 to 10 microsiemens per centimeter per year. Very few trends were detected in other data.

Sodium Adsorption Ratio

At most stations statistically significant ($p<0.10$) trends in sodium adsorption ratio or flow-adjusted sodium adsorption ratio were not detected in January through December or in June through September data (tables 4-40). The most significant trends ($p<0.01$) were the downward trends detected in raw (0.25 units per year) and flow-adjusted January through December data for Arkansas River near Gillett (07265283). Only 10 stations had sufficient data for trend testing.

Dissolved Sulfate

Data for a relatively large number of stations indicate increasing dissolved sulfate concentrations (tables 4-40). Statistically significant ($p<0.10$) increasing trends of raw concentrations in January through December (approximately 0.2 to 1.6 mg/L per year) were detected at 17 of 37 stations. A decreasing trend was detected at only one station, Tyronza River near Twist (07047700). The 17 stations were scattered throughout all but the central section of the eastern part of the study area. The percentage of stations where no detectable trends were identified is much larger when data are flow adjusted or were collected in June through September.

Dissolved Chloride

At most stations statistically significant ($p<0.10$) trends in dissolved chloride were not detected (tables 4-40). Significant increasing trends were more common than decreasing trends in raw and flow-adjusted concentrations in January through December and in June through September data.

Fecal-Coliform Bacteria

At nearly one-half (17 of 37) of the stations a statistically significant ($p<0.10$) decreasing trend in January through December raw fecal-coliform bacteria concentrations (approximately 4 to 130 colonies per 100 mL per year) was detected (tables 4-40). These stations are distributed homogeneously throughout the study area. Similar results were found when flow-adjusted data and June through September data were analyzed. No increasing trends were detected.

Total Phosphorus

At most stations (about 75 percent) significant ($p<0.10$) trends in raw or flow-adjusted total phosphorus concentration were not detected (tables 4-40). Statistically significant trends were not detected in the flow-adjusted June through September data at the three stations tested. For each type of data tested there was an equal number of stations with significant increasing and decreasing trends. In general, stations with significant decreasing trends are in the eastern part of the study area and stations with significant increasing trends are in the western part of the study area.

Total Ammonia

Statistically significant increasing trends in total ammonia were seldom detected (tables 4-40). Significant decreasing trends in raw January through December data (approximately 0.005 to 0.07 mg/L per year) were detected at 18 of 33 stations. These stations are distributed homogeneously throughout the study area. Decreasing trends in raw June through September data were detected at 4 of 17 stations. Flow-adjusted concentrations were calculated for only one station, Cache River near Cash.

TRENDS AND COMPARISON OF WATER QUALITY OF STREAMS

Water-quality data for stations operated at least 6 years between October 1974 and September 1985 and sediment-data stations operated during the period are summarized in tables 41-119. Substantial differences in water quality exist. Many water-quality properties are influenced by hydrologic, geologic, and land use differences.

Water-quality stations on the (1) Arkansas River mainstem, (2) Bayou Meto and Bayou Two Prairie, (3) Black River and Current River, (4) Cache River and Bayou DeView, (5) St. Francis River mainstem, (6) St. Francis River tributaries, and (7) White River mainstem were grouped together to assess differences in water quality between these groups. Typical (median) values and generalized time trend information of selected water-quality properties for each of these station groupings are shown in table 120 and are discussed below.

Arkansas River

Typical specific conductance, dissolved sulfate, dissolved chloride, and dissolved solids values are higher in the Arkansas River than in any other river group. Total phosphorus, biochemical oxygen demand, turbidity, iron, and manganese values are lower than values of most other groups. Available data indicate that the Arkansas River has lower concentrations of suspended sediment and higher percentages of sand-sized or larger particles than the other groups.

In general, time trends were not statistically significant ($p<0.10$) for specific conductance, dissolved sulfate, dissolved chloride, and total

phosphorus values. Total ammonia concentrations decreased and fecal-coliform bacteria concentrations decreased or did not change significantly.

Bayou Meto-Bayou Two Prairie

Typical dissolved chloride, total ammonia, total nitrite plus nitrate, and total recoverable manganese concentrations are higher in Bayou Meto and Bayou Two Prairie than in most other river groups. Dissolved chloride concentrations generally are exceeded only by concentrations in the Arkansas River. Dissolved chloride concentrations are substantially larger at the station at Bayou Meto near Lonoke than at the other two stations in this group. Dissolved solids concentrations generally are lower in this group than in any other river group. Specific conductance, total alkalinity, and total hardness values are comparable to values in the Cache River-Bayou DeView group and lower than in all other groups.

In general, time trends were not significant ($p<0.10$) for specific conductance, dissolved chloride, total phosphorus, total ammonia, and fecal-coliform bacteria. Sulfate concentrations generally increased.

Black River-Current River

This river group, by several measurements, has the best typical water quality in the study area. Typical biochemical oxygen demand, fecal-coliform bacteria, turbidity, and total recoverable zinc values are lowest in this group. Dissolved sulfate, dissolved chloride, total phosphorus, total ammonia, and total recoverable iron concentrations are comparable to those in the White River and lower than in any other group.

In general, time trends were not significant ($p<0.10$) for specific conductance, dissolved chloride, total phosphorus, and fecal-coliform bacteria. Generally, dissolved sulfate concentrations increased and total ammonia concentrations decreased during the study period.

Cache River-Bayou DeView

Typical values of turbidity, total recoverable manganese, total 2,4-D, and percent of sediment finer than 0.062 mm (silt or clay) are higher in this river group than in other river groups. Dieldrin concentrations were highest in this group and in the St. Francis River tributaries group. Total phosphorus, biochemical oxygen demand, and fecal-coliform bacteria values generally are higher in this group than in most other groups in the study area. Specific conductance, total alkalinity, and total hardness values are comparable to values in the Bayou Meto-Bayou Two Prairie group and lower than in all other groups.

Daily sediment data have been collected since April 1987 at Cache River at Patterson (07077500) and Cache River near Cotton Plant (07077555). Data for water year 1988 are summarized in tables 121-122. Values of water discharge, suspended sediment concentration, and suspended sediment discharge are not normally distributed. High (relative to median values at the two

stations) discharges, suspended sediment concentrations, and suspended sediment discharges occur infrequently and during flood events. For example, in water year 1988, about 22 percent of the annual sediment discharge at Patterson occurred between December 24, 1987, and January 4, 1988, and about 15 percent of the annual sediment discharge at Cotton Plant occurred between December 26, 1987, and January 3, 1988. Annual suspended sediment discharges at Patterson and Cotton Plant were 96,800 and 78,500 tons, respectively.

In general, time trends were not statistically significant ($p<0.10$) for specific conductance and total phosphorus. Trends in dissolved sulfate and chloride concentrations increased or no significant trends were detected. Significant decreasing trends generally were detected in total ammonia and fecal-coliform bacteria concentrations.

St. Francis River

In general, typical concentrations of total recoverable iron and zinc are highest in this river group. Highest suspended sediment concentrations typically are found in the St. Francis River and its tributaries. Chloride concentrations in the St. Francis River are lower and biochemical oxygen demand concentrations are higher than in most other groups.

Daily sediment data have been collected since February 1985 at St. Francis River at St. Francis, 07040100. Data for water years 1986 through 1988 are summarized in table 123. Values of discharge, suspended sediment concentration, and suspended sediment discharge are not normally distributed. Extremely high (relative to median values at this station) discharges, suspended sediment concentrations, and suspended sediment discharges occur infrequently during flood events. For example, about 22 percent of the total sediment discharge during water year 1986 occurred on March 12 through 14 and May 15 through 17. Also, approximately 1,510,000 tons of sediment passed the station during the 3-year period and nearly 3 percent (43,200 tons) was discharged on a single day.

In general, statistically significant ($p<0.10$) time trends were not detected for specific conductance and total phosphorus. Mixed trends were detected for dissolved sulfate (increasing or no trend), dissolved chloride (increasing or no trend), and fecal-coliform bacteria (decreasing or no trend). Ammonia concentrations generally decreased.

St. Francis River Tributaries

Typical specific conductance, dissolved sulfate, and dissolved solids values generally are higher for this river group than values for all groups except the Arkansas River. Typical total phosphorus, total dieldrin, and total 2,4-D concentrations generally are higher than values for all groups except the Cache River-Bayou DeView. Highest suspended sediment concentrations typically are found in the St. Francis River and its tributaries. Generally, biochemical oxygen demand, turbidity, total recoverable iron, total recoverable manganese, and total recoverable zinc values are higher than values for most other groups.

Time trends were not statistically significant ($p<0.10$) for specific conductance and total ammonia, and generally were not significant for dissolved sulfate, dissolved chloride, and total phosphorus. Time trends generally were not significant or were decreasing for fecal-coliform bacteria.

White River

Typical dissolved sulfate, dissolved chloride, total phosphorus, total ammonia, total nitrite plus nitrate, fecal-coliform bacteria, turbidity, and total recoverable iron values for this river group are comparable to values of the Black River-Current River group and generally are lower than all other groups. Total alkalinity concentrations are relatively high.

In general, time trends were not statistically significant ($p<0.10$) for specific conductance, dissolved chloride and total phosphorus. Trends were either not significant or decreasing for fecal-coliform bacteria. Generally, dissolved sulfate concentrations increased and total ammonia concentrations decreased.

PESTICIDES IN BOTTOM MATERIAL

Compared to the amount of pesticides data available for water samples there is a limited amount of pesticide data available for bottom material. Bottom material has been sampled to determine pesticide concentrations for varying periods of time at six network stations operated by the U.S. Geological Survey. These stations are:

St. Francis River at Parkin, 07047800 (tables 59-60)
L'Anguille River near Colt, 07047942 (tables 69-70)
Black River at Black Rock, 07072500 (tables 81-82)
Cache River at Patterson, 07077500 (tables 95-96)
Bayou DeView at Morton, 07077700 (tables 100-101)
White River at Clarendon, 07077800 (tables 103-104)

Other pesticide data are available for the L'Anguille River and tributaries (Bryant and others, 1979); Larkin Creek and its tributaries (Petersen, 1981a); Flat Bayou (Lamb, 1979); Patton Lake (Petersen, 1981b); Tyronza River (Lamb, 1978a); Village Creek (Lamb, 1978b); Whitemans Creek (Jeff J. Atkins, U.S. Army Corps of Engineers, written commun., 1988) given in table 124; and Eightmile Creek (Jeff J. Atkins, U.S. Army Corps of Engineers, written commun., 1988) given in table 125. Stations are located on figure 3.

Organochlorine pesticides were detected in bottom material more frequently than organophosphorus pesticides (table 126). This is probably the result of greater environmental persistence and lower solubility of the organochlorine pesticides.

Available data indicate differences in concentrations of pesticides in bottom material from different parts of the study area (table 126). Concentrations of pesticides in bottom material appear to be highest in rivers that have bottom materials composed of finer particles, for example, the L'Anguille River (tables 69-70) and Bayou DeView (tables 100-101) and lowest in rivers with bottom materials of coarser particles such as the St. Francis River (tables 59-60) and the White River (tables 103-104).

The highest typical concentrations of pesticides occurred in Flat Bayou. Median concentrations of DDD, DDE and DDT were 76, 100, and 13 micrograms per kilogram (µg/kg), respectively. Other pesticides detected in at least 50 percent of samples were aldrin, dieldrin, endrin, and heptachlor epoxide.

The second highest typical concentrations of pesticides occurred in the L'Anguille River at Colt. These concentrations are similar to those that occurred at several locations in the L'Anguille River basin (Bryant and others, 1979; Petersen, 1981a). Median concentrations of DDD, DDE, and DDT at the Colt station were 17, 16, and 5.6 µg/kg, respectively. Other pesticides detected in at least 50 percent of samples at Colt were aldrin, dieldrin, and endrin.

Typical concentrations for Bayou DeView at Morton generally are lower than those for Flat Bayou or the L'Anguille River but higher than at other locations. Median concentrations of DDD, DDE, and DDT were 9.3, 7.6, and 5.6 µg/kg, respectively. Aldrin was also detected in at least 50 percent of the samples.

Typical concentrations of pesticides in the Village Creek basin, Cache River, the Tyronza River basin, and Black River generally ranged from 0.1 to 5 µg/kg of DDD, DDE, DDT, and dieldrin. Other pesticides usually were detected in less than 50 percent of samples.

Typical concentrations of nearly all pesticides were below detection limits in the St. Francis and White Rivers (table 126). Only dieldrin in the St. Francis River was detectable in at least 50 percent of samples.

COMPARISON OF DATA WITH WATER-QUALITY CRITERIA AND STANDARDS

The 75th percentile (25th percentile for dissolved oxygen) for each property at each station was compared to water-quality criteria and standards (table 127). For several properties, reporting limits exceeded criteria or standards and therefore comparisons could not be made.

Commonly Unmet Criteria and Standards

Values for six properties frequently (at least 25 percent of samples) exceeded criteria or standards at greater than one-third of the stations. The properties are iron, total phosphorus, fecal-coliform bacteria, turbidity, lead and copper.

Iron

The criterion for iron (1,000 micrograms per liter (µg/L)) was not met by at least 25 percent of the samples at nearly all (about 90 percent) stations. The stations that most often met the criterion for iron generally are near where the rivers enter the Coastal Plain.

Total Phosphorus

The guideline for total phosphorus (0.10 mg/L) was not met by at least 25 percent of the samples at about 80 percent of the stations. The stations that most often met the phosphorus guideline generally are near the boundary of the Coastal Plain.

Fecal-Coliform Bacteria

The standard for fecal coliform bacteria (geometric mean of 200 colonies per 100 mL between April 1 and September 30) may often be exceeded. January through December data indicate that bacteria concentrations exceeded 200 colonies per 100 mL in at least 25 percent of the samples collected at about two-thirds of the stations.

Turbidity

At approximately 40 percent of the stations the applicable turbidity criterion was exceeded in at least 25 percent of the samples. This criterion is not to be exceeded as the result of waste discharge or instream activity (Arkansas Department of Pollution Control and Ecology, 1988).

Lead and Copper

Lead and copper concentrations frequently may exceed acute or chronic freshwater aquatic-life criteria (table 127). However the concentrations recommended in these criteria are dependent on water hardness. Lead and copper concentrations arbitrarily were compared to criteria based on a water hardness of 100 mg/L. Using this comparison, at least one-third of the stations exceeded the copper criterion and at least two-thirds of the stations exceeded the lead criterion at least 25 percent of the time. Detection limits frequently were greater than the chronic freshwater aquatic-life criteria; this also prevented a more accurate estimation of the number of stations at which criteria frequently were exceeded.

Comparisons by River

The water quality of the six rivers sampled at three or more stations (Arkansas River, Bayou DeView, Black River, Cache River, St. Francis River, and White River) was compared individually to applicable standards or criteria. The 75th percentile again was used in comparisons with the standards or criteria.

Arkansas River

The water-quality standards or criteria frequently (in excess of 25 percent of samples) exceeded at the most Arkansas River stations were the

phosphorus and lead criteria and the fecal coliform standard (based on January through December data). The phosphorus and lead criteria frequently were not met at all four stations.

Bayou DeView

The water-quality standards or criteria frequently exceeded at the most Bayou DeView stations were for phosphorus, iron, turbidity, and dissolved oxygen. These four criteria or standards frequently were not met at all three stations. The lead criterion and the fecal-coliform standard (based on January through December data) frequently were exceeded at two stations. The copper and dieldrin criteria frequently were exceeded at one station.

Black River

The iron criterion frequently was exceeded at two of the three stations on the Black River. The phosphorus guideline, lead criterion, and the fecal-coliform standard (based on January through December data) frequently were exceeded at one of the three stations.

Cache River

Several criteria or standards frequently were exceeded at all three stations on the Cache River. These were the phosphorus guideline, iron criterion, turbidity standard, and the fecal-coliform standard (based on January through December data). The lead criterion frequently was exceeded at two of the three stations. The copper criterion frequently was exceeded at one station.

St. Francis River

The phosphorus guideline and the iron criterion frequently were exceeded at all five stations on the St. Francis River or St. Francis Bay. The fecal-coliform standard (based on January through December data) was exceeded frequently at three stations. The turbidity standard and the copper criterion frequently were exceeded at two stations. The dissolved solids standard and lead criterion frequently were exceeded at one station.

White River

At most stations on the White River the iron criterion and the phosphorus guideline frequently were exceeded. The iron criterion frequently was exceeded at six of the seven stations. The phosphorus guideline frequently was exceeded at five of the seven stations. The lead criterion frequently was exceeded at two of the stations. The fecal-coliform standard (based on January through December data) frequently was exceeded at two of the seven stations. The copper criterion and the turbidity standard frequently were exceeded at one of the seven stations.

EFFECTS OF DIVERSIONS ON WATER-QUALITY

Diversions of surface water from one stream into another may affect the water quality of the receiving stream. The quality of surface water diverted for artificial recharge of ground water may affect the recharge process and the aquifer.

Diversions to Other Streams

As part of the East Arkansas Region Comprehensive Study several possible surface-water diversions are being evaluated (figs. 4-5). These diversions include:

(1) Diversion from the Little Red River near West Point south into an area north of Bayou des Arc
(2) Diversion from the White River near Des Arc north into tributaries of Bayou des Arc and south into Wattensaw Bayou
(3) Diversion from the White River near DeValls Bluff west to the Bayou Two Prairie area and south to the DeWitt and Stuttgart areas
(4) Diversion from the Arkansas River near David D. Terry Lock and Dam east into Indian Bayou, Salt Bayou, Bayou Two Prairie, Bayou Meto, and Wattensaw Bayou
(5) Diversion from the Black River downstream of the Spring River near Black Rock southeast into Bayou DeView, Brushy Creek, the L'Anguille River, and Big Creek and its tributaries
(6) Diversion from the White River north of DeValls Bluff east into Big Creek and its tributaries.

The potential water-quality effects of these diversions were evaluated by use of the Wilcoxon-Mann-Whitney rank sum test, a two-sample t-test on ranked data (Iman and Conover, 1983; P-STAT, Inc., 1986). The null hypothesis is that the differences between the means of the two compared stations is zero. All properties that are listed in the descriptive statistical summary tables for both stations of interest were compared using the rank sum test. Water quality at stations near diversion points was compared with water quality at stations on receiving streams near the diverted surface-water discharge points. Some effects could not be evaluated in this manner because of the absence of a station near the diversion or discharge points. Alternate procedures included t-test comparisons between more-distant stations and simple comparison of median values.

The diversion from the Little Red River was evaluated by comparison of water-quality data for Little Red River at Judsonia (07076634) with data for Bayou Two Prairie near Cabot (07264050) and data collected for Ten Mile Creek (fig. 3) by the ADPCE as part of a least-disturbed reference stream study (Bennett and others, 1987; Giese and others, 1987). Long-term data at more representative receiving streams were not available.

The diversion from the White River near Des Arc was evaluated by comparison of data from three stations. Data for White River near Augusta (07074850) and White River at DeValls Bluff (07077000) were compared with a station operated since November 1983 by ADPCE, Wattensaw Bayou near Hazen (07076950).

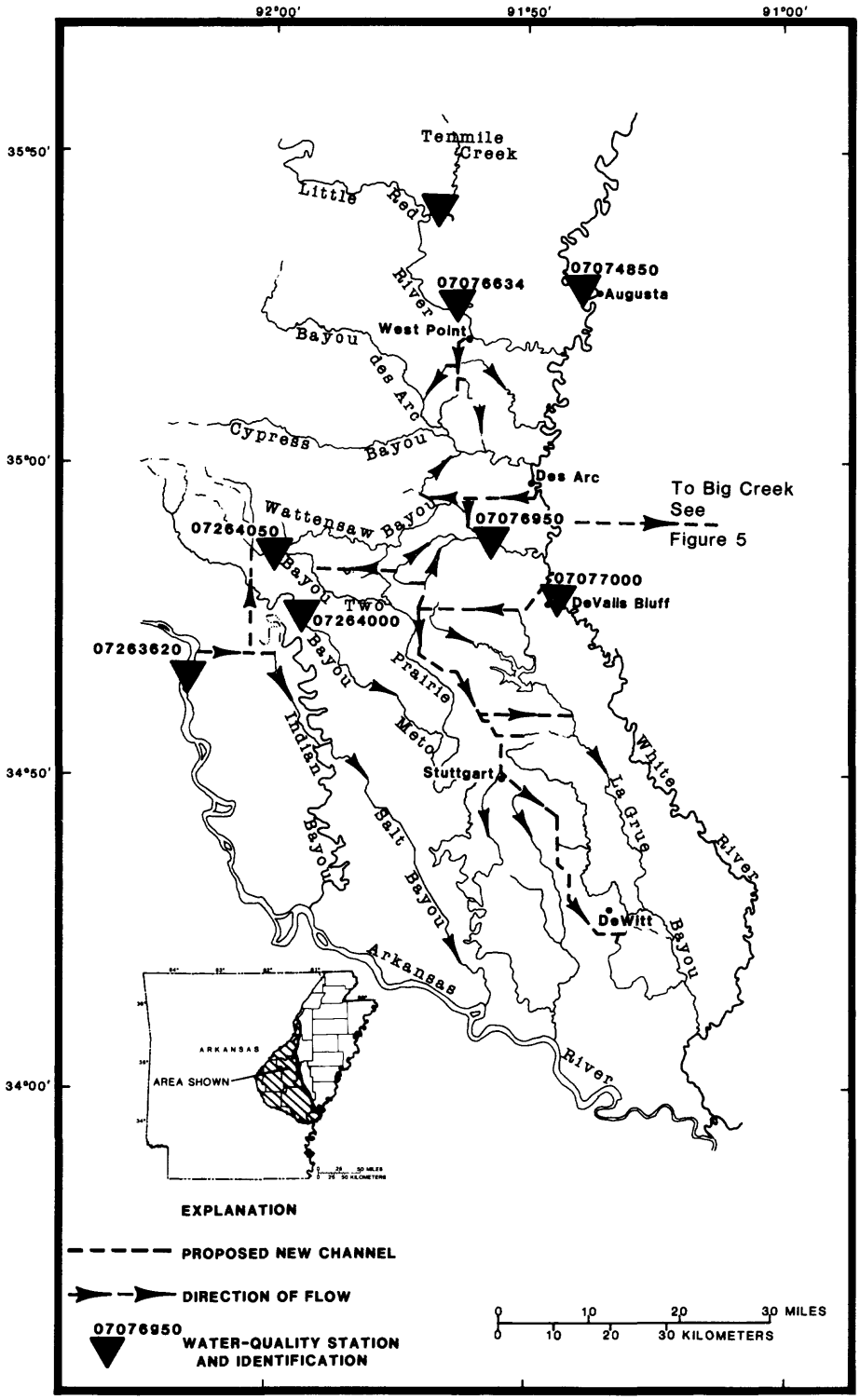


Figure 4.--Location of proposed surface-water diversions from the Little Red, White, and Arkansas Rivers and nearby water-quality stations.

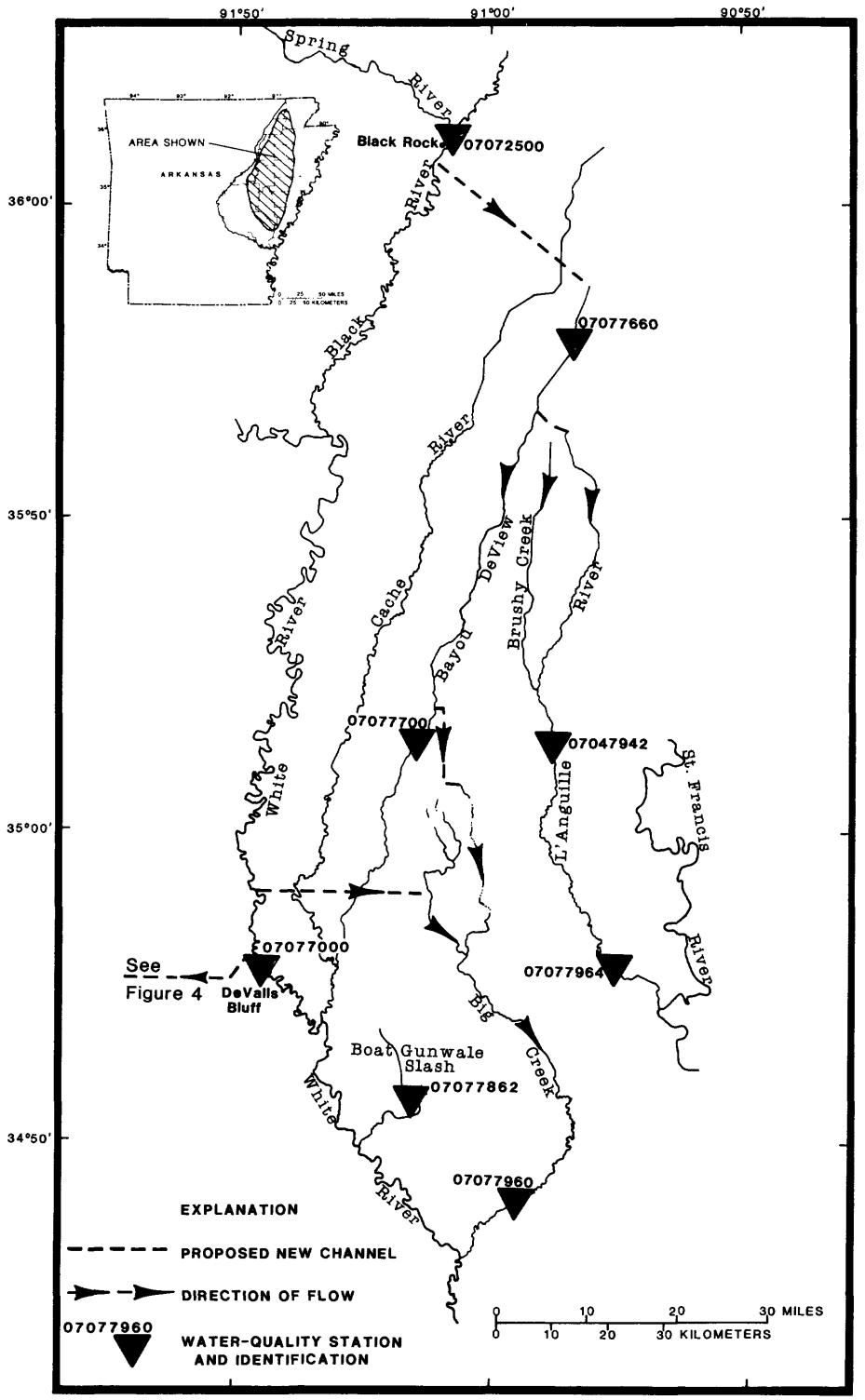


Figure 5.--Location of proposed surface-water diversions from the White and Black Rivers and nearby water-quality stations.

The westward diversion from the White River near DeValls Bluff was evaluated by comparison of data from two stations. Data for White River at DeValls Bluff (07077000) was compared with Bayou Two Prairie near Cabot (07264050).

The diversion from the Arkansas River near David D. Terry Lock and Dam was evaluated by comparing data from three stations. Data for Arkansas River at David D. Terry Lock and Dam below Little Rock (07263620) was compared with data for Bayou Meto near Lonoke (07264000) and Bayou Two Prairie near Cabot (07264050).

The diversion from the Black River near Black Rock was evaluated by comparing data from six stations. Data for Black River at Black Rock (07072500) was compared with data for Bayou DeView near Gibson (07077660), Bayou DeView at Morton (07077700), L'Anguille River near Colt (07047942), L'Anguille River at Marianna (07047964), and Big Creek near Watkins Corner (07077960).

The diversion from the White River east into Big Creek and its tributaries was evaluated by comparing data from three stations. Data for White River at DeValls Bluff (07077000) was compared with data for Big Creek near Watkins Corner (07077960) and Boat Gunwale Slash near Holly Grove (07077862).

Scope of Assessment of Effects of Diversions

The scope of the following assessment is restricted due to the limited availability of data. All of the stations used as a measure of receiving stream water quality, except Wattensaw Bayou near Hazen (07076950) and Boat Gunwale Slash (07077862), are downstream of nearby sewage treatment plant effluents. Nutrients, dissolved constituents, bacteria and metals concentrations may be increased by these effluents. Many water-quality properties have not been measured routinely at stations within the study area. Although several pesticides are summarized in preceding tables there are many which are not. Pesticides used upon at least 40 percent of acreage in rice, soybean, or cotton production (Waldrum, 1984; Waldrum, 1986; and J.D. Waldrum, Arkansas Cooperative Extension Service, written commun., 1989) but not routinely measured include propanil, trifluralin, bentazon, fluometuron, norflurazon, MSMA, and cypermethrin. At many stations there are no data for pesticides in bottom material.

Streamflow may affect the water quality of the originating and receiving rivers. Potential changes of water quality may result from suspension of bottom materials, changes in particle-size distribution, changes in aeration rates, and changes in water velocity and travel times.

The assessments primarily were based upon median values. Actual water-quality effects also will include those resulting from water-quality conditions not characterized by the median. That is, infrequently occurring water-quality conditions were not considered.

The potential effects of construction and operation activities also were not considered. These activities may include dredging, channelization, bank stabilization, and other related activities.

Diversion from Little Red River near West Point

Comparison of data for Little Red River at Judsonia and Bayou Two Prairie near Cabot (table 128) indicated that the water quality in the Little Red River may exceed the water quality in the area north of Bayou des Arc (fig. 4). Alkalinity is slightly higher in Bayou Two Prairie and diversion may make the streams north of Bayou des Arc slightly less buffered against pH fluctuations. The Little Red River has higher concentrations of dissolved oxygen and lower values of several dissolved constituents, nutrients, fecal coliform bacteria, turbidity, iron, manganese, and toxaphene. The accuracy of estimation of water quality in the Bayou des Arc area using data for Bayou Two Prairie near Cabot is limited by the distance between the two locations. Bayou Two Prairie near Cabot is about 30 miles southwest of the Bayou des Arc area.

Data for Little Red River at Judsonia also were compared with data collected in August 1984 and April 1985 for a relatively undisturbed site on Ten Mile Creek (fig. 4) by ADPCE (Bennett and others, 1987). The most notable differences between the data for Little Red River at Judsonia and Ten Mile Creek are the lower turbidity (2 to 5 NTU) and total recoverable iron (190 to 400 µg/L) at Ten Mile Creek. Alkalinity concentrations at Ten Mile Creek (8 to 28 mg/L) are possibly lower than at Little Red River at Judsonia.

Diversion from White River near Des Arc

Comparison of medians of data for White River near Augusta (tables 87-88) and White River at DeValls Bluff (tables 91-92) and data for Wattensaw Bayou near Hazen (table 129) indicated that water diverted from the White River may have higher concentrations of some dissolved constituents (see hardness) and higher pH values than will water in Bayou des Arc and Wattensaw Bayou (fig. 4). Dissolved-solids, dissolved-sulfate and dissolved-chloride concentrations tend to be slightly higher at Wattensaw Bayou near Hazen than in the White River.

Diversion from White River near DeValls Bluff Westward

Comparison of data for White River at DeValls Bluff with data from Bayou Two Prairie near Cabot (table 130) indicated that water diverted from the White River will have higher concentrations of some dissolved constituents (primarily magnesium and calcium carbonate) than will water in Bayou Two Prairie (fig. 4). The White River also has higher values of dissolved oxygen, pH, specific conductance, alkalinity, hardness, and 2-4,D and lower values of several nutrients and metals, and fecal coliform bacteria.

Diversion from Arkansas River near David D. Terry Lock and Dam

Comparison of water-quality data for Arkansas River at David D. Terry Lock and Dam below Little Rock with data for Bayou Meto near Lonoke (table 131), Bayou Two Prairie near Cabot (table 132), and Wattensaw Bayou near Hazen (table 129) (fig. 4) indicated that significant differences exist in concentrations of several nutrients, metals, and common dissolved constituents. The Arkansas River has higher concentrations of dissolved sulfate, chloride, and most other common dissolved constituents than Bayou Meto, Bayou Two Prairie, and Wattensaw Bayou. The Arkansas River has lower values of several nutrients and metals, and turbidity. Median June through September dissolved chloride concentrations at the stations were 110, 50, and 13 mg/L at David D. Terry Lock and Dam, Lonoke, and Cabot, respectively. The median January through December chloride concentration at Hazen was 14 mg/L. Substantial differences between the stations also exist between median dissolved-sulfate concentrations. Arkansas water-quality regulations (Arkansas Department of Pollution Control and Ecology, 1988) state that, as a guideline, levels of chloride and sulfate should not be increased by more than 15 mg/L over naturally occurring levels. Comparison of the June through September median dissolved-chloride concentration of the Arkansas River at David D. Terry Lock and Dam below Little Rock (110 mg/L) with the median of Bayou Two Prairie near Cabot (13 mg/L) indicates that increasing flow in Bayou Two Prairie with water from the Arkansas River by as little as 20 percent may increase chloride concentrations in excess of this guideline.

Median fecal coliform bacteria concentrations were also higher in the Arkansas River (400 colonies per 100 mL) than in Bayou Meto (210 colonies per 100 mL), Bayou Two Prairie (220 colonies per 100 mL), and Wattensaw Bayou (170 colonies per 100 mL). Median lead concentrations were higher in the Arkansas River (12 µg/L) than in Wattensaw Bayou (4 µg/L). Differences in analysis method (bacteria) and time period (lead) may decrease the applicability of these comparisons.

A former chemical manufacturing plant (Walton and Drye, 1982) near the upstream end of Bayou Meto has been included in the National Priorities List of Superfund hazardous-waste sites identified by the U.S. Environmental Protection Agency (1986) under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980. Dioxin (2,3,7,8 tetrachlorodibenzo-p-dioxin) has been found in bottom material and fish tissue in Bayou Meto (Arkansas Department of Pollution Control and Ecology, 1983). In bottom material, dioxin was detected in 1979 and 1981 at Highway 161 (0.25 to 1.5 µg/kg) upstream of the proposed diversion location and in 1981 at Highway 15 (0.023 µg/kg) about 2 miles downstream of the currently proposed diversion location. Dioxin was not detected further downstream. Dioxin concentrations were highest in fish during 1979 through 1981, at Highway 161 and Interstate 40. Dioxin concentrations ranged from 0.12 to 0.31 µg/kg and generally decreased downstream to <0.025 µg/kg at Highway 79 which is about 70 river miles downstream of Interstate 40 and the proposed diversion location.

Diversion from Black River near Black Rock

Comparison of data for Black River at Black Rock with data for Bayou DeView near Gibson (table 133), Bayou DeView at Morton (table 134), L'Anguille

River near Colt (table 135), L'Anguille River at Marianna (table 136), and Big Creek near Watkins Corner (table 137) (fig. 5) indicated that water diverted from the Black River would be higher in dissolved oxygen, pH, total alkalinity, and total hardness than the water in the receiving streams. Dissolved-solids concentrations probably are higher at most locations in the receiving streams than at Black River at Black Rock. Sulfate, chloride, nutrients, bacteria, turbidity, and metal values are lower in the Black River than in the receiving streams.

Diversion from White River near DeValls Bluff Eastward

Comparison of data for White River at DeValls Bluff with data for Big Creek near Watkins Corner (table 138) (fig. 5) indicated that water diverted from the White River will have higher dissolved oxygen, pH, and total alkalinity values than will water in Big Creek. Sulfate, chloride, dissolved-solids, nutrient, bacteria, turbidity, metal, and 2,4-D values are lower in the White River.

Median values for White River at DeValls Bluff also were compared with median values for Boat Gunwale Slash near Holly Grove (table 139) (fig. 5). This station also had been sampled in August 1983 and April 1984 as part of a study of least-disturbed streams (Bennett and others, 1987). Water in the White River is harder than water in Boat Gunwale Slash and dissolved solids, turbidity, and nitrite plus nitrate values are higher in the White River than in Boat Gunwale Slash.

Diversions for Artificial Recharge

Artificial recharge of the alluvial aquifer in the Grand Prairie and in the Poinsett-Cross-St. Francis-Woodruff Counties area west of Crowleys Ridge also is being considered (fig. 1). The two primary methods of artificial recharge would involve injection of diverted surface water into wells or surface pits. The quality of the mix of surface water and native ground water may affect the artificial recharge process. Potential water-quality problems include ion exchange, iron precipitation, turbidity, and decreased drinking water acceptability.

Ion exchange commonly occurs between solutes in ground water and aquifer materials; if clay particles become saturated with sodium they will swell and may decrease aquifer permeability (Sniegocki, 1963). Comparison of quality of ground water in the alluvial aquifer in the Grand Prairie area and the area west of Crowleys Ridge (table 140) with quality of surface water that may be diverted to these areas indicates that the percent sodium (proportion of milliequivalents of sodium to the sum of the milliequivalents of sodium, potassium, calcium, and magnesium) of ground water in the recharge areas (Crowleys Ridge, 10 percent; Grand Prairie, 22 percent) exceeded percent sodium of water at Black River at Black Rock (3 percent, see table 81) and White River at Newport (4 percent, see table 85). Because percent sodium values are higher in the native ground water, additional sodium ions would not be exchanged onto the clay particles and particles would not swell. However, the percent sodium of water at Arkansas River at David D. Terry Lock and Dam below Little Rock (53 percent, see table 110) exceeds the percent sodium of

ground water in both recharge areas. The preceding percent sodium values were calculated using median concentrations. The three surface water stations were the stations with sufficient data closest to the applicable diversion points.

Sodium ion exchange and resulting swelling of clay particles would probably have little effect upon aquifer permeability as a result of injection of these surface waters. Surface water would probably be injected into the basal zone of the aquifer. There is little clay mixed with the sand strata of the basal zone and any clay swelling or dispersal from the clay lenses in the aquifer probably would not seriously reduce aquifer permeability (Sniegocki, 1963). Artificial recharge of water diverted from the Arkansas River through surface pits may be hindered by swelling and dispersal of clay particles resulting from sodium ion exchange.

Introduction of oxygenated surface water into the aquifer can cause precipitation of dissolved iron present in anaerobic ground water (Huisman and Olsthoorn, 1983, p. 268). Sniegocki (1963) measured redox potential and pH of native ground water and surface water in the Grand Prairie. These values indicated that iron would remain in solution in native ground water but that the surface water had a redox potential and pH which would cause the iron to be oxidized and precipitated as ferric hydroxide. The plugging effect would be negligible at first, but long term recharge and accumulation of precipitated iron could cause an eventually severe reduction of aquifer permeability (Sniegocki, 1963). Iron concentrations in the alluvial aquifer generally are higher than in other aquifers in Arkansas (Morris, 1988). Iron concentrations appear to be higher in the Grand Prairie area than in the area west of Crowleys Ridge (table 140).

Suspended solids present in the recharge water have a detrimental effect upon both surface pit and well injection recharge methods (Oaksford, 1985). Injection wells and infiltration surfaces of pits can be clogged by suspended particles, however, infiltration surfaces of pits are more accessible for remedial treatment. Primary sedimentation and chemical clarification can be used to remove suspended solids from water before it is used for recharge (Treweek, 1985).

In the potential artificial-recharge area, the alluvial aquifer is the drinking-water source of a large part of the population. Drinking water of approximately one-third of the population in the Crowleys Ridge artificial recharge area is self supplied. Drinking water of approximately one-half of the population in the Grand Prairie artificial recharge area is self supplied. Nearly all of the self-supplied and some of the public-supplied drinking water is likely to come from the alluvial aquifer. For this reason, drinking water standards may need to be considered before artificial recharge procedures are begun.

SUMMARY AND CONCLUSIONS

Existing water-quality data were summarized for several stations in northeastern Arkansas. Some of these data were used to assess effects of planned surface water diversions upon receiving stream water quality and upon the alluvial aquifer if the diverted water is used for artificial recharge of the aquifer.

Several generalizations can be made about the water-quality data summarized in this report. For most properties (except pesticides) and at most stations, more than 50 analyses were available for summarization. Dissolved magnesium, total alkalinity, and fecal streptococcal bacteria were measured fewer than 50 times at many stations. For most properties, values of the two most common measures of central tendency differed; mean values generally exceeded median values indicating that the data were not normally distributed and reflecting the infrequent occurrence of extremely high values. This was most apparent for discharge and bacteria values.

Differences in typical (median value) quality of water and bottom material exist between selected major groups of rivers in the study area. The group of stations on the Arkansas River is higher than all other groups in specific conductance, dissolved sulfate and chloride, and dissolved solids. It has relatively low nutrient, iron, manganese, and turbidity values.

Bayou Meto and Bayou Two Prairie are higher than most groups in dissolved chloride, nitrogen, and manganese. Dissolved solids, specific conductance, alkalinity and hardness are lower in this group than in most other groups. Sulfate concentrations generally increased during the study period.

By several measurements, the Black and Current Rivers have the best water quality in the study area. The rivers are lower in nutrients, bacteria, turbidity, dissolved chloride, dissolved sulfate, and many trace metals than other river groups. Increasing trends in sulfate and decreasing trends in total ammonia occurred during the study period.

The Cache River and Bayou DeView are high (relative to other river groups) in turbidity, phosphorus, biochemical oxygen demand, fecal-coliform bacteria, and some pesticides. The rivers are relatively low in conductance, hardness and alkalinity. Decreasing trends generally were detected in total ammonia and fecal-coliform bacteria.

The St. Francis River is most different from other river groups because of its higher suspended sediment and total recoverable iron concentrations. Ammonia concentrations generally decreased during the study period.

Tributaries of the St. Francis River are high (relative to most other groups) in common dissolved constituents, phosphorus, several pesticides and trace metals, and suspended sediment. Fecal coliform concentrations decreased during the study period at several stations.

The White River generally has lower concentrations of common dissolved constituents, nutrients, bacteria, and iron than most other river groups. Generally dissolved sulfate concentrations increased and total ammonia concentrations decreased during the study period.

Available data for pesticides in bottom material indicate some generalizations which can be made. Organochlorine pesticides were detected more frequently than organophosphorus pesticides. DDD, DDE, DDT, aldrin, dieldrin, and endrin were often detected in at least 50 percent of samples from a station or basin. Concentrations tend to be higher in rivers with bottoms of fine-grained particles (such as the L'Anguille River and Bayou DeView) and lower in rivers with coarser-grained particles (such as the St. Francis and White Rivers). Highest median concentrations tend to occur in Flat Bayou, the L'Anguille River basin, and Bayou DeView. Median concentrations were almost always less than the detection limit (generally 0.1 µg/kg) in samples from the St. Francis and White Rivers.

Values for six properties frequently (at least 25 percent of samples) exceeded criteria or standards at greater than one-third of stations in the study area. These properties are iron, total phosphorus, fecal-coliform bacteria, turbidity, lead, and copper. The iron criterion was frequently exceeded at about 90 percent of stations in the study area. The phosphorus criterion was exceeded at about 80 percent of stations in the area. The fecal-coliform bacteria standard was not compared directly to the data but at about two-thirds of the stations the standard may be exceeded frequently. Turbidity values that are not to be exceeded as the result of waste discharge or instream activity were frequently exceeded at about 40 percent of the stations. Lead and copper concentrations frequently may exceed criteria.

Effects of diversions of surface water upon existing quality of surface water which could possibly be detrimental and which can reasonably be predicted from available data primarily are related to concentrations of common dissolved constituents. The diversion from the Little Red River may lower alkalinity concentrations in some receiving streams making the streams more susceptible to pH fluctuations. No potential detrimental effects resulting from the diversion from the White River near Des Arc were detected. Diversion westward from the White River near DeValls Bluff might increase dissolved solids (primarily calcium and magnesium carbonates) concentrations. The diversion from the Arkansas River near David D. Terry Lock and Dam would likely increase dissolved sulfate and dissolved chloride concentrations by more than 15 mg/L in many of the receiving streams. Fecal coliform bacteria and lead concentrations might also be increased. Another consideration in Bayou Meto is possible increased mobilization of any dioxin in bottom material caused by resuspension of the bottom material resulting from increased flows in Bayou Meto. No potential detrimental effects from the diversion from the Black River were detected although the diverted water is harder and more alkaline. Diversion of water from the White River near DeValls Bluff eastward into Big Creek and its tributaries may slightly increase dissolved-solids and nitrate plus nitrite concentrations and turbidity in the upstream parts of Big Creek and its tributaries.

Other potential water quality effects were not specifically addressed in this study. These include the effects of higher streamflow (for example, resuspension of bottom materials, changes in particle-size distributions, increased reaeration rates, and decreased travel times), pesticides and metals not sampled, infrequently occurring water-quality values (values occurring at extreme low or high discharges for example), and effects resulting from project construction activities.

Use of surface water for artificial recharge of the alluvial aquifer may cause some problems unless the surface water is treated before use. Ion exchange of sodium may cause some swelling of clay particles, resulting in plugging, where Arkansas River water is introduced to the alluvial aquifer through surface pits. Iron oxidation may also cause well and aquifer plugging. Reduction of suspended solids concentrations will probably be necessary. Finally, because much of the population of the most likely recharge areas gets drinking water from the alluvial aquifer, drinking water standards may need to be considered before artificial recharge procedures are begun.

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INDEX OF STATIONS

Table 1.--Arkansas Department of Pollution Control and Ecology and U.S. Geological Survey stations summarized and related information

[Water years begin October 1 and end September 30. Sampling agencies are the U.S. Geological Survey (USGS) and the Arkansas Department of Pollution Control and Ecology (ADPCE); S indicates U.S. Army Corps of Engineers sediment network; N indicates National Stream Quality Accounting network; G indicates Arkansas Geological Commission cooperative network. Under the "Previous investigations" column: 1= Ward (1963), 2 = Jeffus and others (1967), 3 = Steele (1971), 4 = Briggs and Ficke (1977), 5 = Smith and others (1982), 6 = Britton and others (1983), 7 = Wells and Schertz (1983), 8 = Smith and Alexander (1983) or Smith and Alexander (1985), and 9 = Stoner (1985). The stations sampled by ADPCE are summarized in the Water Quality Inventory Reports (ADPCE, 1974; 1975; 1976; 1977; 1980; 1982; 1984; 1986a). Stations summarized by previous investigation may not be identical in location to station listed here]

Station number	Station name	Water years summarized (inclusive)	Sampling agency	Previous investigations
07040000	St. Francis River at Fisk, Mo.	1978-85	USGS(S)	--
07040057	St. Francis River near Powe, Mo.	1978-84	USGS(S)	--
07040060	St. Francis River near Glennonville, Mo.	1978-85	USGS(S)	--
07040070	Wilhelmina Cutoff near Campbell, Mo.	1978-85	USGS(S)	--
07040100	St. Francis River at St. Francis	1975-85	ADPCE USGS(S)	--
07040110	St. Francis River near Piggott	1978-85	USGS(S)	--
07040130	St. Francis River at Holly Island	1978-85	USGS(S)	--
07040150	Varney River near Senath, Mo.	1978-81	USGS(S)	--
07040350	Big Slough Ditch near Paragould	1978-84	USGS(S)	--
07040424	Locust Creek Ditch near Paragould	1978-84	USGS(S)	--
07040428	Eightmile Ditch near Paragould	1978-84	USGS(S)	--
07040450	St. Francis River at Lake City	1975-85	ADPCE USGS(S)	--
07040496	Cockle Burr Slough Ditch near Monette	1979-85	USGS(S)	--
07046500	Right Hand Chute of Little River at Big Lake Outlet near Manila	1975-83	ADPCE	--
07046600	Right Hand Chute of Little River at Rivervale	1978-85	USGS(S)	--
07047400	Pemiscot Bayou at Dell	1975-83	ADPCE	--
07047700	Tyronza River near Twist	1975-83	ADPCE	--
07047800	St. Francis River at Parkin	1975-85	USGS(N)	4,5,6,7,8
07047810	St. Francis River Floodway near Marked Tree	1978-85	USGS(S)	--
07047815	Cross County Ditch near Birdeye	1978-85	USGS(S)	--
07047882	Straight Slough near Birdeye	1978-84	USGS(S)	--
07047900	St. Francis Bay at Riverfront	1975-85	USGS(N,S)	4,5,6,7,8
07047904	Clark Corner Cutoff near Colt	1978-85	USGS(S)	--
07047907	St. Francis River at Madison	1978-85	USGS(S)	--

Table 1.--Arkansas Department of Pollution Control and Ecology and U.S. Geological Survey stations summarized and related information--Continued

Station number	Station name	Water years summarized (inclusive)	Sampling agency	Previous investigations
07047936	L'Anguille River near Cherry Valley	1981-84	USGS(S)	--
07047942	L'Anguille River near Colt	1975-85	USGS(G,S)	--
07047950	L'Anguille River near Palestine	1981-84	USGS(S)	--
07047964	L'Anguille River at Marianna	1975-85	ADPCE	--
07047968	St. Francis River north of Helena	1975-83	ADPCE	--
07061105	White River at Oil Trough	1975-83	ADPCE	--
07064000	Black River near Corning	1975-83	ADPCE	1,2
07068850	Current River near Pocahontas	1975-85	ADPCE	--
07069000	Black River at Pocahontas	1978-85	ADPCE	--
07072500	Black River at Black Rock	1975-85	USGS(G)	1,2
07074490	Black River at Jacksonport	1975-83	ADPCE	--
07074500	White River at Newport	1978-85	USGS(N)	1,2,7
07074850	White River near Augusta	1975-83	ADPCE	--
07076634	Little Red River at Judsonia	1975-83	ADPCE	--
07077000	White River at DeValls Bluff	1975-85	ADPCE	--
07077400	Cache River near Cash	1975-83	ADPCE	--
07077500	Cache River at Patterson	1976-85	USGS(G)	1,2,3
07077555	Cache River near Cotton Plant	1988	USGS	--
07077600	Cache River at Brasfield	1975-83	ADPCE	--
07077660	Bayou DeView near Gibson	1975-85	ADPCE	--
07076950	Wattensaw Bayou near Hazen	1984-87	ADPCE	--
07077700	Bayou DeView at Morton	1975-85	USGS(G)	--
07077750	Bayou DeView near Brasfield	1975-83	ADPCE	--
07077800	White River at Clarendon	1975-85	USGS(N)	1,2,4,5,6,7,8
07077820	White River at St. Charles	1975-85	ADPCE	--
07077862	Boat Gunwale Slash near Holly Grove	1984-87	ADPCE	--
07077960	Big Creek near Watkins Corner	1975-83	ADPCE	--
07078285	White River at Arkansas Post Canal near Nady	1975-83	ADPCE	--
07263450	Arkansas River at Murray Dam at Little Rock	1975-85	ADPCE	1,2,3
07263620	Arkansas River at David D. Terry Lock and Dam below Little Rock	1975-85	USGS(N)	4,5,6,7,8,9
07263750	Arkansas River at Lock and Dam 3 near Swan Lake	1975-83	ADPCE	--
07264000	Bayou Meto near Lonoke	1975-83	ADPCE	--
07264050	Bayou Two Prairie near Cabot	1975-83	ADPCE	--
07265099	Bayou Meto near Bayou Meto	1975-83	ADPCE	--
07265283	Arkansas River at Dam No. 2 near Gillett	1975-83	USGS(N) ADPCE	7

Table 2.--Properties, associated parameter codes, and water years included in statistical summaries

[USGS = U.S. Geological Survey, ADPCE = Arkansas Department of Pollution Control and Ecology, NASQAN = National stream quality accounting network, AGC = Arkansas Geological Commission, CE = U.S. Army Corps of Engineers. Some stations are part of more than one program; data occurrence is listed only under the appropriate station type]

Property	STORET parameter code	Water years			
			USGS stations		
		ADPCE stations	NASQAN	AGC cooperative[a]	CE sediment
Discharge	00061 (or 00060)	Variable	1975-85	1975-85	1978-85
Dissolved oxygen	00300	1975-85	do.	do.	do.
pH	00400	1975-85	do.	do.	do.
Specific conductance	00095	1975-80	do.	do.	do.
Total alkalinity	00410 (or 90410)	1975-80	do.	do.	--
Total hardness	00900	1975-83	do.	do.	--
Dissolved calcium	00915	1975-77	do.	do.	--
Dissolved magnesium	00925	1975-77	do.	do.	--
Dissolved sodium	00930	--	do.	do.	--
Sodium adsorption ratio	00931	--	do.	do.	--
Dissolved potassium	00935	--	do.	do.	--
Dissolved sulfate	00945	1975-85	do.	do.	--
Dissolved chloride	00940	1975-85	do.	do.	--
Dissolved fluoride	00950	--	do.	do.	--
Dissolved silica	00955	--	do.	1975-81	--
Dissolved solids (residue on evaporation at 180 °C)	70300	1978, 1980-85	do.	do.	--
Total phosphorus	00665	1975-85	do.	1975-85	--
Total nitrogen	00600	--	1975-82	do.	--
Total organic nitrogen	00605	--	1978-81	1980-85	--
Total nitrite plus nitrate	00630	1978, 1981-85	1975-81	1975-85	--
Total ammonia	00610	1977-85	1978-81	1980-85	--
5-day biochemical oxygen demand	00310	1975-85	--	1975-85	--
Fecal coliform bacteria (0.7 micron filter)	31625	--	1977-85	1977-85	--
Fecal coliform bacteria (0.45 micron filter)	31616	1975-85	1975-76	1975-76	--

Table 2.--Properties, associated parameter codes, and water years included in statistical summaries--Continued

Property	STORET parameter code	Water Years			
		ADPCE stations	USGS stations		
			NASQAN	AGC cooperative[a]	CE sediment
Fecal streptococcal bacteria (KF agar)	31673	--	1978-85	1978-85	--
Fecal streptococcal bacteria (m-enterococcus agar)	31679	1975-77	1975-77	1975-76	--
Turbidity (nephelometric)	00076	1981-85	1978-85	1980-81	--
Total arsenic	01002	1975-77, 1979-82	1975-82	1975, 1977-85	--
Total recoverable cadmium	01027	1975-85	do.	do.	--
Total recoverable chromium	01034	1975-85	do.	do.	--
Total recoverable copper	01042	1975-85	do.	do.	--
Total recoverable iron	01045	1975-80	1975-82	1975-85	--
Total recoverable lead	01051	[b]1975-81, 1984-85	[b]1979-82	[b]1979-85	--
Total recoverable manganese	01055	1975-80	1975-82	1975-85	--
Total recoverable zinc	01092	1975-85	1975-82	1975, 1977-85	--
Total aldrin	39330	1975-85	1975-82	1975, 1977-80	--
Total aldrin in bottom material	39333	--	1976, 1978-80, 1982	1975, 1977-80	--
Total chlordane	39350	--	1975-80, 1982	1975, 1977-80	--
Total chlordane in bottom material	39351	--	1976, 1978-80	1975, 1977-80	--
Total DDD	39360	--	1975-80, 1982	1975, 1977-80	--
Total DDD in bottom material	39363	--	1976, 1979, 1982	1975, 1977-80	--
Total DDE	39365	1975-85	1975-82	1975, 1979-80	--
Total DDE in bottom material	39368	--	1976, 1979, 1982	1975, 1977-80	--

Table 2.--Properties, associated parameter codes, and water years included in statistical summaries--Continued

Property	STORET parameter code	Water Years ADPCE stations	USGS stations NASQAN	USGS stations AGC cooperative[a]	USGS stations CE sediment
Total DDT	39370	1975-85	1975-82	1975, 1977-80	--
Total DDT in bottom material	39373	--	1976, 1978-79, 1982	1975, 1977-80	--
Total diazinon	39570	--	1975-80, 1982	1975, 1977-80	--
Total diazinon in bottom material	39571	--	1976, 1978-80	1975, 1978-80	--
Total dieldrin	39380	1975-85	1975-82	1975, 1977-80	--
Total dieldrin in bottom material	39383	--	1976, 1978-80	1975, 1977-80	--
Total endosulfan	39388	--	1982	1977-80	--
Total endosulfan in bottom material	39389	--	1982	--	--
Total endrin	39390	1975-85	1975-82	1975, 1977-80	--
Total endrin in bottom material	39393	--	1976, 1978-80, 1982	1975, 1977-80	--
Total ethion	39398	--	1975-80, 1982	1975, 1977-80	--
Total ethion in bottom material	39399	--	1976, 1978-80	1975, 1978-80	--
Total heptachlor	39410	--	1975-80, 1982	1975, 1977-80	--
Total heptachlor in bottom material	39413	--	1976, 1978-80, 1982	1975, 1977-80	--
Total heptachlor epoxide	39420	--	1975-80, 1982	1975, 1977-80	--
Total heptachlor epoxide in bottom material	39423	--	1976, 1978-80, 1982	1975, 1978-80	--
Total lindane	39340	--	1975-80, 1982	1975, 1977-80	--
Total lindane	39782	1975-85	--	--	--
Total lindane in bottom material	39343	--	1976-80, 1982	1975, 1977-80	--
Total malathion	39530	1979-81	1975-82	1975, 1977-80	--
Total malathion in bottom material	39531	--	1976, 1978-80	1975, 1978-80	--
Total methoxychlor	39480	--	1975-80, 1982	1977-80	--
Total methoxychlor in bottom material	39481	--	1976, 1978-80, 1982	1978-80	--

Table 2.--Properties, associated parameter codes, and water years included in statistical summaries--Continued

Property	STORET parameter code	Water Years: ADPCE stations	Water Years: USGS stations: NASQAN	Water Years: USGS stations: AGC cooperative[a]	Water Years: USGS stations: CE sediment
Total methyl parathion	39600	1975-85	1975-82	1975, 1977-80	--
Total methyl parathion in bottom material	39601	--	1976, 1978-80	1975, 1978-80	--
Total methyl trithion	39790	--	1975-80, 1982	1975, 1977-80	--
Total methyl trithion in bottom material	39791	--	1976, 1978-80	1975, 1978-80	--
Total mirex	39755	--	1982	1977-80	--
Total mirex in bottom material	39758	--	1982	--	--
Total parathion	39540	--	1975-80, 1982	1975, 1977-80	--
Total parathion in bottom material	39541	--	1976, 1978-80	1975, 1978-80	--
Total perthane	39034	--	1982	1979-80	--
Total toxaphene	39400	1975-85	1975-82	1975, 1977-80	--
Total toxaphene in bottom material	39403	--	1976, 1978-80, 1982	1975, 1977-80	--
Total trithion	39786	--	1975-80, 1982	1975, 1977-80	--
Total trithion in bottom material	39787	--	1976, 1978-80	1975, 1978-80	--
Total 2,4-D	39730	1979-83	1975-82	1975, 1977-80	--
Total 2,4,5-T	39740	--	1976-78, 1980, 1982	1975, 1977-80	--
Total silvex	39760	--	1976-78, 1980, 1982	1975, 1977-80	--
Suspended sediment	80154	--	1975-85	1980, 1985	1978-85
Suspended sediment, fall diameter, percent finer than 1 millimeter	70346	--	--	--	do.
Suspended sediment, fall diameter, percent finer than 0.500 millimeter	70345	--	--	--	do.
Suspended sediment, fall diameter, percent finer than 0.250 millimeter	70344	--	--	--	do.

Table 2.--Properties, associated parameter codes, and water years included in statistical summaries--Continued

Property	STORET parameter code	Water Years: ADPCE stations	Water Years: USGS stations: NASQAN	Water Years: USGS stations: AGC cooperative[a]	Water Years: USGS stations: CE sediment
Suspended sediment, fall diameter, percent finer than 0.125 millimeter	70343	--	--	--	do.
Suspended sediment, fall diameter, percent finer than 0.062 millimeter	70342	--	--	1980, 1985	do.
Suspended sediment, sieve diameter, percent finer than 0.062 millimeter	70331	--	1975-85	1980, 1985	do.
Bed material, sieve diameter, percent finer than 16.00 millimeters	80172	--	--	--	do.
Bed material, sieve diameter, percent finer than 8.00 millimeters	80171	--	--	--	do.
Bed material, sieve diameter, percent finer than 4.00 millimeters	80170	--	--	--	do.
Bed material, fall diameter, percent finer than 2.00 millimeters	80163	--	--	--	do.
Bed material, sieve diameter, percent, finer than 2.00 millimeters	80169	--	--	--	do.
Bed material, fall diameter, percent finer than 1.00 millimeter	80162	--	--	--	do.
Bed material, sieve diameter, percent finer than 1.00 millimeter	80168	--	--	--	do.
Bed material, fall diameter, percent finer than 0.500 millimeter	80161	--	--	--	do.

Table 2.--Properties, associated parameter codes, and water years included in statistical summaries--Continued

Property	STORET parameter code	Water Years			
		ADPCE stations	USGS stations		
			NASQAN	AGC cooperative[a]	CE sediment
Bed material, fall diameter, percent finer than 0.250 millimeter	80160	--	--	--	do.
Bed material, fall diameter, percent finer than 0.125 millimeter	80159	--	--	--	do.
Bed material, fall diameter, percent finer than 0.062 millimeter	80158	--	--	--	do.

[a]Among the different AGC cooperative network stations there is some variation from the time periods shown.
[b]USGS values for lead prior to water year 1979 are available in NWIS but were omitted from the statistical analyses in this report. Data for stations sampled by ADPCE and which are also part (table 1) of the USGS networks shown above included lead values from both agencies. All lead values prior to water year 1979 were omitted for these jointly sampled stations.

Table 3.--Values assigned as greatest detection limits used by Arkansas Department of Pollution Control and Ecology and U.S. Geological Survey laboratories between 1974 and 1985

[Actual detection limits are not known to exceed values shown. mg/L=milligrams per liter, µg/L=micrograms per liter, BTM=bottom material, µg/kg=micrograms per kilogram]

Property and units	Assigned greatest detection limit	
	Arkansas Department of Pollution Control and Ecology	U.S. Geological Survey
Dissolved sulfate (mg/L)	1.0	5.0
Dissolved fluoride (mg/L)	--	.10
Total phosphorus (mg/L)	.01	.01
Total nitrogen (mg/L)	--	.10
Total organic nitrogen (mg/L)	--	.10
Total nitrite + nitrate (mg/L)	.05	.10
Total ammonia (mg/L)	.10	.01
Turbidity (nephelometric turbidity units)	1	1
Total arsenic (µg/L)	10	1
Total recoverable cadmium (µg/L)	20	20
Total recoverable chromium (µg/L)	20	20
Total recoverable copper (µg/L)	20	20
Total recoverable iron (µg/L)	30	--[a]
Total recoverable lead (µg/L)	20	[b] 2
Total recoverable manganese (µg/L)	27	--[a]
Total recoverable zinc (µg/L)	20	20
Aldrin (µg/L)	.002	.01
Aldrin in BTM (µg/kg)	--	.1
Chlordane (µg/L)	--	.1
Chlordane in BTM (µg/kg)	--	1.0
DDD (µg/L)	--	.01
DDD in BTM (µg/kg)	--	.1
DDE (µg/L)	0.002	.01
DDE in BTM (µg/kg)	--	.1
DDT (µg/L)	.004	.01
DDT in BTM (µg/kg)	--	.1
Diazinon (µg/L)	--	.01
Diazinon in BTM (µg/kg)	--	.1
Dieldrin (µg/L)	.002	.01
Dieldrin in BTM (µg/kg)	--	.1
Endosulfan (µg/L)	--	.01
Endosulfan in BTM (µg/kg)	--	.1
Endrin (µg/L)	.002	.01
Endrin in BTM (µg/kg)	--	.1
Ethion (µg/L)	--	.01
Ethion in BTM (µg/kg)	--	.1
Heptachlor (µg/L)	--	.01
Heptachlor in BTM (µg/kg)	--	.1
Heptachlor epoxide (µg/L)	--	.01

Table 3.--Values assigned as greatest detection limits used by Arkansas Department of Pollution Control and Ecology and U.S. Geological Survey laboratories between 1974 and 1985--Continued

Property and units	Assigned greatest detection limit	
	Arkansas Department of Pollution Control and Ecology	U.S. Geological Survey
Heptachlor epoxide in BTM (µg/kg)	--	.1
Lindane (µg/L)	--[c]	0.01
Lindane in BTM (µg/kg)	--	.1
Malathion (µg/L)	0.05	.01
Malathion in BTM (µg/kg)	--	.1
Methoxychlor (µg/L)	--	.01
Methoxychlor in BTM (µg/kg)	--	.1
Methyl parathion (µg/L)	.04	.01
Methyl parathion in BTM (µg/kg)	--	.1
Methyl trithion (µg/L)	--	.01
Methyl trithion in BTM (µg/kg)	--	.1
Mirex (µg/L)	--	.01
Mirex in BTM (µg/kg)	--	.1
Parathion (µg/L)	--	.01
Parathion in BTM (µg/kg)	--	.1
Perthane (µg/L)	--	.1
Toxaphene (µg/L)	2	1
Toxaphene in BTM (µg/kg)	--	10
Trithion (µg/L)	--	.01
Trithion in BTM (µg/kg)	--	.1
2,4-D (µg/L)	--[c]	.01
2,4,5-T (µg/L)	--	.01
Silvex (µg/L)	--	.01

[a]No values below a detection limit in the data set

[b]A detection limit of 100 micrograms per liter was used by the Geological Survey during all or parts of water years 1974 through 1978. Because of the large improvement in detection limits, all Geological Survey values for lead prior to water year 1979 were omitted from the statistical analyses in this report.

[c]Detection limits used could not be determined.

Table 4.--Results of Seasonal Kendall trend analysis for St. Francis River at St. Francis, Ark., 07040100

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equation that could be used in flow adjustment was hyperbolic (HYP6)]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-85	0.31	NS	1975-85	HYP6	0.63	0.37	NS
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	< .01	+0.63	ID	--	--	--	--
Cl	All	1975-83	.06	+ .29	ID	--	--	--	--
FC	All	1975-83	.04	-5.0	ID	--	--	--	--
TP	All	1975-83	.31	NS	ID	--	--	--	--
TNH	All	1975-83	.52	NS	ID	--	--	--	--

Table 5.--Results of Seasonal Kendall trend analysis for St. Francis River at Lake City, Ark., 07040450

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were quadratic (QUAD) and hyperbolic (HYP7)]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-85	0.49	NS	1978-85	HYP7	0.70	0.08	-4.8
SC	Irrig.	1975-85	.41	NS	1978-85	QUAD	.71	.43	NS
SAR	All	ID	--	--	ID	--	--	--	--
SAR	Irrig.	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	< .01	+0.63	ID	--	--	--	--
SO_4	Irrig.	1975-83	.03	+ .65	ID	--	--	--	--
Cl	All	1975-83	.15	NS	ID	--	--	--	--
Cl	Irrig.	1975-83	.05	+ .55	ID	--	--	--	--
FC	All	1975-83	.04	-5.0	ID	--	--	--	--
FC	Irrig.	1975-83	.23	NS	ID	--	--	--	--
TP	All	1975-83	.58	NS	ID	--	--	--	--
TP	Irrig.	1975-83	.63	NS	ID	--	--	--	--
TNH	All	1977-83	< .01	- .015	ID	--	--	--	--
TNH	Irrig.	1977-83	.24	NS	ID	--	--	--	--

Table 6.--Results of Seasonal Kendall trend analysis for Right Hand Chute of Little River at Big Lake Outlet near Manila, Ark., 07046500

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-81	0.84	NS	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	.71	NS	ID	--	--	--	--
Cl	All	1975-83	.25	NS	ID	--	--	--	--
FC	All	1975-83	.50	NS	ID	--	--	--	--
TP	All	1975-83	.20	NS	ID	--	--	--	--
TNH	All	1975-83	.49	NS	ID	--	--	--	--

Table 7.--Results of Seasonal Kendall trend analysis for Pemiscot Bayou at Dell, Ark., 07047400

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equation that could be used in flow adjustment was log-linear (LOGLIN). NONE indicates that none of the flow-adjusted equations were used. DL indicates that flow-adjustment procedures were not performed because more than 5 percent of the water-quality property data paired with discharge data were censored]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-80	0.17	NS	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	.96	NS	1976-83	NONE	--	--	--
Cl	All	1975-83	.03	+0.32	1976-83	LOGLIN	0.15	0.67	NS
FC	All	1975-83	< .01	-110	ID	--	--	--	--
TP	All	1975-83	.09	- .034	ID	--	--	--	--
TNH	All	1977-83	.16	NS	1978-83	DL	--	--	--

Table 8.--Results of Seasonal Kendall trend analysis for Tyronza River near Twist, Ark., 07047700

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-80	0.16	NS	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	.03	-2.50	ID	--	--	--	--
Cl	All	1975-83	1.00	NS	ID	--	--	--	--
FC	All	1975-83	.04	-20.8	ID	--	--	--	--
TP	All	1975-83	.11	NS	ID	--	--	--	--
TNH	All	1977-83	.10	NS	ID	--	--	--	--

Table 9.--Results of Seasonal Kendall trend analysis for St. Francis River at Parkin, Ark., 07047800

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31625), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were log-log (LOGLOG) and hyperbolic (HYP4 and HYPY6). NONE indicates that none of the flow-adjustment equations were used. DL indicates that flow-adjustment procedures were not performed because more than 5 percent of the water-quality property data paired with discharge data were censored]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-85	0.57	NS	1975-85	NONE	--	--	--
SC	Irrig.	1975-85	1.00	NS	1975-85	HYP4	0.66	0.79	NS
SAR	All	1975-85	.04	+<0.01	1975-85	NONE	--	--	--
SAR	Irrig.	1975-85	.18	NS	1975-85	NONE	--	--	--
SO_4	All	1975-85	.36	NS	1975-85	HYP6	.45	.12	NS
SO_4	Irrig.	1975-85	1.00	NS	1975-85	DL	--	--	--
Cl	All	1975-85	.02	+ .23	1975-85	NONE	--	--	--
Cl	Irrig.	1975-85	.38	NS	1975-85	NONE	--	--	--
FC	All	1977-85	.72	NS	1977-85	NONE	--	--	--
FC	Irrig.	1977-85	.04	- 100	1977-85	NONE	--	--	--
TP	All	1975-85	.04	-.013	1975-85	LOGLOG	.24	.01	Decrease
TP	Irrig.	1975-85	.42	NS	1975-85	NONE	--	--	--
TNH	All	ID	--	--	ID	--	--	--	--
TNH	Irrig.	ID	--	--	ID	--	--	--	--

Table 10.--Results of Seasonal Kendall trend analysis for St. Francis Bay at Riverfront, Ark., 07047900

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31625), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjust- ment were log-linear (LOGLIN), log-log (LOGLOG) and hyperbolic (HYP3-HYPY6). NONE indicates that none of the flow-adjustment equations were used]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-85	0.46	NS	1975-85	HYP5	0.70	0.61	NS
SC	Irrig.	1975-85	.83	NS	1975-85	LOGLIN	.66	.11	NS
SAR	All	1975-85	.49	NS	1975-85	LOGLOG	.11	.51	NS
SAR	Irrig.	1975-85	.66	NS	1975-85	NONE	--	--	--
SO_4	All	1975-85	.90	NS	1975-85	HYP6	.48	.14	NS
SO_4	Irrig.	1975-85	.64	NS	1975-85	HYP6	.68	.26	NS
Cl	All	1975-85	.38	NS	1975-85	LOGLOG	.21	.65	NS
Cl	Irrig.	1975-85	.86	NS	1975-85	HYP5	.09	.86	NS
FC	All	1977-85	.28	NS	1977-85	NONE	--	--	--
FC	Irrig.	1977-85	.75	NS	1977-85	NONE	--	--	--
TP	All	1975-85	< .01	-0.012	1975-85	HYP4	.08	<.01	-0.013
TP	Irrig.	1975-85	.02	- .012	1975-85	HYP3	.27	.14	NS
TNH	All	ID	--	--	ID	--	--	--	--
TNH	Irrig.	ID	--	--	ID	--	--	--	--

Table 11.--Results of Seasonal Kendall trend analysis for L'Anguille River near Colt, Ark., 07047942

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31625), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were log-linear (LOGLIN), log-log (LOGLOG), log-quadratic log (LOGQUAD) and hyperbolic (HYP5-HYP6). NONE indicates that none of the flow-adjustment equations were used]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-85	0.27	NS	1975-85	NONE	--	--	--
SC	Irrig.	1975-85	.96	NS	1975-85	LOGQUAD	0.25	0.21	NS
SAR	All	1975-85	.86	NS	1975-85	LOGLIN	.32	.58	NS
SAR	Irrig.	1975-85	.78	NS	1975-85	NONE	--	--	--
SO_4	All	1975-85	.78	NS	1975-85	HYP5	.45	.67	NS
SO_4	Irrig.	1975-85	.48	NS	1975-85	NONE	--	--	--
Cl	All	1975-85	.87	NS	1975-85	HYP6	.56	.17	NS
Cl	Irrig.	1975-85	.40	NS	1975-85	NONE	--	--	--
FC	All	1977-85	< .01	-22.1	1977-85	NONE	--	--	--
FC	Irrig.	1977-85	.05	-55.2	1977-85	NONE	--	--	--
TP	All	1975-85	.50	NS	1975-85	LOGLOG	.05	.62	NS
TP	Irrig.	1975-85	.68	NS	1975-85	NONE	--	--	--
TNH	All	1980-85	.94	NS	1980-85	NONE	--	--	--
TNH	Irrig.	1980-85	.23	NS	ID	--	--	--	--

Table 12.--Results of Seasonal Kendall trend analysis for L'Anguille River at Marianna, Ark., 07047964

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-81	0.73	NS	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-85	.78	NS	ID	--	--	--	--
Cl	All	1975-85	.20	NS	ID	--	--	--	--
FC	All	1975-85	1.00	NS	ID	--	--	--	--
TP	All	1975-85	.22	NS	ID	--	--	--	--
TNH	All	1977-85	.66	NS	ID	--	--	--	--

Table 13.--Results of Seasonal Kendall trend analysis for St. Francis River north of Helena, Ark., 07047968

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-81	0.77	NS	ID	--	--	--	--
SC	Irrig.	1975-81	.56	NS	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SAR	Irrig.	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	.76	NS	ID	--	--	--	--
SO_4	Irrig.	1975-83	.66	NS	ID	--	--	--	--
Cl	All	1975-83	.76	NS	ID	--	--	--	--
Cl	Irrig.	1975-83	.34	NS	ID	--	--	--	--
FC	All	1975-83	.39	NS	ID	--	--	--	--
FC	Irrig.	1975-83	.47	NS	ID	--	--	--	--
TP	All	1975-83	.47	NS	ID	--	--	--	--
TP	Irrig.	1975-83	1.00	NS	ID	--	--	--	--
TNH	All	1977-83	< .01	-0.018	ID	--	--	--	--
TNH	Irrig.	1977-83	.16	NS	ID	--	--	--	--

Table 14.--Results of Seasonal Kendall trend analysis for White River at Oil Trough, Ark., 07061105

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-85	0.04	+5.5	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-85	< .01	+ .50	ID	--	--	--	--
Cl	All	1975-85	.34	NS	ID	--	--	--	--
FC	All	1975-85	.63	NS	ID	--	--	--	--
TP	All	1975-85	< .01	+ .002	ID	--	--	--	--
TNH	All	1977-85	< .01	- .005	ID	--	--	--	--

Table 15.--Results of Seasonal Kendall trend analysis for Black River near Corning, Ark., 07064000

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were log-linear (LOGLIN), inverse (INV), and hyperbolic (HYP6). NONE indicates that none of the flow-adjustment equations were used. DL indicates that flow-adjustment procedures were not performed because more than 5 percent of the water-quality property data paired with discharge data were censored]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-80	0.61	NS	1975-80	HYP6	0.76	0.73	NS
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	.06	+0.38	1975-83	INV	.04	.16	NS
Cl	All	1975-83	.20	NS	1975-83	LOGLIN	.24	.44	NS
FC	All	1975-83	.02	-12.1	1975-83	NONE	--	--	--
TP	All	1975-83	.63	NS	1975-83	NONE	--	--	--
TNH	All	1977-83	.02	- .007	1977-83	DL	--	--	--

Table 16.--Results of Seasonal Kendall trend analysis for Current River near Pocahontas, Ark., 07068850

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were quadratic (QUAD) and log-log (LOGLOG). NONE indicates that none of the flow-adjustment equations were used. DL indicates that flow-adjustment procedures were not performed because more than 5 percent of the water-quality property data paired with discharge data were censored]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-80	0.52	NS	1975-80	NONE	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-85	< .01	+0.33	1975-85	DL	--	--	--
Cl	All	1975-85	.22	NS	1975-85	QUAD	0.16	0.27	NS
FC	All	1975-85	.67	NS	1975-85	LOGLOG	.22	.09	Decrease
TP	All	1975-85	.27	NS	1975-85	NONE	--	--	--
TNH[a]	All	1977-85	< .01	- .005	1977-85	DL	--	--	--

[a]Frequency of occurrence of censored data (three detection limits that decreased during 1977-85) may be high enough to substantially affect trend analysis results. The probability of no trend may have been higher in the absence of censored data.

Table 17.--Results of Seasonal Kendall trend analysis for Black River at Pocahontas, Ark., 07069000

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were log-linear (LOGLIN), log-log (LOGLOG), and hyperbolic (HYP3 and HYP6). NONE indicates that none of the flow-adjustment equations were used. DL indicates that flow-adjustment procedures were not performed because more than 5 percent of the water-quality property data paired with discharge data were censored]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	ID	--	--	ID	--	--	--	--
SC	Irrig.	ID	--	--	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SAR	Irrig.	ID	--	--	ID	--	--	--	--
SO_4	All	1978-85	0.09	+0.22	1978-85	DL	--	--	--
SO_4	Irrig.	1978-85	.01	+ .68	1978-85	DL	--	--	--
Cl	All	1978-85	< .01	- .25	1978-85	HYP6	0.19	<0.01	-0.26
Cl	Irrig.	1978-85	.01	- .33	1978-85	NONE	--	--	--
FC	All	1978-85	.50	NS	1977-85	LOGLOG	.11	.96	NS
FC	Irrig.	1978-85	.38	NS	1978-85	NONE	--	--	--
TP	All	1978-85	.88	NS	1978-85	HYP3	.29	.06	+ .138
TP	Irrig.	1978-85	.86	NS	1978-85	LOGLIN	.35	.34	NS
TNH	All	1978-85	< .01	- .007	1978-85	DL	--	--	--
TNH	Irrig.	1978-85	.38	NS	1978-85	NONE	--	--	--

Table 18.--Results of Seasonal Kendall trend analysis for Black River at Black Rock, Ark., 07072500

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31625), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were log-log (LOGLOG) and hyperbolic (HYP4). NONE indicates that none of the flow-adjustment equations were used. DL indicates that flow-adjustment procedures were not performed because more than 5 percent of the water-quality property data paired with discharge data were censored]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-85	0.17	NS	1975-85	NONE	--	--	--
SC	Irrig.	1975-85	.11	NS	1975-85	NONE	--	--	--
SAR	All	1975-85	.11	NS	1975-85	NONE	--	--	--
SAR	Irrig.	1979-85	.45	NS	1979-85	NONE	--	--	--
SO_4	All	1979-85	.49	NS	1979-85	NONE	--	--	--
SO_4	Irrig.	1979-85	.80	NS	1979-85	NONE	--	--	--
Cl	All	1979-85	.63	NS	1979-85	NONE	--	--	--
Cl	Irrig.	1979-85	.20	NS	1979-85	NONE	--	--	--
FC	All	1977-85	.62	NS	1977-85	LOGLOG	0.11	0.31	NS
FC	Irrig.	1977-85	.29	NS	1977-85	NONE	--	--	--
TP	All	1975-85	.18	NS	1975-85	HYP4	.10	.02	-0.004
TP	Irrig.	1975-85	.27	NS	1975-85	DL	--	--	--
TNH	All	1980-85	< .01	+ .010	1980-85	DL	--	--	--
TNH	Irrig.	1980-85	.55	NS	ID	--	--	--	--

Table 19.--Results of Seasonal Kendall trend analysis for Black River at Jacksonport, Ark., 07074490

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-80	0.34	NS	ID	--	--	--	--
SC	Irrig.	1975-80	.23	NS	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SAR	Irrig.	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	.02	+0.40	ID	--	--	--	--
SO_4	Irrig.	1975-83	.52	NS	ID	--	--	--	--
Cl	All	1975-83	.17	NS	ID	--	--	--	--
Cl	Irrig.	1975-83	.11	NS	ID	--	--	--	--
FC	All	1975-83	.12	NS	ID	--	--	--	--
FC	Irrig.	1975-83	< .01	-24.8	ID	--	--	--	--
TP	All	1975-83	1.00	NS	ID	--	--	--	--
TP	Irrig.	1975-83	.20	NS	ID	--	--	--	--
TNH	All	1977-83	.02	- .008	ID	--	--	--	--
TNH	Irrig.	1977-83	.67	NS	ID	--	--	--	--

Table 20.--Results of Seasonal Kendall trend analysis for White River at Newport, Ark., 07074500

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31625), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equation that could be used in flow adjustment was hyperbolic (HYP4 and HYP6). NONE indicates that none of the flow-adjustment equations were used]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1978-85	0.17	NS	1978-85	HYP4	0.73	0.30	NS
SC	Irrig.	1978-85	.34	NS	1978-85	HYP4	.64	.26	NS
SAR	All	1978-85	.77	NS	1978-85	NONE	--	--	--
SAR	Irrig.	1978-85	.90	NS	1978-85	NONE	--	--	--
SO_4	All	1978-85	.57	NS	1978-85	NONE	--	--	--
SO_4	Irrig.	1978-85	.79	NS	1978-85	HYP6	.28	.43	NS
Cl	All	1978-85	.82	NS	1978-85	NONE	--	--	--
Cl	Irrig.	1978-85	.29	NS	1978-85	NONE	--	--	--
FC	All	1978-85	.07	-10.8	1978-85	NONE	--	--	--
FC	Irrig.	1978-85	.02	-14.3	1978-85	NONE	--	--	--
TP	All	1978-85	.76	NS	1978-85	NONE	--	--	--
TP	Irrig.	1978-85	.77	NS	1978-85	NONE	--	--	--
TNH	All	ID	--	--	ID	--	--	--	--
TNH	Irrig.	ID	--	--	ID	--	--	--	--

Table 21.--Results of Seasonal Kendall trend analysis for White River near Augusta, Ark., 07074850

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were inverse (INV) and log-log (LOGLOG). NONE indicates that none of the flow-adjustment equations were used]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-80	0.01	+8.4	ID	--	--	--	--
SC	Irrig.	1975-80	.28	NS	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SAR	Irrig.	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	< .01	+ .40	1975-83	NONE	--	--	--
SO_4	Irrig.	1975-83	.02	+ .40	1975-83	NONE	--	--	--
Cl	All	1975-83	.03	+ .12	1975-83	INV	0.37	0.09	+0.16
Cl	Irrig.	1975-83	.01	+ .21	1975-83	NONE	--	--	--
FC	All	1975-83	.18	NS	1975-83	NONE	--	--	--
FC	Irrig.	1975-83	.03	-12.8	1975-83	NONE	--	--	--
TP	All	1975-83	.65	NS	1975-83	LOGLOG	.13	.56	NS
TP	Irrig.	1975-83	.30	NS	1975-83	NONE	--	--	--
TNH	All	1977-83	< .01	- .008	1977-83	NONE	--	--	--
TNH	Irrig.	1977-83	.04	- .011	1977-83	NONE	--	--	--

Table 22.--Results of Seasonal Kendall trend analysis for Little Red River at Judsonia, Ark., 07076634

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-80	<0.01	+2.6	ID	--	--	--	--
SC	Irrig.	1975-80	.42	NS	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SAR	Irrig.	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	< .01	+ .25	ID	--	--	--	--
SO_4	Irrig.	1975-83	.02	+ .33	ID	--	--	--	--
Cl	All	1975-83	.13	NS	ID	--	--	--	--
Cl	Irrig.	1975-83	.32	NS	ID	--	--	--	--
FC	All	1975-83	.71	NS	ID	--	--	--	--
FC	Irrig.	1975-83	.38	NS	ID	--	--	--	--
TP	All	1975-83	.05	+ .005	ID	--	--	--	--
TP	Irrig.	1975-83	.41	NS	ID	--	--	--	--
TNH	All	1977-83	.18	NS	ID	--	--	--	--
TNH	Irrig.	1977-83	.03	- .017	ID	--	--	--	--

Table 23.--Results of Seasonal Kendall trend analysis for White River at DeValls Bluff, Ark., 07077000

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were log-linear (LOGLIN), log-log (LOGLOG), and hyperbolic (HYP4). NONE indicates that none of the flow-adjustment equations were used. DL indicates that flow-adjustment procedures were not performed because more than 5 percent of the water-quality property data paired with discharge data were censored]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-81	0.86	NS	1975-81	HYP4	0.53	0.49	NS
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-85	.05	+0.17	1975-85	NONE	--	--	--
Cl	All	1975-85	.97	NS	1975-85	LOGLIN	.24	.42	NS
FC	All	1975-85	.43	NS	1975-85	LOGLOG	.08	.51	NS
TP	All	1975-85	.97	NS	1975-85	NONE	--	--	--
TNH	All	1977-85	< .01	- .007	1977-85	DL	--	--	--

Table 24.--Results of Seasonal Kendall trend analysis for Cache River near Cash, Ark., 07077400

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were inverse (INV), log-log (LOGLOG), and hyperbolic (HYP1). NONE indicates that none of the flow-adjustment equations were used. DL indicates that flow-adjustment procedures were not performed because more than 5 percent of the water-quality property data paired with discharge data were censored]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-81	0.04	+9.8	1975-81	NONE	--	--	--
SC	Irrig.	1975-81	.04	+27.8	1975-81	INV	0.33	0.03	+20.9
SAR	All	ID	--	--	ID	--	--	--	--
SAR	Irrig.	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	< .01	+ .75	1975-83	NONE	--	--	--
SO_4	Irrig.	1975-83	.33	NS	1975-83	DL	--	--	--
Cl	All	1975-83	.02	+ .59	1975-83	LOGLOG	.43	.74	NS
Cl	Irrig.	1975-83	.03	+ .98	1975-83	LOGLOG	.35	.01	INCREASE
FC	All	1975-83	.12	NS	1975-83	NONE	--	--	--
FC	Irrig.	1975-83	.47	NS	1975-83	NONE	--	--	--
TP	All	1975-83	.13	NS	1975-83	LOGLOG	.05	.07	INCREASE
TP	Irrig.	1975-83	.94	NS	1975-83	NONE	--	--	--
TNH	All	1977-83	< .01	- .030	1977-83	NONE	--	--	--
TNH	Irrig.	1977-83	.01	- .033	ID	HYP1	.32	.11	NS

Table 25.--Results of Seasonal Kendall trend analysis for Cache River at Patterson, Ark., 07077500

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31625), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. ID indicates that insufficient data were available]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-85	0.20	NS	ID	--	--	--	--
SC	Irrig.	1975-85	.30	NS	ID	--	--	--	--
SAR	All	1975-85	.09	+0.01	ID	--	--	--	--
SAR	Irrig.	1975-85	.08	+ .02	ID	--	--	--	--
SO_4	All	1975-85	.20	NS	ID	--	--	--	--
SO_4	Irrig.	1975-85	.04	+ .65	ID	--	--	--	--
Cl	All	1975-85	.09	+ .25	ID	--	--	--	--
Cl	Irrig.	1975-85	.01	+ .45	ID	--	--	--	--
FC	All	1977-85	< .01	-12.0	ID	--	--	--	--
FC	Irrig.	1977-85	.08	-19.6	ID	--	--	--	--
TP	All	1975-85	.01	- .007	ID	--	--	--	--
TP	Irrig.	1975-85	< .01	- .009	ID	--	--	--	--
TNH	All	1980-85	.87	NS	ID	--	--	--	--
TNH	Irrig.	1980-85	.68	NS	ID	--	--	--	--

Table 26.--Results of Seasonal Kendall trend analysis for Cache River at Brasfield, Ark., 07077600

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-81	0.33	NS	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	.22	NS	ID	--	--	--	--
Cl	All	1975-83	.13	NS	ID	--	--	--	--
FC	All	1975-83	.06	- 8.7	ID	--	--	--	--
TP	All	1975-83	.48	NS	ID	--	--	--	--
TNH	All	1977-83	.01	- .015	ID	--	--	--	--

Table 27.--Results of Seasonal Kendall trend analysis for Bayou DeView near Gibson, Ark., 07077660

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were log-log (LOGLOG) and hyperbolic (HYP8). NONE indicates that none of the flow-adjustment equations were used]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-80	0.34	NS	ID	--	--	--	--
SC	Irrig.	1975-80	.23	NS	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SAR	Irrig.	ID	--	--	ID	--	--	--	--
SO_4	All	1975-85	.16	NS	1977-85	HYP8	0.08	0.09	+0.79
SO_4	Irrig.	1975-85	.17	NS	1975-85	NONE	--	--	--
Cl	All	1975-85	.47	NS	1977-85	NONE	--	--	--
Cl	Irrig.	1975-85	.15	NS	1975-85	LOGLOG	.17	.92	NS
FC	All	1975-85	.02	-80.0	1975-85	NONE	--	--	--
FC	Irrig.	1975-85	< .01	-91.3	1975-85	NONE	--	--	--
TP	All	1975-85	.75	NS	1975-85	LOGLOG	.24	.96	NS
TP	Irrig.	1975-85	.53	NS	ID	--	--	--	--
TNH	All	1977-85	< .01	- .072	1977-85	NONE	--	--	--
TNH	Irrig.	1977-85	< .01	- .177	1977-85	NONE	--	--	--

Table 28.--Results of Seasonal Kendall trend analysis for Bayou DeView at Morton, Ark., 07077700

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31625), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. ID indicates that insufficient data were available]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-85	0.56	NS	ID	--	--	--	--
SC	Irrig.	1975-85	.62	NS	ID	--	--	--	--
SAR	All	1975-85	.53	NS	ID	--	--	--	--
SAR	Irrig.	1975-85	.86	NS	ID	--	--	--	--
SO_4	All	1975-85	1.00	NS	ID	--	--	--	--
SO_4	Irrig.	1975-85	.54	NS	ID	--	--	--	--
Cl	All	1975-85	.05	+0.26	ID	--	--	--	--
Cl	Irrig.	1975-85	.16	NS	ID	--	--	--	--
FC	All	1977-85	.68	NS	ID	--	--	--	--
FC	Irrig.	1977-85	.16	NS	ID	--	--	--	--
TP	All	1975-85	.51	NS	ID	--	--	--	--
TP	Irrig.	1975-85	.70	NS	ID	--	--	--	--
TNH	All	1980-85	.57	NS	ID	--	--	--	--
TNH	Irrig.	1980-85	1.00	NS	ID	--	--	--	--

Table 29.--Results of Seasonal Kendall trend analysis for Bayou DeView near Brasfield, Ark., 07077750

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-81	0.61	NS	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	.03	+0.50	ID	--	--	--	--
Cl	All	1975-83	1.00	NS	ID	--	--	--	--
FC	All	1975-83	.06	- 4.2	ID	--	--	--	--
TP	All	1975-83	.42	NS	ID	--	--	--	--
TNH	All	1977-83	< .01	- .015	ID	--	--	--	--

Table 30.--Results of Seasonal Kendall trend analysis for White River at Clarendon, Ark., 07077800

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31625), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were quadratic (QUAD), log-quadratic log (LOGQUAD), and hyperbolic (HYP6). NONE indicates that none of the flow-adjusted equations were used. DL indicates that flow-adjustment procedures were not performed because more than 5 percent of the water-quality property data paired with discharge data were censored]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-85	0.57	NS	1975-85	QUAD	0.48	0.49	NS
SC	Irrig.	1975-85	.35	NS	1975-85	LOGQUAD	.30	.71	NS
SAR	All	1975-85	.34	NS	1975-85	NONE	--	--	--
SAR	Irrig.	1975-85	.09	+<0.01	1975-85	NONE	--	--	--
SO_4	All	1975-85	.27	NS	1975-85	NONE	--	--	--
SO_4	Irrig.	1975-85	1.00	NS	1975-85	NONE	--	--	--
Cl	All	1975-85	.27	NS	1975-85	HYP6	.05	1.00	NS
Cl	Irrig.	1975-85	.08	- .10	1975-85	NONE	--	--	--
FC	All	1977-85	.78	NS	1977-85	NONE	--	--	--
FC	Irrig.	1977-85	.34	NS	1977-85	NONE	--	--	--
TP	All	1975-85	.42	NS	1975-85	NONE	--	--	--
TP	Irrig.	1975-85	.53	NS	1975-85	NONE	--	--	--
TNH	All	1977-81	< .01	+ .015	1977-81	DL	--	--	--
TNH	Irrig.	1977-81	.01	+ .016	1977-81	NONE	--	--	--

Table 31.--Results of Seasonal Kendall trend analysis for White River at St. Charles, Ark., 07077820

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-80	0.38	NS	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-84	< .01	+0.45	ID	--	--	--	--
Cl	All	1975-85	.12	NS	ID	--	--	--	--
FC	All	1975-85	.02	- 3.5	ID	--	--	--	--
TP	All	1975-85	.46	NS	ID	--	--	--	--
TNH	All	1977-85	< .01	- .005	ID	--	--	--	--

Table 32.--Results of Seasonal Kendall trend analysis for Big Creek near Watkins Corner, Ark., 07077960

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equation that could be used in flow adjustment was hyperbolic (HYP6). NONE indicates that none of the flow-adjusted equations were used. DL indicates that flow-adjustment procedures were not performed because more than 5 percent of the water-quality property data paired with discharge data were censored]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-80	0.16	NS	1975-80	NONE	--	--	--
SC	Irrig.	1975-80	.23	NS	1975-80	HYP6	0.60	0.77	NS
SAR	All	ID	--	--	ID	--	--	--	--
SAR	Irrig.	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	1.00	NS	1975-80	NONE	--	--	--
SO_4	Irrig.	1975-83	.60	NS	1975-80	DL	--	--	--
Cl	All	1975-83	.04	-0.50	1975-80	NONE	--	--	--
Cl	Irrig.	1975-83	.21	NS	1975-80	HYP6	.32	.89	NS
FC	All	1975-83	< .01	-27.7	1975-80	NONE	--	--	--
FC	Irrig.	1975-80	.18	NS	1975-80	NONE	--	--	--
TP	All	1975-83	.22	NS	1975-80	HYP6	.07	.79	NS
TP	Irrig.	1975-83	< .01	+ .022	1975-80	NONE	--	--	--
TNH	All	1977-83	.01	- .017	ID	--	--	--	--
TNH	Irrig.	1977-83	.60	NS	ID	--	--	--	--

Table 33.--Results of Seasonal Kendall trend analysis for White River at Arkansas Post Canal near Nady, Ark., 07078285

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-81	0.33	NS	ID	--	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	< .01	+0.50	ID	--	--	--	--
Cl	All	1975-83	.53	NS	ID	--	--	--	--
FC	All	1975-83	< .01	- 5.0	ID	--	--	--	--
TP	All	1975-83	.50	NS	ID	--	--	--	--
TNH	All	1977-83	.15	NS	ID	--	--	--	--

Table 34.--Results of Seasonal Kendall trend analysis for Arkansas River at Murray Dam at Little Rock, Ark., 07263450

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were log-linear (LOGLIN), quadratic (QUAD), and hyperbolic (HYP5). NONE indicates that none of the flow-adjusted equations were used. DL indicates that flow-adjustment procedures were not performed because more than 5 percent of the water-quality property data paired with discharge data were censored]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-83	0.92	NS	1975-83	HYP5	0.08	0.90	NS
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-85	.52	NS	1975-85	LOGLIN	.21	.09	-1.36
Cl	All	1975-85	.85	NS	1975-85	HYP5	.06	.59	NS
FC	All	1975-85	.21	NS	1976-85	NONE	--	--	--
TP	All	1975-85	.11	NS	1975-85	QUAD	.40	.84	NS
TNH	All	1977-85	.02	-0.005	1977-85	DL	--	--	--

Table 35.--Results of Seasonal Kendall trend analysis for Arkansas River at David D. Terry Lock and Dam below Little Rock, Ark., 07263620

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31625), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjust- ment were quadratic (QUAD), log-log (LOGLOG), and hyperbolic (HYP5-HYP7). NONE indicates that none of the flow-adjusted equations were used]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-85	0.92	NS	1975-85	HYP5	0.06	0.82	NS
SC	Irrig.	1975-85	.28	NS	1975-85	NONE	--	--	--
SAR	All	1975-85	.38	NS	1975-85	LOGLOG	.03	.72	NS
SAR	Irrig.	1975-85	.59	NS	1975-85	NONE	--	--	--
SO_4	All	1975-85	.28	NS	1975-85	HYP6	.05	.14	NS
SO_4	Irrig.	1975-85	.61	NS	1975-85	NONE	--	--	--
Cl	All	1975-85	.63	NS	1975-85	HYP7	.03	.87	NS
Cl	Irrig.	1975-85	.41	NS	1975-85	NONE	--	--	--
FC	All	1977-85	< .01	-131	1977-85	NONE	--	--	--
FC	Irrig.	1977-85	< .01	-338	1977-85	NONE	--	--	--
TP	All	1975-85	.38	NS	1975-85	NONE	--	--	--
TP	Irrig.	1975-85	.22	NS	1975-85	QUAD	.18	.77	NS
TNH	All	ID	--	--	ID	--	--	--	--
TNH	Irrig.	ID	--	--	ID	--	--	--	--

Table 36.--Results of Seasonal Kendall trend analysis for Arkansas River at Lock and Dam 3 near Swan Lake, Ark., 07263750

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equation that could be used in flow adjustment was hyperbolic (HYP7). NONE indicates that none of the flow-adjusted equations were used]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-81	0.20	NS	1975-81	HYP7	0.10	0.12	NS
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	.09	+1.61	1975-83	HYP7	.16	.49	NS
Cl	All	1975-83	.02	+7.54	1975-83	HYP7	.07	.01	+6.00
FC	All	1975-83	< .01	-22.7	1975-83	NONE	--	--	--
TP	All	1975-83	.06	+ .004	1975-83	NONE	--	--	--
TNH	All	1977-83	.38	NS	1977-83	NONE	--	--	--

Table 37.--Results of Seasonal Kendall trend analysis for Bayou Meto near Lonoke, Ark., 07264000

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equation that could be used in flow adjustment was hyperbolic (HYP7). NONE indicates that none of the flow-adjusted equations were used]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-81	0.38	NS	1975-81	NONE	--	--	--
SC	Irrig.	1975-81	.08	-53.4	1975-81	NONE	--	--	--
SAR	All	ID	--	--	ID	--	--	--	--
SAR	Irrig.	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	.22	NS	1975-83	HYP7	0.08	0.60	NS
SO_4	Irrig.	1975-83	1.00	NS	1975-83	NONE	--	--	--
Cl	All	1975-83	.40	NS	1975-83	NONE	--	--	--
Cl	Irrig.	1975-83	.87	NS	1975-83	NONE	--	--	--
FC	All	1975-83	< .01	-27.4	1975-83	NONE	--	--	--
FC	Irrig.	1975-83	.23	NS	1975-83	NONE	--	--	--
TP	All	1975-83	.35	NS	1975-83	HYP7	.04	.83	NS
TP	Irrig.	1975-83	.28	NS	1975-83	NONE	--	--	--
TNH	All	1977-83	.17	NS	1977-83	NONE	--	--	--
TNH	Irrig.	1977-83	.59	NS	1977-83	NONE	--	--	--

Table 38.--Results of Seasonal Kendall trend analysis for Bayou Two Prairie near Cabot, Ark., 07264050

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were log-linear (LOGLIN), log-log (LOGLOG), and hyperbolic (HYP8). NONE indicates that none of the flow-adjusted equations were used]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-81	0.24	NS	1975-81	LOGLOG	0.74	0.05	Increase
SC	Irrig.	1975-81	.44	NS	1975-81	LOGLIN	.44	1.00	NS
SAR	All	ID	--	--	ID	--	--	--	--
SAR	Irrig.	ID	--	--	ID	--	--	--	--
SO_4	All	1975-83	.04	+0.42	1975-83	NONE	--	--	--
SO_4	Irrig.	1975-83	.26	NS	1975-83	NONE	--	--	--
Cl	All	1975-83	.75	NS	1975-83	LOGLOG	.53	.31	NS
Cl	Irrig.	1975-83	.50	NS	1975-83	HYP8	.16	.30	NS
FC	All	1975-83	.28	NS	1975-83	NONE	--	--	--
FC	Irrig.	1975-83	.29	NS	1975-83	NONE	--	--	--
TP	All	1975-83	< .01	+ .032	1975-83	NONE	--	--	--
TP	Irrig.	1975-83	.03	+ .064	1975-83	NONE	--	--	--
TNH	All	1977-83	.01	+ .071	1977-83	NONE	--	--	--
TNH	Irrig.	1977-83	.12	NS	1977-83	NONE	--	--	--

Table 39.--Results of Seasonal Kendall trend analysis for Bayou Meto near Bayou Meto, Ark., 07265099

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31616), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were log-log (LOGLOG), and hyperbolic (HYP7-HYP8). NONE indicates that none of the flow-adjusted equations were used]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-80	0.66	NS	1975-80	HYP7	0.63	0.84	NS
SAR	All	ID	--	--	ID	--	--	--	--
SO_4	All	1975-85	.05	+0.35	1975-85	HYP8	.13	.07	+0.29
Cl	All	1975-85	.28	NS	1975-85	HYP8	.38	.21	NS
FC	All	1975-85	.69	NS	1975-85	NONE	--	--	--
TP	All	1975-85	.31	NS	1975-85	LOGLOG	.35	.15	NS
TNH	All	1977-85	< .01	- .008	1977-85	NONE	--	--	--

Table 40.--Results of Seasonal Kendall trend analysis for Arkansas River at Dam No. 2 near Gillett, Ark., 07265283

[Properties: SC is specific conductance, in microsiemens per centimeter at 25 degrees Celsius; SAR is sodium adsorption ratio; SO_4 is dissolved sulfate, in milligrams per liter (mg/L); Cl is dissolved chloride, in mg/L; FC is fecal-coliform bacteria (parameter code 31625), in colonies per 100 milliliters; TP is total phosphorus, in mg/L; and TNH is total ammonia, in mg/L. Information in "Period" column describes data included in trend analysis--January through December (All) or June through September (Irrig.). Water year ranges indicated are generalized; some years within range shown may have no data. ID indicates that insufficient data were available. Estimated trend is the Seasonal Kendall Slope Estimator expressed in units per year; NS indicates that no significant ($p<0.10$) trend was detected. The regression equations that could be used in flow adjustment were log-log (LOGLOG), and hyperbolic (HYP5-HYP6). NONE indicates that none of the flow-adjusted equations were used]

		Raw data			Flow-adjusted data				
Property	Period	Water years (inclusive)	Probability of no trend	Estimated trend	Water years (inclusive)	Equation type	r^2	Probability of no trend	Estimated trend
SC	All	1975-85	0.47	NS	1975-85	HYP5	0.10	0.24	NS
SC	Irrig.	1975-85	.78	NS	1975-85	NONE	--	--	--
SAR	All	1979-85	< .01	-0.25	1979-85	LOGLOG	.13	< .01	Decrease
SAR	Irrig.	1979-85	.22	NS	1979-85	NONE	--	--	--
SO_4	All	1975-85	.50	NS	1975-85	HYP6	.09	.21	NS
SO_4	Irrig.	1975-85	.54	NS	1975-85	NONE	--	--	--
Cl	All	1975-85	.80	NS	1975-85	HYP6	.08	.37	NS
Cl	Irrig.	1975-85	.87	NS	1975-85	NONE	--	--	--
FC	All	1979-85	.57	NS	1979-85	NONE	--	--	--
FC	Irrig.	1979-85	1.00	NS	1979-85	NONE	--	--	--
TP	All	1975-85	.83	NS	1975-85	NONE	--	--	--
TP	Irrig.	1975-85	.74	NS	1975-85	NONE	--	--	--
TNH	All	1977-81	.05	- .014	1977-81	NONE	--	--	--
TNH	Irrig.	1977-81	.16	NS	1977-81	NONE	--	--	--

Table 41.--Statistical summary of selected water-quality properties for St. Francis River at Fisk, Mo., 07040000

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	92	38	196	941	1,790	2,860	10,400	2,154
Dissolved oxygen	92	4.8	6.9	8.8	9.1	11.2	14.8	2.4
pH	93	6.0	7.6	7.8	7.8	8.0	8.7	.5
Specific conductance	94	79	151	190	190	224	343	53
Suspended sediment								
concentration	92	11	36	48	61	70	292	45
finer than 1 mm (fd)	82	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	82	94	100	100	100	100	100	1
finer than 0.25 mm (fd)	82	44	95	98	96	99	100	8
finer than 0.125 mm (fd)	82	24	81	93	87	97	100	15
finer than 0.062 mm (fd)	82	21	73	85	79	91	100	18
finer than 0.062 mm (sd)	10	32	49	57	56	65	78	13
Bed material								
finer than 16 mm (sd)	88	100	100	100	100	100	100	0
finer than 8 mm (sd)	88	63	100	100	99	100	100	5
finer than 4 mm (sd)	88	42	100	100	98	100	100	9
finer than 2 mm (sd, fd)	88	33	100	100	98	100	100	10
finer than 1 mm (sd, fd)	90	32	100	100	98	100	100	10
finer than 0.5 mm (fd)	90	29	96	98	95	99	100	11
finer than 0.25 mm (fd)	90	15	56	73	71	86	99	20
finer than 0.125 mm (fd)	90	1	4	10	19	30	74	18
finer than 0.062 mm (fd)	90	1	3	6	11	16	58	12

*Includes only discharges corresponding to a water-quality sample.

Table 42.--Statistical summary of selected water-quality properties for St. Francis River near Powe, Mo., 07040057

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), and sediment partice-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	74	82	282	1,220	1,970	3,160	10,400	2,290
Dissolved oxygen	0	--	--	--	--	--	--	--
pH	0	--	--	--	--	--	--	--
Specific conductance	0	--	--	--	--	--	--	--
Suspended sediment concentration	73	17	65	99	239	214	3,660	486
finer than 1 mm (fd)	66	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	66	94	100	100	100	100	100	1
finer than 0.25 mm (fd)	66	56	95	98	95	99	100	7
finer than 0.125 mm (fd)	66	19	67	85	79	95	99	18
finer than 0.062 mm (fd)	66	17	60	78	73	90	99	20
finer than 0.062 mm (sd)	7	29	43	57	54	66	68	14
Bed material								
finer than 16 mm (sd)	69	100	100	100	100	100	100	0
finer than 8 mm (sd)	69	100	100	100	100	100	100	0
finer than 4 mm (sd)	69	100	100	100	100	100	100	0
finer than 2 mm (sd, fd)	69	100	100	100	100	100	100	0
finer than 1 mm (sd, fd)	71	97	100	100	100	100	100	1
finer than 0.5 mm (fd)	71	80	95	98	96	99	100	4
finer than 0.25 mm (fd)	71	5	36	53	51	68	96	20
finer than 0.125 mm (fd)	71	0	1	3	5	5	37	7
finer than 0.062 mm (fd)	71	0	1	2	4	4	25	5

*Includes only discharges corresponding to a water-quality sample.

Table 43.--Statistical summary of selected water-quality properties for St. Francis River near Glennonville, Mo., 07040060

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	82	96	371	1,530	2,460	3,440	11,200	2,680
Dissolved oxygen	1	12.3	12.3	12.3	12.3	12.3	12.3	.0
pH	1	6.2	6.2	6.2	6.2	6.2	6.2	.0
Specific conductance	1	131	131	131	131	131	131	.0
Suspended sediment concentration	82	13	70	139	306	311	2,870	480
finer than 1 mm (fd)	76	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	76	92	100	100	100	100	100	1
finer than 0.25 mm (fd)	75	45	96	98	95	99	100	9
finer than 0.125 mm (fd)	76	9	64	82	76	94	100	22
finer than 0.062 mm (fd)	76	8	56	74	69	89	99	24
finer than 0.062 mm (sd)	6	49	51	59	63	72	97	17
Bed material								
finer than 16 mm (sd)	79	100	100	100	100	100	100	0
finer than 8 mm (sd)	79	100	100	100	100	100	100	0
finer than 4 mm (sd)	79	100	100	100	100	100	100	0
finer than 2 mm (sd, fd)	79	100	100	100	100	100	100	0
finer than 1 mm (sd, fd)	80	97	100	100	100	100	100	0
finer than 0.5 mm (fd)	80	85	99	99	99	99	100	2
finer than 0.25 mm (fd)	80	25	71	78	77	84	99	12
finer than 0.125 mm (fd)	80	0	1	1	3	3	28	4
finer than 0.062 mm (fd)	80	0	0	1	2	2	28	4

*Includes only discharges corresponding to a water-quality sample.

Table 44.--Statistical summary of selected water-quality properties for Wilhelmina Cutoff near Campbell, Mo., 07040070

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	83	109	338	1,320	2,420	3,460	11,900	2,770
Dissolved oxygen	0	--	--	--	--	--	--	--
pH	0	--	--	--	--	--	--	--
Specific conductance	0	--	--	--	--	--	--	--
Suspended sediment concentration	83	19	101	204	404	361	7,430	865
finer than 1 mm (fd)	77	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	77	97	100	100	100	100	100	1
finer than 0.25 mm (fd)	77	67	97	98	97	99	100	4
finer than 0.125 mm (fd)	77	19	59	80	74	90	99	21
finer than 0.062 mm (fd)	77	14	46	70	65	82	99	23
finer than 0.062 mm (sd)	6	34	48	66	65	83	95	21
Bed material								
finer than 16 mm (sd)	78	100	100	100	100	100	100	0
finer than 8 mm (sd)	78	100	100	100	100	100	100	0
finer than 4 mm (sd)	78	100	100	100	100	100	100	0
finer than 2 mm (sd, fd)	78	100	100	100	100	100	100	0
finer than 1 mm (sd, fd)	81	99	100	100	100	100	100	0
finer than 0.5 mm (fd)	81	93	99	99	99	100	100	1
finer than 0.25 mm (fd)	81	47	84	89	87	93	99	9
finer than 0.125 mm (fd)	81	0	1	2	6	6	57	10
finer than 0.062 mm (fd)	81	0	1	1	3	3	26	4

*Includes only discharges corresponding to a water-quality sample.

Table 45.--Statistical summary of selected water-quality properties for St. Francis River at St. Francis, Ark., 07040100

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), trace metals and pesticides (total or total recoverable in micrograms per liter) and sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N. Some discharge and other water-quality data are associated with separate main-channel and overbank samples]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	95	87	434	1,340	2,360	3,410	9,740	2,470
Dissolved oxygen	185	4.5	7.4	9.0	9.2	10.9	14.6	2.1
pH	183	5.9	7.4	7.8	7.7	8.0	8.8	.4
Specific conductance	152	65	135	186	192	240	363	71
Total alkalinity	23	35	53	71	81	100	180	37
Total hardness	51	38	74	90	94	120	180	31
Dissolved magnesium	11	6.4	7.4	9.4	10.3	13.0	17.0	3.3
Sodium adsorption ratio	5	.1	.1	.1	.1	.2	.2	.0
Dissolved sulfate	95	< 1.0	7.0	9.0	9.6	12.0	27.0	4.5
Dissolved chloride	97	2.2	4.7	6.0	7.8	7.5	31.0	5.7
Dissolved solids	60	72	111	128	146	163	468	61
Total phosphorus	87	< .01	.09	.13	.19	.19	1.90	.26
Total nitrite + nitrate	47	< .05	< .05	.09	.15	.25	.49	.14
Total ammonia	80	< .10	< .10	< .10	.08	< .10	.94	.13
BOD	89	1.1	2.3	3.0	3.1	3.6	9.5	1.1
Fecal coliforms(31616)	96	2	20	51	--	138	11,000	--
Fecal strep.(31679)	15	20	40	210	--	5,000	30,000	--
Turbidity	33	7.5	22	30	46	50	340	56
Arsenic	39	< 10	< 10	< 10	--	< 10	10	--
Cadmium	78	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	49	< 20	< 20	< 20	--	< 20	< 20	--
Copper	93	< 20	< 20	< 20	21	20	520	59
Lead	43	< 20	< 20	< 20	--	< 20	300	--
Iron	52	140	1,300	2,300	3,200	3,700	27,000	3,900
Manganese	57	93	220	340	380	480	1,800	260
Zinc	81	< 20	< 20	27	51	53	650	92
Aldrin	41	< .002	< .002	< .002	--	< .002	< .002	--
DDE	41	< .002	< .002	< .002	--	< .002	< .002	--
DDT	41	< .004	< .004	< .004	--	< .004	.010	--
Dieldrin	41	< .002	< .002	< .002	--	< .002	.010	--
Endrin	41	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	41	ND	ND	ND	--	ND	ND	--
Malathion	16	< .05	< .05	< .05	--	< .05	< .05	--

Table 45.--Statistical summary of selected water-quality properties for St. Francis River at St. Francis, Ark., 07040100--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Methyl parathion	40	<0.04	<0.04	<0.04	--	<0.04	<0.04	--
Toxaphene	40	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	24	ND	ND	ND	--	ND	ND	--
Suspended sediment concentration	196	27	86	150	247	226	2,960	376
finer than 1 mm (fd)	84	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	84	96	100	100	100	100	100	1
finer than 0.25 mm (fd)	84	77	98	98	98	99	100	3
finer than 0.125 mm (fd)	83	32	82	94	87	97	99	15
finer than 0.062 mm (fd)	84	22	74	89	82	95	99	18
finer than 0.062 mm (sd)	6	48	62	85	77	87	89	16
Bed material								
finer than 16 mm (sd)	87	100	100	100	100	100	100	0
finer than 8 mm (sd)	87	100	100	100	100	100	100	0
finer than 4 mm (sd)	87	93	100	100	100	100	100	1
finer than 2 mm (sd,fd)	87	90	100	100	100	100	100	1
finer than 1 mm (sd,fd)	88	89	100	100	100	100	100	2
finer than 0.5 mm (fd)	88	69	97	99	97	99	100	5
finer than 0.25 mm (fd)	88	30	80	91	86	97	99	15
finer than 0.125 mm (fd)	88	1	15	29	40	67	99	30
finer than 0.062 mm (fd)	88	0	4	18	27	45	99	28

*Includes only discharges corresponding to a water-quality sample.

Table 46.--Statistical summary of selected water-quality properties for St. Francis River near Piggott, Ark., 07040110

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	107	48	336	1,000	1,790	2,740	7,940	1,920
Dissolved oxygen	0	--	--	--	--	--	--	--
pH	0	--	--	--	--	--	--	--
Specific conductance	0	--	--	--	--	--	--	--
Suspended sediment concentration	107	21	99	140	266	213	9,620	923
finer than 1 mm (fd)	97	98	100	100	100	100	100	0
finer than 0.5 mm (fd)	97	82	100	100	99	100	100	2
finer than 0.25 mm (fd)	97	22	96	98	95	99	100	9
finer than 0.125 mm (fd)	97	1	74	85	82	95	100	16
finer than 0.062 mm (fd)	97	1	66	77	76	91	100	18
finer than 0.062 mm (sd)	11	44	50	61	67	82	94	18
Bed material								
finer than 16 mm (sd)	95	100	100	100	100	100	100	0
finer than 8 mm (sd)	95	94	100	100	100	100	100	1
finer than 4 mm (sd)	95	88	100	100	100	100	100	1
finer than 2 mm (sd, fd)	95	84	100	100	100	100	100	2
finer than 1 mm (sd, fd)	104	79	99	100	99	100	100	3
finer than 0.5 mm (fd)	104	23	88	94	91	98	100	11
finer than 0.25 mm (fd)	104	3	38	56	58	78	99	27
finer than 0.125 mm (fd)	104	0	1	2	19	14	97	33
finer than 0.062 mm (fd)	104	0	1	1	15	4	94	30

*Includes only discharges corresponding to a water-quality sample.

Table 47.--Statistical summary of selected water-quality properties for St. Francis River at Holly Island, Ark., 07040130

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	101	20	482	1,540	1,990	3,280	5,620	1,650
Dissolved oxygen	0	--	--	--	--	--	--	--
pH	1	6.8	6.8	6.8	6.8	6.8	6.8	.0
Specific conductance	1	290	290	290	290	290	290	0
Suspended sediment concentration	100	20	85	114	190	208	1,070	203
finer than 1 mm (fd)	91	99	100	100	100	100	100	0
finer than 0.5 mm (fd)	91	91	100	100	100	100	100	1
finer than 0.25 mm (fd)	91	45	95	97	95	99	100	9
finer than 0.125 mm (fd)	91	20	78	93	86	97	100	16
finer than 0.062 mm (fd)	91	16	72	88	82	96	100	18
finer than 0.062 mm (sd)	9	50	66	82	77	91	95	15
Bed material								
finer than 16 mm (sd)	88	98	100	100	100	100	100	0
finer than 8 mm (sd)	88	92	100	100	100	100	100	1
finer than 4 mm (sd)	88	85	100	100	99	100	100	3
finer than 2 mm (sd, fd)	90	73	100	100	98	100	100	5
finer than 1 mm (sd, fd)	96	58	97	99	97	100	100	7
finer than 0.5 mm (fd)	96	44	73	90	85	97	100	15
finer than 0.25 mm (fd)	96	1	20	42	45	68	99	29
finer than 0.125 mm (fd)	96	0	1	3	16	18	98	26
finer than 0.062 mm (fd)	96	0	1	3	13	13	96	24

*Includes only discharges corresponding to a water-quality sample.

Table 48.--Statistical summary of selected water-quality properties for Varney River near Senath, Mo., 07040150

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	30	0	0	0	21	42	175	41
Dissolved oxygen	30	4.5	6.2	7.7	7.8	9.2	12.3	2.0
pH	30	6.7	7.5	7.8	7.8	8.1	9.6	.5
Specific conductance	31	144	310	328	304	336	340	55
Suspended sediment								
concentration	9	70	93	237	279	317	1,000	288
finer than 1 mm (fd)	5	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	5	100	100	100	100	100	100	0
finer than 0.25 mm (fd)	5	95	97	100	99	100	100	2
finer than 0.125 mm (fd)	5	76	87	98	94	99	99	10
finer than 0.062 mm (fd)	5	69	81	97	91	98	99	12
finer than 0.062 mm (sd)	4	58	66	93	86	98	98	19
Bed material								
finer than 16 mm (sd)	9	100	100	100	100	100	100	0
finer than 8 mm (sd)	9	100	100	100	100	100	100	0
finer than 4 mm (sd)	9	100	100	100	100	100	100	0
finer than 2 mm (sd, fd)	9	100	100	100	100	100	100	0
finer than 1 mm (sd, fd)	9	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	9	98	99	100	100	100	100	1
finer than 0.25 mm (fd)	9	84	94	97	96	100	100	5
finer than 0.125 mm (fd)	9	42	78	91	86	99	99	19
finer than 0.062 mm (fd)	9	10	69	85	78	98	99	28

*Includes only discharges corresponding to a water-quality sample.

Table 49.--Statistical summary of selected water-quality properties for Big Slough Ditch near Paragould, Ark., 07040350

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	71	0	0	0	133	0	3,030	429
Dissolved oxygen	66	4.5	7.8	8.7	9.0	9.8	14.0	1.9
pH	66	6.7	7.7	7.9	7.9	8.2	8.5	.4
Specific conductance	68	70	284	330	303	350	430	79
Suspended sediment concentration	17	39	62	98	282	217	2,000	490
finer than 1 mm (fd)	9	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	9	100	100	100	100	100	100	0
finer than 0.25 mm (fd)	9	97	99	100	99	100	100	1
finer than 0.125 mm (fd)	9	96	97	99	98	99	100	1
finer than 0.062 mm (fd)	9	92	96	99	97	99	100	3
finer than 0.062 mm (sd)	8	74	78	85	87	98	99	10
Bed material								
finer than 16 mm (sd)	17	100	100	100	100	100	100	0
finer than 8 mm (sd)	17	100	100	100	100	100	100	0
finer than 4 mm (sd)	17	100	100	100	100	100	100	0
finer than 2 mm (sd, fd)	17	100	100	100	100	100	100	0
finer than 1 mm (sd, fd)	17	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	17	99	99	100	100	100	100	0
finer than 0.25 mm (fd)	17	95	98	99	99	100	100	2
finer than 0.125 mm (fd)	17	20	83	96	86	98	100	20
finer than 0.062 mm (fd)	17	6	63	92	79	98	99	27

*Includes only discharges corresponding to a water-quality sample.

Table 50.--Statistical summary of selected water-quality properties for Locust Creek Ditch near Paragould, Ark., 07040424

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	64	0	0	0	26	0	482	84
Dissolved oxygen	59	3.9	7.2	8.2	8.6	9.9	22.0	2.8
pH	62	6.2	7.4	7.8	7.7	8.0	8.9	.5
Specific conductance	62	69	225	315	290	380	420	105
Suspended sediment								
concentration	8	57	95	180	170	240	287	81
finer than 1 mm (fd)	6	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	6	99	100	100	100	100	100	0
finer than 0.25 mm (fd)	6	95	97	99	98	99	99	2
finer than 0.125 mm (fd)	6	70	82	93	90	97	98	10
finer than 0.062 mm (fd)	6	64	79	90	87	95	98	12
finer than 0.062 mm (sd)	2	52	52	75	75	98	98	33
Bed material								
finer than 16 mm (sd)	8	100	100	100	100	100	100	0
finer than 8 mm (sd)	8	100	100	100	100	100	100	0
finer than 4 mm (sd)	8	100	100	100	100	100	100	0
finer than 2 mm (sd, fd)	8	100	100	100	100	100	100	0
finer than 1 mm (sd, fd)	8	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	8	99	99	100	100	100	100	0
finer than 0.25 mm (fd)	8	84	87	96	94	99	99	6
finer than 0.125 mm (fd)	8	6	8	28	44	92	96	40
finer than 0.062 mm (fd)	8	4	4	16	38	88	94	41

*Includes only discharges corresponding to a water-quality sample.

Table 51.--Statistical summary of selected water-quality properties for Eightmile Ditch near Paragould, Ark., 07040428

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	61	0	0	13	34	22	669	92
Dissolved oxygen	58	4.6	8.0	9.8	9.5	11.0	14.0	2.1
pH	61	6.2	7.5	7.9	7.8	8.1	9.4	.5
Specific conductance	61	60	231	280	271	311	485	78
Suspended sediment								
concentration	42	29	53	79	126	147	542	120
finer than 1 mm (fd)	35	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	35	95	98	100	99	100	100	1
finer than 0.25 mm (fd)	35	28	80	94	87	98	100	18
finer than 0.125 mm (fd)	35	13	64	85	78	95	99	23
finer than 0.062 mm (fd)	35	13	61	82	73	89	96	23
finer than 0.062 mm (sd)	7	27	31	51	58	82	99	29
Bed material								
finer than 16 mm (sd)	36	100	100	100	100	100	100	0
finer than 8 mm (sd)	36	100	100	100	100	100	100	0
finer than 4 mm (sd)	36	100	100	100	100	100	100	0
finer than 2 mm (sd, fd)	36	100	100	100	100	100	100	0
finer than 1 mm (sd, fd)	40	96	99	100	100	100	100	1
finer than 0.5 mm (fd)	40	45	80	87	84	93	99	13
finer than 0.25 mm (fd)	40	1	6	15	19	29	87	17
finer than 0.125 mm (fd)	40	0	1	2	5	4	72	11
finer than 0.062 mm (fd)	40	0	1	2	4	4	65	10

*Includes only discharges corresponding to a water-quality sample.

Table 52.--Statistical summary of selected water-quality properties for St. Francis River at Lake City, Ark., 07040450

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), trace metals and pesticides (total or total recoverable in micrograms per liter) and sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N. Some discharge and other water-quality data are associated with separate main-channel and overbank samples]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	128	116	818	1,260	2,410	2,220	31,000	3,620
Dissolved oxygen	225	3.7	6.3	7.7	8.1	9.8	14.5	2.3
pH	227	6.1	7.4	7.7	7.6	7.9	8.8	.4
Specific conductance	203	24	135	192	202	267	388	81
Total alkalinity	21	32	63	107	100	136	180	45
Total hardness	50	6	72	93	97	129	210	41
Dissolved magnesium	9	4.8	8.0	10.0	9.9	11.5	16.0	3.1
Dissolved sulfate	99	< 1.0	7.0	10.0	10.5	12.0	46.0	6.3
Dissolved chloride	99	3.0	5.5	6.5	7.4	8.0	24.0	3.4
Dissolved solids	57	106	138	164	181	192	960	112
Total phosphorus	96	< .01	.12	.18	.20	.26	.60	.11
Total nitrite + nitrate	44	< .05	< .05	.09	.16	.23	1.00	.19
Total ammonia	76	< .10	< .10	< .10	.11	.12	.81	.13
BOD	104	.5	2.1	2.6	2.7	3.2	5.5	0.9
Fecal coliforms(31616)	98	2	30	80	--	223	3,500	--
Fecal strep.(31679)	12	20	67	195	--	352	11,000	--
Turbidity	36	10	30	40	64	65	340	69
Arsenic	50	< 10	< 10	< 10	--	< 10	10	--
Cadmium	80	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	56	< 20	< 20	< 20	--	< 20	< 20	--
Copper	98	< 20	< 20	< 20	--	< 20	170	--
Lead	41	< 20	< 20	< 20	--	< 20	< 20	--
Iron	56	400	1,600	3,800	3,900	5,200	15,000	2,800
Manganese	60	32	160	310	360	540	930	230
Zinc	86	< 20	< 20	< 20	23	30	110	20
Aldrin	44	< .002	< .002	< .002	--	< .002	< .002	--
DDE	44	< .002	< .002	< .002	--	< .002	< .002	--
DDT	44	< .004	< .004	< .004	--	< .004	.004	--
Dieldrin	44	< .002	< .002	< .002	--	< .002	.002	--
Endrin	44	< .002	< .002	< .002	--	< .002	.002	--
Lindane	44	ND	ND	ND	--	ND	ND	--
Malathion	15	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	43	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	43	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	23	ND	ND	ND	--	ND	ND	--

Table 52.--Statistical summary of selected water-quality properties for St. Francis River at Lake City, Ark., 07040450--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Suspended sediment								
concentration	126	19	59	103	117	135	729	93
finer than 1 mm (fd)	111	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	111	92	99	100	99	100	100	1
finer than 0.25 mm (fd)	111	53	94	97	94	99	100	7
finer than 0.125 mm (fd)	111	29	84	93	87	96	100	15
finer than 0.062 mm (fd)	111	17	77	89	83	95	100	17
finer than 0.062 mm (sd)	16	7	50	73	66	86	90	23
Bed material								
finer than 16 mm (sd)	115	100	100	100	100	100	100	0
finer than 8 mm (sd)	116	98	100	100	100	100	100	0
finer than 4 mm (sd)	116	96	100	100	100	100	100	0
finer than 2 mm (sd,fd)	116	92	100	100	100	100	100	1
finer than 1 mm (sd,fd)	120	89	100	99	100	100	100	2
finer than 0.5 mm (fd)	120	50	94	98	95	99	100	7
finer than 0.25 mm (fd)	120	16	52	68	66	80	97	18
finer than 0.125 mm (fd)	120	0	2	6	11	16	74	13
finer than 0.062 mm (fd)	120	0	1	3	7	9	73	11

*Includes only discharges corresponding to a water-quality sample.

Table 53.--Statistical summary of selected water-quality properties for St. Francis River at Lake City, Ark., 07040450 (June through September)--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Toxaphene	26	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	11	ND	ND	ND	--	ND	ND	--
Suspended sediment								
concentration	37	30	69	91	105	120	342	58
finer than 1 mm (fd)	33	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	33	95	100	100	100	100	100	1
finer than 0.25 mm (fd)	33	80	97	98	97	99	100	4
finer than 0.125 mm (fd)	33	67	89	96	92	98	99	8
finer than 0.062 mm (fd)	33	57	85	93	89	96	98	9
finer than 0.062 mm (sd)	4	80	82	88	87	90	90	4
Bed material								
finer than 16 mm (sd)	34	100	100	100	100	100	100	0
finer than 8 mm (sd)	34	100	100	100	100	100	100	0
finer than 4 mm (sd)	34	100	100	100	100	100	100	0
finer than 2 mm (sd,fd)	34	100	100	100	100	100	100	0
finer than 1 mm (sd,fd)	35	98	100	100	100	100	100	0
finer than 0.5 mm (fd)	35	50	95	98	95	99	100	9
finer than 0.25 mm (fd)	35	27	50	73	68	84	93	20
finer than 0.125 mm (fd)	35	0	2	6	10	16	42	11
finer than 0.062 mm (fd)	35	0	1	3	6	7	32	7

*Includes only discharges corresponding to a water-quality sample.

Table 53.--Statistical summary of selected water-quality properties for St. Francis River at Lake City, Ark., 07040450 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), trace metals and pesticides (total or total recoverable in micrograms per liter), and sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	41	212	494	879	1,080	1,330	4,360	815
Dissolved oxygen	74	3.7	5.2	6.0	6.0	6.7	8.7	1.1
pH	72	7.2	7.5	7.7	7.8	8.0	8.5	.3
Specific conductance	64	128	170	246	242	305	388	76
Total alkalinity	6	43	91	109	119	168	180	49
Total hardness	14	49	76	104	106	123	210	40
Dissolved magnesium	3	8.0	8.0	9.0	11.0	16.0	16.0	4.4
Dissolved sulfate	35	< 1.0	5.0	7.0	7.6	10.0	16.0	3.2
Dissolved chloride	36	4.5	6.5	7.5	9.2	11.4	24.0	4.7
Dissolved solids	19	117	152	171	220	203	960	185
Total phosphorus	32	< .01	.15	.20	.21	.26	.60	.11
Total nitrite + nitrate	15	< .05	< .05	.07	.10	.15	.36	.08
Total ammonia	27	< .10	< .10	< .10	.10	.12	.53	.10
BOD	36	.9	2.3	2.7	2.8	3.4	5.5	.9
Fecal coliforms(31616)	35	3	44	120	--	250	600	--
Fecal strep.(31679)	5	90	140	200	--	305	370	--
Turbidity	13	20	30	40	46	60	85	20
Arsenic	16	< 10	< 10	< 10	--	< 10	< 10	--
Cadmium	28	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	19	< 20	< 20	< 20	--	< 20	< 20	--
Copper	35	< 20	< 20	< 20	--	< 20	170	--
Lead	13	< 20	< 20	< 20	--	< 20	< 20	--
Iron	18	1,500	3,000	4,000	4,600	5,600	15,000	2,900
Manganese	19	160	380	540	530	680	930	190
Zinc	32	< 20	< 20	< 20	25	40	80	20
Aldrin	26	< .002	< .002	< .002	--	< .002	< .002	--
DDE	26	.002	< .002	< .002	--	< .002	< .002	--
DDT	26	.004	< .004	< .004	--	< .004	< .004	--
Dieldrin	26	< .002	< .002	< .002	--	< .002	.002	--
Endrin	26	.002	< .002	< .002	--	< .002	< .002	--
Lindane	26	ND	ND	ND	--	ND	ND	--
Malathion	9	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	26	< .04	< .04	< .04	--	< .04	< .04	--

Table 54.--Statistical summary of selected water-quality properties for Cockle Burr Slough Ditch near Monette, Ark., 07040496

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	65	0	0	0	119	213	558	185
Dissolved oxygen	61	4.8	7.1	7.9	8.1	9.2	11.8	1.7
pH	63	7.0	7.9	8.1	8.0	8.2	8.5	.3
Specific conductance	63	155	390	409	391	418	462	52
Suspended sediment								
concentration	29	26	44	51	67	68	242	47
finer than 1 mm (fd)	28	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	28	95	100	100	100	100	100	1
finer than 0.25 mm (fd)	28	91	97	99	98	100	100	2
finer than 0.125 mm (fd)	28	64	94	96	94	98	100	8
finer than 0.062 mm (fd)	28	47	83	91	86	95	100	14
finer than 0.062 mm (sd)	0	--	--	--	--	--	--	--
Bed material								
finer than 16 mm (sd)	28	100	100	100	100	100	100	0
finer than 8 mm (sd)	28	100	100	100	100	100	100	0
finer than 4 mm (sd)	28	100	100	100	100	100	100	0
finer than 2 mm (sd, fd)	28	100	100	100	100	100	100	0
finer than 1 mm (sd, fd)	28	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	28	95	98	99	99	100	100	1
finer than 0.25 mm (fd)	28	70	85	94	91	98	99	8
finer than 0.125 mm (fd)	28	4	17	34	41	60	98	27
finer than 0.062 mm (fd)	28	1	7	13	19	20	88	20

*Includes only discharges corresponding to a water-quality sample.

Table 55.--Statistical summary of selected water-quality properties for Right Hand Chute of Little River at Big Lake Outlet near Manila, Ark., 07046500

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	0	--	--	--	--	--	--	--
Dissolved oxygen	105	2.7	6.2	8.0	8.1	10.0	13.1	2.4
pH	101	6.7	7.5	7.8	7.7	8.0	8.3	.4
Specific conductance	77	37	190	269	261	338	446	99
Total alkalinity	22	15	71	95	104	140	190	47
Total hardness	51	32	84	130	126	168	264	51
Dissolved magnesium	9	5.0	8.0	9.0	10.6	15.0	17.0	4.1
Dissolved sulfate	99	2.0	10.0	14.0	14.5	18.0	28.0	5.9
Dissolved chloride	99	1.4	8.0	13.0	12.5	16.0	23.0	4.9
Dissolved solids	58	103	171	207	200	233	321	47
Total phosphorus	96	.06	.12	.19	.22	.26	.63	.14
Total nitrite + nitrate	44	< .05	< .05	.05	.17	.30	.92	.23
Total ammonia	77	< .10	< .10	< .10	.11	.16	.69	.12
BOD	102	.9	2.0	2.3	2.6	3.0	6.6	1.1
Fecal coliforms(31616)	100	1	8	20	--	53	405	--
Fecal strep.(31679)	11	3	50	73	--	120	5,400	--
Turbidity	35	6.8	20	25	62	80	340	78
Arsenic	54	< 10	< 10	< 10	--	< 10	19	--
Cadmium	86	< 20	< 20	< 20	--	< 20	20	--
Chromium	57	< 20	< 20	< 20	--	< 20	30	--
Copper	104	< 20	< 20	< 20	--	< 20	110	--
Lead	43	< 20	< 20	< 20	--	< 20	50	--
Iron	63	220	940	2,000	3,100	4,400	15,000	3,200
Manganese	67	< 27	78	140	160	200	460	99
Zinc	92	< 20	< 20	< 20	29	30	610	71
Aldrin	45	< .002	< .002	< .002	--	< .002	< .002	--
DDE	45	< .002	< .002	< .002	--	< .002	< .002	--
DDT	45	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	44	< .002	< .002	< .002	--	< .002	.010	--
Endrin	45	< .002	< .002	< .002	--	< .002	.002	--
Lindane	45	ND	ND	ND	--	ND	ND	--
Malathion	16	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	43	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	43	< 2	< 2	< 2	--	< 2	4	--
2,4-D	22	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 56.--Statistical summary of selected water-quality properties for Right Hand Chute of Little River at Rivervale, Ark., 07046600

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	96	111	642	1,560	3,270	3,760	26,300	4,710
Dissolved oxygen	93	5.0	7.1	8.4	8.6	10.0	13.2	2.0
pH	96	5.7	7.7	8.0	7.9	8.2	8.6	.5
Specific conductance	96	64	246	337	317	407	560	114
Suspended sediment								
concentration	96	34	59	117	182	267	806	162
finer than 1 mm (fd)	83	97	100	100	100	100	100	0
finer than 0.5 mm (fd)	83	97	100	100	100	100	100	1
finer than 0.25 mm (fd)	83	70	96	98	97	99	100	5
finer than 0.125 mm (fd)	83	38	89	96	91	98	100	11
finer than 0.062 mm (fd)	83	32	83	91	87	97	100	14
finer than 0.062 mm (sd)	13	29	63	79	74	92	94	20
Bed material								
finer than 16 mm (sd)	92	100	100	100	100	100	100	0
finer than 8 mm (sd)	92	100	100	100	100	100	100	0
finer than 4 mm (sd)	92	100	100	100	100	100	100	0
finer than 2 mm (sd, fd)	92	97	100	100	100	100	100	0
finer than 1 mm (sd, fd)	95	96	100	100	100	100	100	1
finer than 0.5 mm (fd)	95	61	96	98	96	99	100	6
finer than 0.25 mm (fd)	95	2	49	79	70	93	100	27
finer than 0.125 mm (fd)	95	0	9	31	35	56	100	30
finer than 0.062 mm (fd)	95	0	4	17	25	34	100	26

*Includes only discharges corresponding to a water-quality sample.

Table 57.--Statistical summary of selected water-quality properties for Pemiscot Bayou at Dell, Ark., 07047400

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	37	0.4	8.4	20	49	48	194	64
Dissolved oxygen	97	3.5	7.0	9.1	9.8	12.0	20.2	3.7
pH	94	6.9	7.5	7.7	7.7	7.9	9.2	.4
Specific conductance	57	66	270	444	396	497	1370	200
Total alkalinity	20	65	154	205	190	236	259	55
Total hardness	50	56	122	178	167	206	280	53
Dissolved magnesium	8	12.0	12.7	17.5	16.7	19.0	22.0	3.5
Dissolved sulfate	92	3.3	16.0	23.5	24.1	28.8	68.0	11.4
Dissolved chloride	92	3.0	9.0	11.5	12.1	15.0	40.0	5.6
Dissolved solids	57	127	238	277	269	301	458	52
Total phosphorus	86	.13	.42	.70	1.01	1.16	4.60	.92
Total nitrite + nitrate	43	< .05	.37	.63	.65	.90	1.90	.40
Total ammonia	74	< .10	< .10	.31	.41	.54	3.80	.51
BOD	94	.8	3.8	5.4	6.1	7.9	22.0	3.4
Fecal coliforms(31616)	90	2	45	285	--	920	40,000	--
Fecal strep.(31679)	11	20	59	90	--	330	27,000	--
Turbidity	35	3.0	15	25	86	35	1,000	230
Arsenic	48	< 10	< 10	< 10	9	12	34	7
Cadmium	82	< 20	< 20	< 20	--	< 20	20	--
Chromium	54	< 20	< 20	< 20	--	< 20	35	--
Copper	99	< 20	< 20	< 20	29	30	269	46
Lead	39	< 20	< 20	< 20	26	20	320	69
Iron	57	710	1,800	2,600	5,000	4,100	50,000	7,600
Manganese	60	180	360	520	580	790	1,500	270
Zinc	87	< 20	< 20	30	71	80	820	117
Aldrin	37	< .002	< .002	< .002	--	< .002	< .002	--
DDE	37	< .002	< .002	< .002	--	< .002	< .002	--
DDT	38	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	37	< .002	< .002	< .002	--	< .002	.030	--
Endrin	38	< .002	< .002	< .002	--	< .002	.010	--
Lindane	37	ND	ND	ND	--	ND	ND	--
Malathion	15	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	37	< .04	< .04	< .04	--	< .04	.04	--
Toxaphene	39	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	24	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 58.--Statistical summary of selected water-quality properties for Tyronza River near Twist, Ark., 07047700

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	0	--	--	--	--	--	--	--
Dissolved oxygen	94	3.5	7.1	7.9	8.4	10.0	14.0	2.0
pH	91	6.7	7.7	7.9	7.8	8.0	8.3	.4
Specific conductance	60	43	290	471	410	543	739	172
Total alkalinity	20	28	130	195	192	266	280	78
Total hardness	45	36	110	208	194	270	360	83
Dissolved magnesium	8	7.7	11.0	18.0	20.6	27.7	40.0	10.7
Dissolved sulfate	91	< 1.0	19.0	32.0	30.6	38.0	110.0	16.9
Dissolved chloride	89	2.0	6.0	7.5	8.8	8.5	145.0	14.8
Dissolved solids	54	134	245	306	293	343	502	73
Total phosphorus	86	.06	.17	.26	.38	.44	1.85	.37
Total nitrite + nitrate	42	< .05	< .05	.08	.33	.47	2.30	.47
Total ammonia	70	< .10	< .10	< .10	.12	.15	.51	.11
BOD	92	.2	2.2	3.2	3.2	4.0	7.0	1.3
Fecal coliforms(31616)	82	2	40	110	--	355	4,200	--
Fecal strep.(31679)	8	10	52	122	--	280	490	--
Turbidity	32	9.5	30	50	250	300	2,700	530
Arsenic	48	< 10	< 10	< 10	--	< 10	16	--
Cadmium	83	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	53	< 20	< 20	< 20	--	< 20	48	--
Copper	96	< 20	< 20	< 20	26	30	230	35
Lead	50	< 20	< 20	< 20	34	20	957	136
Iron	59	30	2,200	4,400	6,500	8,600	30,000	6,200
Manganese	62	< 27	230	310	320	390	1,000	150
Zinc	85	< 20	< 20	40	65	82	350	75
Aldrin	41	< .002	< .002	< .002	--	< .002	< .002	--
DDE	41	< .002	< .002	< .002	--	< .002	< .002	--
DDT	42	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	41	< .002	< .002	< .002	--	< .002	.010	--
Endrin	42	< .002	< .002	< .002	--	< .002	.010	--
Lindane	42	ND	ND	ND	--	ND	ND	--
Malathion	15	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	41	< .04	< .04	< .04	--	< .04	.14	--
Toxaphene	41	< 2	< 2	< 2	--	< 2	4	--
2,4-D	23	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 59.--Statistical summary of selected water-quality properties for St. Francis River at Parkin, Ark., 07047800

[N=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.=streptococci, BTM=bottom material, ND=not detected, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), trace metals and pesticides (total or total recoverable in micrograms per liter), and pesticides in bottom material (total in micrograms per kilogram). Alkalinity and hardness are reported as CaCO3, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	102	288	966	1,675	2,329	2,820	11,800	2,089
Dissolved oxygen	87	3.8	6.2	7.5	7.9	9.2	12.6	2.1
pH	102	6.9	7.6	7.8	7.7	8.0	8.4	.3
Specific conductance	102	65	213	308	300	394	516	113
Total alkalinity	101	17	83	130	131	172	250	58
Total hardness	102	27	93	140	139	180	250	57
Dissolved calcium	102	7.3	25.0	38.0	38.8	51.3	71.0	16.1
Dissolved magnesium	102	1.8	6.8	11.0	10.3	14.0	19.0	4.2
Dissolved sodium	102	2.5	6.5	8.9	8.4	10.0	14.0	2.6
Sodium adsorption ratio	102	.2	.3	.3	.3	.4	.9	.1
Dissolved potassium	102	.3	2.3	2.7	2.7	3.0	5.4	.8
Dissolved sulfate	102	< 5.0	14.0	19.0	18.2	22.0	33.0	5.5
Dissolved chloride	102	2.4	4.7	6.1	6.4	8.0	13	2.2
Dissolved fluoride	102	< .1	.1	.2	.2	.2	.6	.1
Dissolved silica	102	4.1	11.0	14.0	13.6	17.0	23.0	4.0
Dissolved solids	101	43	137	188	187	236	302	64
Total phosphorus	102	.10	.23	.32	.43	.53	5.30	.53
Total nitrogen	77	.47	1.10	1.70	1.97	2.50	6.10	1.19
Total organic nitrogen	43	.24	.77	1.20	1.28	1.60	2.50	.59
Total nitrite + nitrate	83	< .10	.20	.41	.58	.76	4.30	.61
Total ammonia	48	< .01	.03	.09	.12	.19	.50	.11
Fecal coliforms(31625)	75	11	67	170	--	430	3,400	--
Fecal strep.(31673)	64	5	170	400	--	1,450	169,000	--
Turbidity	58	2.8	38	88	160	220	800	190
Arsenic	30	2	3	5	5	7	10	2
Cadmium	31	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	31	< 20	< 20	< 20	14	20	40	8
Copper	31	< 20	< 20	< 20	21	27	120	22
Lead	16	2	6	11	15	21	53	12
Iron	31	1,500	2,800	7,600	8,100	12,000	20,000	5,400
Manganese	31	120	260	320	320	370	670	100
Zinc	31	< 20	30	60	69	80	300	52
Aldrin	26	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	--
Aldrin in BTM	8	< .1	< .1	< .1	--	< .1	< .1	--

Table 59.--Statistical summary of selected water-quality properties for St. Francis River at Parkin, Ark., 07047800--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Chlordane	26	< .1	< .1	< .1	--	< .1	< .1	--
Chlordane in BTM	8	< 1.0	< 1.0	< 1.0	--	< 1.0	7.0	--
DDD	26	< .01	< .01	< .01	--	< .01	.01	--
DDD in BTM	4	< .1	< .1	< .1	--	10	14	--
DDE	26	< .01	< .01	< .01	--	< .01	< .01	--
DDE in BTM	4	< .1	< .1	< .1	--	5.0	6.6	--
DDT	26	< .01	< .01	< .01	--	< .01	.06	--
DDT in BTM	5	< .1	< .1	< .1	--	14	27	--
Diazinon	26	< .01	< .01	< .01	--	< .01	.02	--
Dizainon in BTM	6	< .1	< .1	< .1	--	< .1	< .1	--
Dieldrin	26	< .01	< .01	< .01	--	< .01	.02	--
Dieldrin in BTM	8	< .1	< .1	.6	1.2	1.8	4.0	1.3
Endosulfan	1	< .01	< .01	< .01	--	< .01	< .01	--
Endosulfan in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Endrin	26	< .01	< .01	< .01	--	< .01	.03	--
Endrin in BTM	8	< .1	< .1	< .1	--	.1	1.8	--
Ethion	26	< .01	< .01	< .01	--	< .01	.01	--
Ethion in BTM	6	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor	26	< .01	< .01	< .01	--	< .01	.01	--
Heptachlor in BTM	8	< .1	< .1	< .1	--	< .1	.1	--
Heptachlor epoxide	26	< .01	< .01	< .01	--	< .01	.01	--
Heptachlor epoxide in BTM	8	< .1	< .1	< .1	--	< .1	.6	--
Lindane	26	< .01	< .01	< .01	--	< .01	.01	--
Lindane in BTM	8	< .1	< .1	< .1	--	< .1	< .1	--
Malathion	26	< .01	< .01	< .01	--	< .01	< .01	--
Malathion in BTM	6	ND	ND	ND	--	ND	ND	--
Methoxychlor	26	< .01	< .01	< .01	--	< .01	< .01	--
Methoxychlor in BTM	8	< .1	< .1	< .1	--	< .1	< .1	--
Methyl parathion	26	< .01	< .01	< .01	--	< .01	.50	--
Methyl parathion in BTM	6	< .11	< .1	< .1	--	< .1	< .1	--
Methyl trithion	26	< .01	< .01	< .01	--	< .01	< .01	--
Methyl trithion in BTM	6	< .1	< .1	< .1	--	< .1	< .1	--
Mirex	1	< .01	< .01	< .01	--	< .01	< .01	--
Mirex in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Parathion	26	< .01	< .01	< .01	--	< .01	< .01	--
Parathion in BTM	6	ND	ND	ND	--	ND	ND	--
Perthane	1	< .1	< .1	< .1	--	< .1	< .1	--
Silvex	14	< .01	< .01	< .01	--	< .01	< .01	--
Toxaphene	26	< 1	< 1	< 1	--	< 1	< 1	--
Toxaphene in BTM	8	<10	<10	<10	--	190	410	--
Trithion	26	< .01	< .01	< .01	--	< .01	< .01	--
Trithion in BTM	6	< .1	< .1	< .1	--	< .1	< .1	--
2,4-D	14	< .01	< .01	< .01	--	< .01	.46	--
2,4,5-T	14	< .01	< .01	< .01	--	< .01	.01	--
Suspended sediment concentration	96	14	97	174	294	376	1,500	289
finer than 0.062 mm (sd)	96	24	88	96	90	98	100	16

*Includes only discharges corresponding to a water-quality sample.

Table 60.--Statistical summary of selected water-quality properties for St. Francis River at Parkin, Ark., 07047800 (June through September)

[N=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.=streptococci, BTM=bottom material, ND=not detected, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), trace metals and pesticides (total recoverable in micrograms per liter), and pesticides in bottom material (total in micrograms per kilogram). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as phosphorus and nitrogen.]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	31	320	923	1,580	1,960	2,250	10,200	1,910
Dissolved oxygen	27	3.8	5.5	6.0	5.9	6.4	7.7	.9
pH	31	7.0	7.6	7.9	7.8	8.1	8.3	.3
Specific conductance	31	90	260	350	338	423	516	98
Total alkalinity	31	18	114	155	148	186	250	52
Total hardness	31	39	120	160	157	190	250	50
Dissolved calcium	31	10.0	32.0	44.0	43.3	52.0	68.0	13.9
Dissolved magnesium	31	3.4	9.2	12.0	11.7	14.0	19.0	3.7
Dissolved sodium	31	5.0	7.8	10.0	9.5	11.0	14.0	2.3
Sodium adsorption ratio	31	.2	.3	.3	.3	.4	.9	.1
Dissolved potassium	31	1.8	2.3	2.7	2.7	3.0	3.7	.5
Dissolved sulfate	31	< 5.0	13.0	17.0	16.9	21.0	29.0	5.6
Dissolved chloride	31	3.8	5.0	6.3	6.8	8.6	13.0	2.2
Dissolved fluoride	31	< .1	.2	.2	.2	.3	.6	.1
Dissolved silica	31	6.7	13.0	15.0	14.6	17.0	20.0	3.0
Dissolved solids	31	92	159	211	208	252	300	56
Total phosphorus	31	.12	.24	.32	.38	.49	1.10	.19
Total nitrogen	26	.53	1.10	1.60	2.00	2.50	6.10	1.33
Total organic nitrogen	14	.70	.85	1.20	1.28	1.60	2.10	.45
Total nitrite + nitrate	26	< .10	< .10	.26	.49	.59	4.30	.83
Total ammonia	14	< .01	.03	.08	.12	.23	.35	.11
Fecal coliforms(31625)	22	16	64	100	--	450	3,400	--
Fecal strep.(31673)	18	88	142	375	--	635	169,000	--
Turbidity	18	22	47	66	125	163	620	140
Arsenic	7	5	5	6	7	9	9	2
Cadmium	8	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	8	< 20	< 20	20	--	20	20	--
Copper	8	< 20	< 20	< 20	19	26	40	11
Lead	4	2	3	8	7	10	10	4
Iron	8	1,700	5,300	7,900	8,500	12,000	15,000	4,300
Manganese	8	160	230	340	320	410	420	95
Zinc	8	30	38	65	60	70	90	21
Aldrin	9	< .01	< .01	< .01	--	< .01	< .01	--
Aldrin in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--

Table 60.--Statistical summary of selected water-quality properties for St. Francis River at Parkin, Ark., 07047800 (June through September)--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Chlordane	9	< .1	< .1	< .1	--	< .1	< .1	--
Chlordane in BTM	2	< 1.0	< 1.0	< 1.0	--	< 1.0	< 1.0	--
DDD	9	< .01	< .01	< .01	--	< .01	< .01	--
DDD in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
DDE	9	< .01	< .01	< .01	--	< .01	< .01	--
DDE in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
DDT	9	< .01	< .01	< .01	--	< .01	< .01	--
DDT in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Diazinon	9	< .01	< .01	< .01	--	< .01	< .01	--
Diazinon in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Dieldrin	9	< .01	< .01	< .01	--	< .01	< .01	--
Dieldrin in BTM	2	1.1	1.1	2.6	2.6	4.0	4.0	2.0
Endosulfan	0	--	--	--	--	--	--	--
Endosulfan in BTM	0	--	--	--	--	--	--	--
Endrin	9	< .01	< .01	< .01	--	< .01	.03	--
Endrin in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Ethion	9	< .01	< .01	< .01	--	< .01	< .01	--
Ethion in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor	9	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor epoxide	9	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor epoxide in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Lindane	9	< .01	< .01	< .01	--	< .01	< .01	--
Lindane in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Malathion	9	< .01	< .01	< .01	--	< .01	< .01	--
Malathion in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Methoxychlor	9	< .01	< .01	< .01	--	< .01	< .01	--
Methoxychlor in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Methyl parathion	9	< .01	< .01	< .01	--	< .01	< .01	--
Methyl parathion in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Methyl trithion	9	< .01	< .01	< .01	--	< .01	< .01	--
Methyl trithion in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Mirex	0	--	--	--	--	--	--	--
Mirex in BTM	0	--	--	--	--	--	--	--
Parathion	9	< .01	< .01	< .01	--	< .01	< .01	--
Parathion in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Perthane	0	--	--	--	--	--	--	--
Silvex	4	< .01	< .01	< .01	--	< .01	< .01	--
Toxaphene	9	< 1	< 1	< 1	--	< 1	< 1	--
Toxaphene in BTM	2	< 10	< 10	120	--	250	250	--
Trithion	9	< .01	< .01	< .01	--	< .01	< .01	--
Trithion in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
2,4-D	4	< .01	< .01	< .01	--	< .01	< .01	--
2,4,5-T	4	< .01	< .01	< .01	--	< .01	< .01	--
Suspended sediment concentration finer than	30	47	96	146	261	371	1,510	286
0.062 mm (sd)	30	65	90	96	93	98	100	8

*Includes only discharges corresponding to a water-quality sample.

Table 61.--Statistical summary of selected water-quality properties for St. Francis River Floodway near Marked Tree, Ark., 07047810

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	199	0	489	1,700	2,910	4,380	15,000	3,170
Dissolved oxygen	94	4.5	6.9	8.2	8.6	10.5	14.6	2.3
pH	97	5.7	7.4	7.7	7.7	8.0	8.6	.5
Specific conductance	96	66	140	211	218	289	403	87
Suspended sediment								
concentration	194	28	87	136	161	199	556	104
finer than 1 mm (fd)	176	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	176	93	99	100	99	100	100	1
finer than 0.25 mm (fd)	176	56	91	97	93	99	100	9
finer than 0.125 mm (fd)	176	26	75	90	83	97	100	17
finer than 0.062 mm (fd)	176	12	71	85	80	95	100	19
finer than 0.062 mm (sd)	18	19	56	79	70	87	94	23
Bed material								
finer than 16 mm (sd)	185	53	100	100	99	100	100	5
finer than 8 mm (sd)	186	38	100	100	98	100	100	9
finer than 4 mm (sd)	185	34	100	100	97	100	100	12
finer than 2 mm (sd, fd)	186	32	100	100	96	100	100	14
finer than 1 mm (sd, fd)	192	31	99	100	95	100	100	14
finer than 0.5 mm (fd)	192	24	90	95	91	98	100	14
finer than 0.25 mm (fd)	192	1	32	50	51	74	98	26
finer than 0.125 mm (fd)	192	0	1	6	19	30	96	25
finer than 0.062 mm (fd)	192	0	1	3	15	22	93	22

*Includes only discharges corresponding to a water-quality sample.

Table 62.--Statistical summary of selected water-quality properties for Cross County Ditch near Birdeye, Ark., 07047815

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	92	77	1,110	3,250	5,720	8,790	26,100	6,040
Dissolved oxygen	1	8.0	8.0	8.0	8.0	8.0	8.0	.0
pH	1	8.2	8.2	8.2	8.2	8.2	8.2	.0
Specific conductance	1	289	289	289	289	289	289	0
Suspended sediment								
concentration	92	26	89	164	238	263	2,150	277
finer than 1 mm (fd)	82	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	82	94	99	100	99	100	100	1
finer than 0.25 mm (fd)	82	47	94	97	94	98	100	8
finer than 0.125 mm (fd)	82	7	66	83	78	94	99	19
finer than 0.062 mm (fd)	82	6	57	77	72	90	99	21
finer than 0.062 mm (sd)	10	8	22	62	53	82	89	30
Bed material								
finer than 16 mm (sd)	87	100	100	100	100	100	100	0
finer than 8 mm (sd)	87	60	100	100	99	100	100	5
finer than 4 mm (sd)	87	58	100	100	99	100	100	7
finer than 2 mm (sd, fd)	87	51	100	100	98	100	100	5
finer than 1 mm (sd, fd)	90	49	100	100	98	100	100	8
finer than 0.5 mm (fd)	90	33	96	98	96	99	100	9
finer than 0.25 mm (fd)	90	14	50	65	63	77	99	20
finer than 0.125 mm (fd)	90	0	1	2	11	6	95	24
finer than 0.062 mm (fd)	90	0	0	1	8	2	93	21

*Includes only discharges corresponding to a water-quality sample.

Table 63.--Statistical summary of selected water-quality properties for Straight Slough near Birdeye, Ark., 07047882

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	74	0	106	216	632	388	9,550	1,400
Dissolved oxygen	70	4.5	7.6	9.1	8.9	10.0	12.3	1.8
pH	74	6.0	7.6	7.9	7.8	8.2	8.8	.5
Specific conductance	73	71	269	392	349	461	522	135
Suspended sediment concentration	64	31	56	98	235	282	1,900	346
finer than 1 mm (fd)	53	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	53	94	100	100	99	100	100	1
finer than 0.25 mm (fd)	53	55	95	98	94	99	100	9
finer than 0.125 mm (fd)	53	4	82	93	85	97	99	20
finer than 0.062 mm (fd)	53	3	69	90	79	95	99	22
finer than 0.062 mm (sd)	11	39	53	77	74	93	99	20
Bed material								
finer than 16 mm (sd)	61	28	100	100	91	100	100	18
finer than 8 mm (sd)	61	15	86	100	85	100	100	27
finer than 4 mm (sd)	61	14	76	100	82	100	100	32
finer than 2 mm (sd, fd)	62	11	81	100	82	100	100	33
finer than 1 mm (sd, fd)	64	11	90	100	82	100	100	33
finer than 0.5 mm (fd)	64	8	85	98	80	99	100	33
finer than 0.25 mm (fd)	64	3	33	80	63	90	98	32
finer than 0.125 mm (fd)	64	0	2	3	11	14	97	18
finer than 0.062 mm (fd)	64	0	1	3	8	9	95	15

*Includes only discharges corresponding to a water-quality sample.

Table 64.--Statistical summary of selected water-quality properties for St. Francis Bay at Riverfront, Ark., 07047900

[N=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.=streptococci, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), trace metals and pesticides (total or total recoverable in micrograms per liter), and sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N. Some discharge and other water-quality data are associated with separate main-channel and overbank samples]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	200	158	1,140	3,120	6,080	3,150	39,000	7,100
Dissolved oxygen	186	4.5	7.2	8.5	8.8	10.2	13.8	1.9
pH	202	5.6	7.5	7.8	7.8	8.1	8.6	.4
Specific conductance	202	68	178	246	257	328	474	100
Total alkalinity	107	24	68	102	110	150	214	51
Total hardness	106	27	78	110	116	150	230	49
Dissolved calcium	107	7.0	20.1	29.0	31.5	41.0	65.0	13.9
Dissolved magnesium	106	2.3	6.3	9.0	9.2	12.0	16.0	3.5
Dissolved sodium	107	1.5	5.2	6.9	7.4	9.2	14.0	2.8
Sodium adsorption ratio	106	.1	.3	.3	.3	.4	.5	.1
Dissolved potassium	107	.2	1.9	2.2	2.2	2.4	4.7	.7
Dissolved sulfate	107	< 5.0	11.0	14.0	15.0	19.0	30.0	5.3
Dissolved chloride	107	2.8	5.0	6.1	6.6	7.7	13.0	2.2
Dissolved fluoride	107	< .1	.1	.2	.2	.2	.6	.1
Dissolved silica	107	3.9	9.0	12.0	11.8	14.0	22.0	3.9
Dissolved solids	107	55	111	152	160	201	290	58
Total phosphorus	107	.04	.15	.21	.25	.30	.68	.14
Total nitrogen	76	.24	.82	1.10	1.27	1.60	3.30	.65
Total organic nitrogen	43	.20	.64	.95	.96	1.30	1.90	.40
Total nitrite + nitrate	82	< .10	< .10	.17	.24	.32	1.10	.22
Total ammonia	48	< .01	.02	.06	.09	.14	.37	.08
Fecal coliforms(31625)	80	5	23	66	--	170	4,300	--
Fecal strep.(31673)	70	3	51	190	--	1,000	20,000	--
Turbidity	64	1.5	25	58	79	110	310	72
Arsenic	30	1	2	2	3	4	7	1
Cadmium	31	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	31	< 20	< 20	< 20	15	20	30	6
Copper	31	< 20	< 20	< 20	16	20	110	22
Lead	15	3	5	10	5	14	18	48
Iron	31	870	1,900	3,500	4,600	5,400	19,000	3,900
Manganese	30	70	160	210	240	300	670	120
Zinc	30	< 20	20	50	49	60	170	31

Table 64.--Statistical summary of selected water-quality properties for St. Francis Bay at Riverfront, Ark., 07047900--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Aldrin	0	--	--	--	--	--	--	--
DDE	0	--	--	--	--	--	--	--
DDT	0	--	--	--	--	--	--	--
Dieldrin	0	--	--	--	--	--	--	--
Endrin	0	--	--	--	--	--	--	--
Lindane	0	--	--	--	--	--	--	--
Malathion	0	--	--	--	--	--	--	--
Methyl parathion	0	--	--	--	--	--	--	--
Toxaphene	0	--	--	--	--	--	--	--
2,4-D	0	--	--	--	--	--	--	--
Suspended sediment	197	21	87	144	193	239	959	162
concentration	96	14	97	174	294	376	1,500	289
finer than 1 mm (fd)	89	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	89	96	100	100	100	100	100	1
finer than 0.25 mm (fd)	89	66	95	98	95	99	100	7
finer than 0.125 mm (fd)	89	25	74	86	80	95	100	18
finer than 0.062 mm (fd)	89	24	64	78	74	90	100	20
finer than 0.062 mm (sd)	110	21	69	84	79	93	100	18
Bed material								
finer than 16 mm (sd)	90	100	100	100	100	100	100	0
finer than 8 mm (sd)	90	100	100	100	100	100	100	0
finer than 4 mm (sd)	90	100	100	100	100	100	100	0
finer than 2 mm (sd,fd)	90	100	100	100	100	100	100	0
finer than 1 mm (sd,fd)	93	97	100	100	100	100	100	0
finer than 0.5 mm (fd)	93	82	97	99	98	99	100	3
finer than 0.25 mm (fd)	93	16	44	60	60	79	99	23
finer than 0.125 mm (fd)	93	0	1	2	11	6	97	23
finer than 0.062 mm (fd)	93	0	1	1	7	4	95	17

*Includes only discharges corresponding to a water-quality sample.

Table 65.--Statistical summary of selected water-quality properties for St. Francis Bay at Riverfront, Ark., 07047900 (June through September)

[N=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.=streptococci, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimer at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter), and sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N. Some discharge and other water-quality data are associated with separate main-channel and overbank samples]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	66	158	937	1,960	2,760	3,490	13,600	2,850
Dissolved oxygen	59	5.0	6.6	7.2	7.3	8.0	10.8	1.1
pH	63	5.6	7.8	8.2	8.0	8.3	8.6	.5
Specific conductance	63	110	245	301	300	373	460	85
Total alkalinity	32	31	105	134	135	180	210	45
Total hardness	31	46	110	140	138	180	220	43
Dissolved calcium	32	12.0	28.3	38.0	37.8	48.5	62.0	12.7
Dissolved magnesium	31	3.9	9.0	11.0	10.9	14.0	16.0	3.0
Dissolved sodium	32	3.5	6.9	8.6	8.7	10.7	13.0	2.5
Sodium adsorption ratio	31	.2	.3	.3	.3	.4	.5	.1
Dissolved potassium	32	1.1	1.9	2.2	2.2	2.4	4.7	0.6
Dissolved sulfate	32	< 5.0	10.5	14.5	14.7	18.8	29.0	6.3
Dissolved chloride	32	3.7	5.8	7.1	7.3	8.6	13.0	2.1
Dissolved fluoride	32	< .1	.2	.2	.2	.2	.6	.1
Dissolved silica	32	7.6	12.3	14.5	14.3	16.0	22.0	3.1
Dissolved solids	32	93	149	180	188	237	290	53
Total phosphorus	32	.10	.18	.22	.24	.27	.53	.10
Total nitrogen	24	.24	.76	1.05	1.24	1.75	3.30	.70
Total organic nitrogen	14	.20	.61	.93	.91	1.25	1.50	.42
Total nitrite + nitrate	24	< .10	< .10	.14	.17	.21	1.00	.1
Total ammonia	14	< .01	.02	.06	.07	.13	.23	.07
Fecal coliforms(31625)	25	5	33	67	--	109	4,300	--
Fecal strep.(31673)	21	5	40	80	--	235	20,000	--
Turbidity	21	1.5	30	52	64	76	310	70
Arsenic	7	3	3	4	4	5	7	1
Cadmium	8	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	8	< 20	< 20	< 20	--	20	20	--
Copper	8	< 20	< 20	< 20	--	< 20	30	--
Lead	4	3	4	8	8	13	14	4
Iron	8	2,100	3,200	4,600	4,800	6,400	8,100	2,000
Manganese	8	160	200	300	300	390	420	99
Zinc	8	30	40	50	51	60	80	16

Table 65.--Statistical summary of selected water-quality properties for St. Francis Bay at Riverfront, Ark., 07047900 (June through September)--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Aldrin	0	--	--	--	--	--	--	--
DDE	0	--	--	--	--	--	--	--
DDT	0	--	--	--	--	--	--	--
Dieldrin	0	--	--	--	--	--	--	--
Endrin	0	--	--	--	--	--	--	--
Lindane	0	--	--	--	--	--	--	--
Malathion	0	--	--	--	--	--	--	--
Methyl parathion	0	--	--	--	--	--	--	--
Toxaphene	0	--	--	--	--	--	--	--
2,4-D	0	--	--	--	--	--	--	--
Suspended sediment concentration	62	35	93	137	173	194	875	144
finer than 1 mm (fd)	31	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	31	97	100	100	100	100	100	1
finer than 0.25 mm (fd)	31	69	97	98	95	99	100	8
finer than 0.125 mm (fd)	31	25	81	90	85	96	99	18
finer than 0.062mm (fd)	31	24	76	85	80	93	99	18
finer than 0.062 mm (sd)	32	39	78	88	84	95	99	15
Bed material								
finer than 16 mm (sd)	31	100	100	100	100	100	100	0
finer than 8 mm (sd)	31	100	100	100	100	100	100	0
finer than 4 mm (sd)	31	100	100	100	100	100	100	0
finer than 2 mm (sd,fd)	31	100	100	100	100	100	100	0
finer than 1 mm (sd,fd)	31	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	31	82	98	99	98	99	100	3
finer than 0.25 mm (fd)	31	16	41	59	56	70	99	22
finer than 0.125 mm (fd)	31	0	1	1	9	4	97	23
finer than 0.062 mm (fd)	31	0	1	1	7	1	95	19

*Includes only discharges corresponding to a water-quality sample.

Table 66.--Statistical summary of selected water-quality properties for Clark Corner Cutoff near Colt, Ark., 07047904

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	81	221	1,240	3,960	7,030	9,620	35,500	7,800
Dissolved oxygen	1	9.6	9.6	9.6	9.6	9.6	9.6	.0
pH	0	--	--	--	--	--	--	--
Specific conductance	0	--	--	--	--	--	--	--
Suspended sediment								
concentration	81	29	85	148	202	262	985	168
finer than 1 mm (fd)	69	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	69	90	100	100	99	100	100	2
finer than 0.25 mm (fd)	69	59	95	98	95	99	100	9
finer than 0.125 mm (fd)	69	46	80	92	86	97	99	15
finer than 0.062 mm (fd)	69	42	73	87	81	94	99	17
finer than 0.062 mm (sd)	12	52	74	78	78	86	94	11
Bed material								
finer than 16 mm (sd)	62	100	100	100	100	100	100	0
finer than 8 mm (sd)	62	100	100	100	100	100	100	0
finer than 4 mm (sd)	62	100	100	100	100	100	100	0
finer than 2 mm (sd, fd)	62	100	100	100	100	100	100	0
finer than 1 mm (sd, fd)	65	97	100	100	100	100	100	1
finer than 0.5 mm (fd)	65	54	84	96	90	99	100	12
finer than 0.25 mm (fd)	65	1	19	60	50	78	98	32
finer than 0.125 mm (fd)	65	0	2	8	14	21	81	15
finer than 0.062 mm (fd)	65	0	2	3	7	10	34	7

*Includes only discharges corresponding to a water-quality sample.

Table 67.--Statistical summary of selected water-quality properties for St. Francis River at Madison, Ark., 07047907

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	100	98	1,010	3,040	5,880	8,780	34,200	6,800
Dissolved oxygen	97	3.7	6.8	8.2	8.6	10.4	13.6	2.1
pH	99	6.4	7.4	7.9	7.8	8.1	8.5	.4
Specific conductance	99	65	171	231	246	319	458	97
Suspended sediment								
concentration	99	22	88	129	186	229	633	145
finer than 1 mm (fd)	87	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	87	95	100	100	100	100	100	1
finer than 0.25 mm (fd)	87	49	96	98	95	99	100	9
finer than 0.125 mm (fd)	87	39	90	96	91	98	99	12
finer than 0.062 mm (fd)	87	38	84	92	87	97	99	14
finer than 0.062 mm (sd)	12	45	80	85	81	93	98	17
Bed material								
finer than 16 mm (sd)	89	100	100	100	100	100	100	0
finer than 8 mm (sd)	89	85	100	100	100	100	100	2
finer than 4 mm (sd)	89	62	100	100	99	100	100	6
finer than 2 mm (sd,fd)	89	48	100	100	98	100	100	8
finer than 1 mm (sd,fd)	95	45	98	100	97	100	100	9
finer than 0.5 mm (fd)	95	9	69	83	80	93	100	18
finer than 0.25 mm (fd)	95	3	16	34	41	62	99	30
finer than 0.125 mm (fd)	95	0	2	6	15	18	95	21
finer than 0.062 mm (fd)	95	0	1	3	8	7	88	14

*Includes only discharges corresponding to a water-quality sample.

Table 68.--Statistical summary of selected water-quality properties for L'Anguille River near Cherry Valley, Ark., 07047936

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	63	0	42	125	189	217	1,420	236
Dissolved oxygen	62	2.2	4.1	5.7	6.2	8.3	12.0	2.6
pH	62	6.7	7.1	7.3	7.4	7.7	8.4	.4
Specific conductance	62	92	117	163	217	267	647	133
Suspended sediment								
concentration	62	35	120	173	178	225	430	84
finer than 1 mm (fd)	62	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	62	91	100	100	100	100	100	1
finer than 0.25 mm (fd)	62	87	98	99	98	99	100	2
finer than 0.125 mm (fd)	62	76	97	98	97	99	100	5
finer than 0.062 mm (fd)	62	73	94	97	95	99	100	6
finer than 0.062 mm (sd)	0	--	--	--	--	--	--	--
Bed material								
finer than 16 mm (sd)	57	46	100	100	97	100	100	11
finer than 8 mm (sd)	57	34	100	100	93	100	100	18
finer than 4 mm (sd)	57	26	84	100	87	100	100	22
finer than 2 mm (sd, fd)	58	20	79	100	85	100	100	24
finer than 1 mm (sd, fd)	58	17	74	99	84	100	100	25
finer than 0.5 mm (fd)	58	13	62	96	80	99	99	26
finer than 0.25 mm (fd)	58	9	48	67	62	79	98	23
finer than 0.125 mm (fd)	58	2	11	24	33	48	94	27
finer than 0.062 mm (fd)	58	2	8	18	29	44	92	26

*Includes only discharges corresponding to a water-quality sample.

Table 69.--Statistical summary of selected water-quality properties for L'Anguille River near Colt, Ark., 07047942

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, BTM=bottom material, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter), pesticides in bottom material (total in micrograms per kilogram), and sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	198	0.0	156	420	703	963	6,140	844
Dissolved oxygen	159	2.1	4.7	5.9	6.5	8.1	13.1	2.4
pH	162	6.4	7.2	7.4	7.4	7.7	8.3	.4
Specific conductance	164	51	103	176	230	329	638	151
Total alkalinity	55	15	45	70	100	167	260	73
Total hardness	50	17	51	75	102	153	260	69
Dissolved calcium	50	4.4	12.8	19.0	25.3	37.3	62.0	16.4
Dissolved magnesium	50	1.5	4.7	6.6	9.4	15.0	26.0	6.8
Dissolved sodium	50	.7	6.4	9.5	12.4	19.3	34.0	8.2
Sodium adsorption ratio	50	.0	.4	.5	.5	.7	1	.2
Dissolved potassium	50	.4	2.5	3.3	3.7	4.7	9.6	1.9
Dissolved sulfate	52	< 5.0	9.6	15.0	15.6	21.7	29.0	7.4
Dissolved chloride	52	1.9	7.2	11.5	13.1	18.0	32.0	7.3
Dissolved fluoride	52	< .1	.1	.2	.2	.3	1.0	.1
Dissolved silica	28	6.2	9.6	11.5	13.6	20.0	24.0	5.5
Dissolved solids	25	63	111	139	167	212	368	84
Total phosphorus	100	.07	.18	.23	.28	.34	1.10	.16
Total nitrogen	98	.46	1.20	1.60	1.66	2.00	4.70	.71
Total organic nitrogen	40	.30	.83	1.10	1.10	1.38	2.20	.40
Total nitrite + nitrate	99	< .10	.20	.30	.37	.46	3.60	.39
Total ammonia	41	< .01	.10	.15	.21	.21	2.10	.32
BOD	96	1.2	2.5	3.2	3.5	4.0	12.0	1.7
Fecal coliforms(31625)	77	3	83	200	--	430	620,000	--
Fecal strep.(31673)	64	5	152	370	--	862	580,000	--
Turbidity	19	8.2	29	84	85	140	190	60
Arsenic	13	1	2	3	3	4	7	2
Cadmium	13	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	13	< 20	< 20	< 20	--	< 20	20	--
Copper	13	< 20	< 20	< 20	--	< 20	33	--
Lead	9	< 2	5	8	10	13	23	6
Iron	13	1,100	1,400	1,700	4,200	4,500	23,000	6,000
Manganese	13	130	310	490	590	900	1,200	360
Zinc	13	< 20	20	30	40	60	80	22

Table 69.--Statistical summary of selected water-quality properties for L'Anguille River near Colt, Ark., 07047942--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Aldrin	17	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	--
Aldrin in BTM	10	< .1	< .1	.6	0.8	1.6	2.1	0.8
Chlordane	17	< .1	< .1	< .1	--	< .1	< .1	--
Chlordane in BTM	10	< 1.0	< 1.0	< 1.0	--	< 1.0	23	--
DDD	17	< .01	< .01	< .01	--	< .01	.01	--
DDD in BTM	10	< .1	5.6	17	17	31	35	12
DDE	17	< .01	< .01	< .01	--	< .01	< .01	--
DDE in BTM	10	3.2	6.4	16	18	34	39	13
DDT	17	< .01	< .01	< .01	--	< .01	.01	--
DDT in BTM	10	1.0	3.5	5.6	19	22	110	33
Diazinon	15	< .01	< .01	< .01	--	< .01	.01	--
Diazinon in BTM	7	< .1	< .1	< .1	--	< .1	< .1	--
Dieldrin	17	< .01	< .01	.01	.01	.01	.02	.00
Dieldrin in BTM	10	.3	2.4	3.8	4.1	6.2	8.7	2.6
Endosulfan	9	< .01	< .01	< .01	--	< .01	< .01	--
Endosulfan in BTM	0	--	--	--	--	--	--	--
Endrin	15	< .01	< .01	< .01	--	< .01	< .01	--
Endrin in BTM	10	< .1	< .1	.4	.4	.6	1.0	.3
Ethion	15	< .01	< .01	< .01	--	< .01	< .01	--
Ethion in BTM	7	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor	17	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor in BTM	10	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor epoxide	17	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor epoxide in BTM	10	< .1	< .1	< .1	--	< .1	.3	--
Lindane	17	< .01	< .01	< .01	--	< .01	< .01	--
Lindane in BTM	10	< .1	< .1	< .1	--	< .1	.2	--
Malathion	15	< .01	< .01	< .01	--	< .01	< .01	--
Malathion in BTM	7	< .1	< .1	< .1	--	< .1	< .1	--
Methoxychlor	12	< .01	< .01	< .01	--	< .01	< .01	--
Methoxychlor in BTM	6	< .1	< .1	< .1	--	.2	.7	--
Methyl parathion	15	< .01	< .01	< .01	--	< .01	.25	--
Methyl parathion in BTM	7	< .1	< .1	< .1	--	< .1	< .1	--
Methyl trithion	15	< .01	< .01	< .01	--	< .01	< .01	--
Methyl trithion in BTM	7	< .1	< .1	< .1	--	< .1	< .1	--
Mirex	11	< .01	< .01	< .01	--	< .01	< .01	--
Mirex in BTM	0	--	--	--	--	--	--	--
Parathion	15	< .01	< .01	< .01	--	< .01	.01	--
Parathion in BTM	7	< .1	< .1	< .1	--	< .1	< .1	--
Perthane	5	< .1	< .1	< .1	--	< .1	< .1	--
Silvex	18	< .01	< .01	< .01	0.01	.01	.03	.01
Toxaphene	17	< 1	< 1	< 1	--	< 1	< 1	--
Toxaphene in BTM	9	<10	<10	<10	--	22	45	--
Trithion	15	< .01	< .01	< .01	--	< .01	< .01	--
Trithion in BTM	7	< .1	< .1	< .1	--	< .1	< .1	--
2,4-D	18	< .01	< .01	.04	0.13	.18	.59	.18
2,4,5-T	18	< .01	.02	.05	0.32	.34	2.8	.67

Table 69.--Statistical summary of selected water-quality properties for L'Anguille River near Colt, Ark., 07047942--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Suspended sediment concentration	77	20	89	141	176	194	975	154
finer than 1 mm (fd)	62	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	62	96	100	100	100	100	100	1
finer than 0.25 mm (fd)	62	90	98	99	98	99	100	2
finer than 0.125 mm (fd)	62	87	97	98	97	99	100	3
finer than 0.062 mm (fd)	61	83	96	98	96	99	100	4
finer than 0.062 mm (sd)	15	66	79	90	87	95	98	10
Bed material								
finer than 16 mm (sd)	61	100	100	100	100	100	100	0
finer than 8 mm (sd)	61	52	100	100	99	100	100	6
finer than 4 mm (sd)	61	43	100	100	98	100	100	9
finer than 2 mm (sd,fd)	61	40	100	100	98	100	100	10
finer than 1 mm (sd,fd)	61	38	100	100	97	100	100	11
finer than 0.5 mm (fd)	62	27	99	99	96	99	100	12
finer than 0.25 mm (fd)	61	22	98	99	95	99	100	13
finer than 0.125 mm (fd)	61	20	97	98	93	99	100	16
finer than 0.062 mm (fd)	61	19	96	98	92	99	100	17

*Includes only discharges corresponding to a water-quality sample.

Table 70.--Statistical summary of selected water-quality properties for L'Anguille River near Colt, Ark., 07047942 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, BTM=bottom material, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter), pesticides in bottom material (total in micrograms per kilogram), and sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	64	6.4	152	216	481	474	6,140	865
Dissolved oxygen	53	2.1	4.2	4.8	4.7	5.3	6.0	.9
pH	50	6.9	7.5	7.7	7.7	7.9	8.2	.3
Specific conductance	52	110	251	369	354	462	638	135
Total alkalinity	14	64	108	173	168	218	260	61
Total hardness	13	76	115	160	166	220	260	61
Dissolved calcium	13	19.0	27.5	38.0	40.5	56.5	62.0	14.6
Dissolved magnesium	13	6.9	11.0	16.0	15.9	19.5	26.0	6.0
Dissolved sodium	13	.7	12.0	20.0	17.9	22.5	30.0	7.9
Sodium adsorption ratio	13	.0	.6	.7	.6	.8	.8	.2
Dissolved potassium	13	2.4	2.8	3.1	3.2	3.4	4.7	.6
Dissolved sulfate	14	< 5.0	14.0	20.5	19.2	26.0	28.0	8.2
Dissolved chloride	14	9.6	15.0	18.0	17.8	20.5	26.0	4.0
Dissolved fluoride	14	.2	.2	.3	.3	.3	.5	.1
Dissolved silica	6	11.0	14.8	21.0	19.3	23.3	24.0	5.0
Dissolved solids	5	143	181	244	253	330	368	84
Total phosphorus	30	.07	.16	.21	.23	.27	.49	.10
Total nitrogen	30	.62	1.28	1.70	1.65	2.00	3.70	.62
Total organic nitrogen	12	.61	.73	1.05	1.08	1.45	1.60	.35
Total nitrite + nitrate	30	< .10	.20	.36	.40	.49	.99	.25
Total ammonia	12	< .01	.08	.15	.14	.19	.22	.06
BOD	29	1.4	2.8	3.4	3.4	3.8	7.2	1.2
Fecal coliforms(31625)	23	22	130	230	--	440	1,500	--
Fecal strep.(31673)	19	110	370	720	--	1,200	2,400	--
Turbidity	4	8.2	14	40	43	75	84	32
Arsenic	2	4	4	5	5	6	6	1
Cadmium	2	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	2	< 20	< 20	< 20	--	< 20	< 20	--
Copper	2	< 20	< 20	< 20	--	< 20	< 20	--
Lead	0	--	--	--	--	--	--	--
Iron	2	1,400	1,400	2,700	2,700	4,000	4,000	1,800
Manganese	2	490	490	700	700	900	900	290
Zinc	2	40	40	45	45	50	50	7

Table 70.--Statistical summary of selected water-quality properties for L'Anguille River near Colt, Ark., 07047942 (June through September)--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Aldrin	6	< .01	< .01	< .01	--	< .01	< .01	--
Aldrin in BTM	3	.3	.3	.7	.8	1.4	1.4	.6
Chlordane	6	< .1	< .1	< .1	--	< .1	< .1	--
Chlordane in BTM	3	<1.0	<1.0	<1.0	--	<1.0	<1.0	--
DDD	6	< .01	< .01	< .01	--	< .01	.01	--
DDD in BTM	3	18	18	30	27	33	33	7.9
DDE	6	< .01	< .01	< .01	--	< .01	< .01	--
DDE in BTM	3	15	15	19	23	36	36	11
DDT	6	< .01	< .01	< .01	--	< .01	.01	--
DDT in BTM	3	5.3	5.3	5.8	11	22	22	9.5
Diazinon	5	< .01	< .01	< .01	--	< .01	< .01	--
Diazinon in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Dieldrin	6	< .01	.01	.01	.01	.01	.02	.00
Dieldrin in BTM	3	4.1	4.1	5.7	5.8	7.7	7.7	1.8
Endosulfan	3	< .01	< .01	< .01	--	< .01	< .01	--
Endosulfan in BTM	0	--	--	--	--	--	--	--
Endrin	6	< .01	< .01	< .01	--	< .01	< .01	--
Endrin in BTM	3	< .1	< .1	.6	--	.6	.6	--
Ethion	5	< .01	< .01	< .01	--	< .01	< .01	--
Ethion.BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor	6	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor epoxide	6	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor epoxide in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Lindane	6	< .01	< .01	< .01	--	< .01	< .01	--
Lindane in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Malathion	5	< .01	< .01	< .01	--	< .01	< .01	--
Malathion in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Methoxychlor	4	< .01	< .01	< .01	--	< .01	< .01	--
Methoxychlor in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Methyl parathion	5	< .01	< .01	.03	.06	.14	.25	.10
Methyl parathion in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Methyl trithion	5	< .01	< .01	< .01	--	< .01	< .01	--
Methyl trithion in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Mirex	4	< .01	< .01	< .01	--	< .01	< .01	--
Mirex in BTM	0	--	--	--	--	--	--	--
Parathion	5	< .01	< .01	< .01	--	< .01	< .01	--
Parathion in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Perthane	1	< .1	< .1	< .1	--	< .1	< .1	--
Silvex	6	< .01	< .01	.01	.01	.02	.03	.01
Toxaphene	6	< 1	< 1	< 1	--	< 1	< 1	--
Toxaphene in BTM	2	< 10	< 10	22	--	45	45	--
Trithion	5	< .01	< .01	< .01	--	< .01	< .01	--
Trithion in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
2,4-D	6	< .01	< .01	.21	.25	.50	.59	.24
2,4,5-T	6	.11	.24	.53	.87	1.4	2.8	.99

Table 70.--Statistical summary of selected water-quality properties for L'Anguille River near Colt, Ark., 07047942 (June through September)--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Suspended sediment concentration	23	43	117	180	259	280	975	229
finer than 1 mm (fd)	21	100	100	100	100	100	100	0
finer than 0.5 (fd)	21	97	100	100	100	100	100	1
finer than 0.25 (fd)	21	90	97	99	98	100	100	2
finer than 0.125 mm (fd)	21	88	96	98	97	99	100	3
finer than 0.062 mm (fd)	21	83	94	98	96	99	100	4
finer than 0.062 mm (sd)	2	94	94	96	96	98	98	3
Bed material								
finer than 16 mm (sd)	21	100	100	100	100	100	100	0
finer than 8 mm (sd)	21	100	100	100	100	100	100	0
finer than 4 mm (sd)	21	100	100	100	100	100	100	0
finer than 2 mm (sd,fd)	21	100	100	100	100	100	100	0
finer than 1 mm (sd,fd)	21	99	100	100	100	100	100	0
finer than 0.5 mm (fd)	21	97	99	99	99	99	100	1
finer than 0.25 mm (fd)	21	95	99	99	99	99	100	1
finer than 0.125 mm (fd)	21	94	98	99	98	99	100	1
finer than 0.062 mm (fd)	21	93	97	99	98	99	99	2

*Includes only discharges corresponding to a water-quality sample.

Table 71.--Statistical summary of selected water-quality properties for L'Anguille River near Palestine, Ark., 07047950

[N=number of observations, mm=millimeter, fd=fall diameter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius, and sediment particle-size distribution (percent)]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	55	0	213	476	620	1,010	2,040	573
Dissolved oxygen	55	2.6	4.9	5.9	6.5	7.8	12.1	2.2
pH	55	6.6	7.1	7.3	7.4	7.7	8.1	.4
Specific conductance	55	80	94	159	223	355	620	158
Suspended sediment								
concentration	46	47	79	114	133	165	357	77
finer than 1 mm (fd)	43	100	100	100	100	100	100	0
finer than 0.5 mm (fd)	43	98	100	100	100	100	100	0
finer than 0.25 mm (fd)	43	92	97	98	98	99	100	2
finer than 0.125 mm (fd)	43	87	94	97	96	98	100	3
finer than 0.062 mm (fd)	43	80	93	96	94	98	100	4
finer than 0.062 mm (sd)	2	79	79	89	89	98	98	13
Bed material								
finer than 16 mm (sd)	41	100	100	100	100	100	100	0
finer than 8 mm (sd)	41	48	100	100	99	100	100	8
finer than 4 mm (sd)	41	38	100	100	98	100	100	11
finer than 2 mm (sd, fd)	41	36	100	100	97	100	100	12
finer than 1 mm (sd, fd)	41	35	98	100	96	100	100	13
finer than 0.5 mm (fd)	41	34	93	97	92	99	100	14
finer than 0.25 mm (fd)	41	33	84	93	85	98	99	17
finer than 0.125 mm (fd)	41	7	63	89	78	94	98	22
finer than 0.062 mm (fd)	41	5	57	83	75	91	97	22

*Includes only discharges corresponding to a water-quality sample.

Table 72.--Statistical summary of selected water-quality properties for L'Anguille River at Marianna, Ark., 07047964

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	0	--	--	--	--	--	--	--
Dissolved oxygen	128	2.4	5.7	6.6	7.0	8.2	12.8	2.1
pH	128	6.4	7.0	7.3	7.3	7.6	8.1	.4
Specific conductance	65	59	98	173	232	329	654	154
Total alkalinity	22	23	32	95	92	133	230	57
Total hardness	59	25	52	74	100	144	310	64
Dissolved magnesium	10	3.0	8.2	12.5	13.6	17.3	34.0	8.9
Dissolved sulfate	120	2.0	8.0	12.0	14.7	19.7	100.0	11.0
Dissolved chloride	122	2.5	7.5	11.5	13.2	17.6	46.0	7.4
Dissolved solids	84	102	156	189	208	241	382	68
Total phosphorus	113	.07	.20	.27	.33	.37	3.50	.34
Total nitrite + nitrate	67	< .05	.17	.30	.33	.43	1.30	.23
Total ammonia	94	< .10	.10	.14	.24	.21	3.40	.46
BOD	124	.5	2.2	2.8	3.1	3.4	7.5	1.3
Fecal coliforms(31616)	115	2	52	130	--	370	42,000	--
Fecal strep.(31679)	18	33	134	184	--	538	9,300	--
Turbidity	55	20	40	70	100	110	1,000	140
Arsenic	60	< 10	< 10	< 10	--	< 10	56	--
Cadmium	114	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	82	< 20	< 20	< 20	--	< 20	30	--
Copper	120	< 20	< 20	< 20	--	< 20	50	--
Lead	62	< 20	< 20	< 20	--	< 20	66	--
Iron	61	80	2,400	4,900	5,200	7,300	20,000	3,800
Manganese	64	< 27	140	270	480	550	4,900	700
Zinc	106	< 20	< 20	20	38	30	515	79
Aldrin	53	< .002	< .002	< .002	--	< .002	< .002	--
DDE	53	< .002	< .002	< .002	--	< .002	.004	--
DDT	54	< .004	< .004	< .004	--	< .004	.010	--
Dieldrin	53	< .002	< .002	< .002	--	< .002	.010	--
Endrin	54	< .002	< .002	< .002	--	< .002	.003	--
Lindane	54	ND	ND	ND	--	ND	ND	--
Malathion	16	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	54	< .04	< .04	< .04	--	< .04	.14	--
Toxaphene	54	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	23	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 73.--Statistical summary of selected water-quality properties for L'Anguille River at Marianna, Ark., 07047964 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	4	402	448	994	1,270	2,360	2,680	1,040
Dissolved oxygen	45	3.9	5.1	5.9	5.8	6.4	7.7	1.0
pH	46	6.8	7.2	7.6	7.5	7.8	8.1	.3
Specific conductance	22	61	212	336	339	439	654	159
Total alkalinity	7	82	130	142	145	153	230	44
Total hardness	16	44	113	147	153	194	310	62
Dissolved magnesium	14	10.0	11.0	15.0	18.5	29.5	34.0	10.6
Dissolved sulfate	46	4.0	8.0	14.0	14.3	19.2	28.0	6.5
Dissolved chloride	43	4.0	12.0	18.0	18.2	22.0	46.0	8.4
Dissolved solids	28	129	175	203	226	273	382	74
Total phosphorus	37	.07	.19	.25	.35	.34	3.50	.55
Total nitrite + nitrate	23	< .05	.18	.33	.37	.51	.80	.21
Total ammonia	34	< .10	< .10	.11	.22	.18	3.40	.57
BOD	44	1.0	2.2	2.8	3.1	3.4	7.5	1.5
Fecal coliforms(31616)	40	4	64	150	--	488	4,600	--
Fecal strep.(31679)	8	33	97	166	--	497	3,000	--
Turbidity	20	25	35	48	75	72	260	63
Arsenic	16	< 10	< 10	< 10	--	< 10	15	--
Cadmium	41	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	30	< 20	< 20	< 20	--	< 20	< 20	--
Copper	41	< 20	< 20	< 20	--	< 20	20	--
Lead	23	< 20	< 20	< 20	--	< 20	66	--
Iron	19	80	1,400	2,500	3,500	3,600	11,000	3,200
Manganese	21	< 27	245	430	450	560	1,300	270
Zinc	36	< 20	< 20	20	35	28	460	89
Aldrin	31	< .002	< .002	< .002	--	< .002	< .002	--
DDE	31	< .002	< .002	< .002	--	< .002	.004	--
DDT	32	< .004	< .004	< .004	--	< .004	.010	.003
Dieldrin	31	< .002	< .002	< .002	--	< .006	.010	--
Endrin	32	< .002	< .002	< .002	--	< .002	.003	--
Lindane	32	ND	ND	ND	--	ND	ND	--
Malathion	10	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	32	< .04	< .04	< .04	--	< .04	.090	--
Toxaphene	32	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	13	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 74.--Statistical summary of selected water-quality properties for St. Francis River north of Helena, Ark., 07047968

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	0	--	--	--	--	--	--	--
Dissolved oxygen	102	3.0	6.6	7.9	8.0	9.5	12.6	2.1
pH	102	6.3	7.3	7.6	7.6	7.8	8.2	.3
Specific conductance	73	72	163	280	264	342	721	123
Total alkalinity	21	19	66	98	110	166	221	58
Total hardness	46	22	83	129	128	161	388	66
Dissolved magnesium	9	4.0	6.5	12.0	12.0	16.5	24.0	6.5
Dissolved sulfate	94	< 1.0	10.0	13.0	13.4	16.0	26.0	5.2
Dissolved chloride	95	3.5	6.5	8.0	8.3	9.5	16.0	2.5
Dissolved solids	60	101	169	199	205	235	431	57
Total phosphorus	91	.03	.14	.19	.27	.34	2.60	.29
Total nitrite + nitrate	43	< .05	.13	.30	.38	.51	1.50	.34
Total ammonia	73	< .10	< .10	.11	.14	.17	.96	.13
BOD	101	.3	2.4	3.2	3.3	3.9	10.0	1.4
Fecal coliforms(31616)	90	2	18	59	--	145	4,500	--
Fecal strep.(31679)	18	3	30	427	--	1,775	6,000	--
Turbidity	33	4.0	35	50	98	160	350	96
Arsenic	46	< 10	< 10	< 10	--	< 10	30	--
Cadmium	80	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	57	< 20	< 20	< 20	--	< 20	30	--
Copper	84	< 20	< 20	< 20	--	< 20	50	--
Lead	41	< 20	< 20	< 20	--	< 20	43	--
Iron	50	260	1,800	4,000	4,900	6,800	26,000	4,400
Manganese	53	32	100	170	210	280	880	160
Zinc	82	< 20	< 20	20	54	40	930	150
Aldrin	46	< .002	< .002	< .002	--	< .002	.010	--
DDE	46	< .002	< .002	< .002	--	< .002	< .002	--
DDT	47	< .004	< .004	< .004	--	< .004	.010	--
Dieldrin	46	< .002	< .002	< .002	--	< .002	.010	--
Endrin	47	< .002	< .002	< .002	--	< .002	.050	--
Lindane	46	ND	ND	ND	--	ND	ND	--
Malathion	16	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	47	< .04	< .04	< .04	--	< .04	.05	--
Toxaphene	47	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	25	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 75.--Statistical summary of selected water-quality properties for St. Francis River north of Helena, Ark., 07047968 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	0	--	--	--	--	--	--	--
Dissolved oxygen	38	3.0	5.7	6.9	6.7	7.8	10.0	1.7
pH	39	7.2	7.5	7.7	7.7	7.9	8.2	.3
Specific conductance	26	102	211	321	310	370	517	101
Total alkalinity	7	66	150	171	161	180	221	48
Total hardness	13	84	96	140	145	166	300	56
Dissolved magnesium	4	10.0	10.5	12.0	14.5	21.0	24.0	6.4
Dissolved sulfate	39	< 1.0	10.0	13.0	13.0	16.0	24.0	4.7
Dissolved chloride	36	5.0	7.6	9.0	9.2	11.0	16.0	2.4
Dissolved solids	21	103	160	194	204	253	310	58
Total phosphorus	31	.03	.15	.19	.31	.30	2.60	.45
Total nitrite + nitrate	16	.07	.15	.23	.38	.50	1.20	.35
Total ammonia	28	< .10	< .10	< .10	.11	.15	.44	.09
BOD	39	.3	3.2	3.8	4.1	4.5	10.0	1.6
Fecal coliforms(31616)	35	2	20	84	--	230	4,500	--
Fecal strep.(31679)	8	20	20	58	--	1,858	6,000	--
Turbidity	14	4.0	29	38	57	66	250	59
Arsenic	13	< 10	< 10	< 10	--	< 10	30	--
Cadmium	29	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	22	< 20	< 20	< 20	--	< 20	< 20	--
Copper	28	< 20	< 20	< 20	--	< 20	30	--
Lead	14	< 20	< 20	< 20	--	< 20	30	--
Iron	14	260	1,100	2,800	5,600	7,800	26,000	7,200
Manganese	16	32	160	240	280	340	640	170
Zinc	28	< 20	< 20	< 20	102	38	930	249
Aldrin	29	< .002	< .002	< .002	--	< .002	< .002	--
DDE	29	< .002	< .002	< .002	--	< .002	< .002	--
DDT	29	< .004	< .002	< .002	--	< .002	.010	--
Dieldrin	29	< .002	< .002	< .002	--	< .002	.010	--
Endrin	29	< .002	< .002	< .002	--	< .002	.050	--
Lindane	29	ND	ND	ND	--	ND	ND	--
Malathion	10	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	29	< .04	< .04	< .04	--	< .04	.04	--
Toxaphene	29	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	13	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 76.--Statistical summary of selected water-quality properties for White River at Oil Trough, Ark., 07061105

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	0	--	--	--	--	--	--	--
Dissolved oxygen	116	6.4	9.2	9.8	10.1	11.4	13.8	1.5
pH	119	7.5	8.0	8.1	8.1	8.2	8.4	.2
Specific conductance	59	165	255	279	278	295	523	45
Total alkalinity	20	110	129	136	137	150	160	13
Total hardness	59	63	130	140	140	150	190	24
Dissolved magnesium	8	10.0	11.2	13.0	12.9	13.7	17.0	2.1
Dissolved sulfate	110	< 1.0	4.0	6.0	6.4	8.0	25.0	3.1
Dissolved chloride	114	2.5	4.5	5.5	5.6	6.5	13.0	1.6
Dissolved solids	77	133	150	160	161	171	197	15
Total phosphorus	112	< .01	.02	.03	.05	.06	.64	.07
Total nitrite + nitrate	63	.07	.18	.27	.28	.35	.57	.12
Total ammonia	92	< .10	< .10	< .10	--	< .10	.22	--
BOD	115	.4	1.2	2.1	2.2	2.9	7.0	1.2
Fecal coliforms(31616)	116	2	16	49	--	213	13,000	--
Fecal strep.(31679)	9	12	17	32	--	85	220	--
Turbidity	54	2.5	3.9	6.0	18	15	120	28
Arsenic	45	< 10	< 10	< 10	--	< 10	12	--
Cadmium	86	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	77	< 20	< 20	< 20	--	< 20	93	--
Copper	89	< 20	< 20	< 20	--	< 20	860	--
Lead	56	< 20	< 20	< 20	--	< 20	< 20	--
Iron	31	< 30	160	240	490	520	2,100	560
Manganese	33	< 27	52	73	97	100	630	110
Zinc	75	< 20	< 20	< 20	16	20	60	13
Aldrin	20	< .002	< .002	< .002	--	< .002	< .002	--
DDE	20	< .002	< .002	< .002	--	< .002	< .002	--
DDT	20	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	20	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	20	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	20	ND	ND	ND	--	ND	ND	--
Malathion	4	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	20	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	20	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	9	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 77.--Statistical summary of selected water-quality properties for Black River near Corning, Ark., 07064000

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	104	338	592	1,120	1,970	2,270	19,300	2,800
Dissolved oxygen	96	5.9	7.5	8.6	8.8	10.0	12.3	1.7
pH	94	6.9	7.6	7.9	7.8	8.0	8.3	.3
Specific conductance	60	88	168	234	220	267	313	57
Total alkalinity	19	54	86	107	108	139	156	29
Total hardness	49	50	85	116	113	139	200	34
Dissolved magnesium	9	10.0	11.5	14.0	14.3	16.5	22.0	3.7
Dissolved sulfate	85	< 1.0	6.0	8.0	8.0	9.0	19.0	3.4
Dissolved chloride	91	2.5	4.5	5.0	5.3	6.0	12.0	1.4
Dissolved solids	57	97	121	142	138	152	247	26
Total phosphorus	90	< .01	.06	.09	.11	.13	.68	.09
Total nitrite + nitrate	43	< .05	.12	.16	.19	.25	.66	.12
Total ammonia	70	< .10	< .10	< .10	--	< .10	.62	--
BOD	98	.1	1.5	2.1	2.2	2.6	5.2	1.0
Fecal coliforms(31616)	92	2	27	56	--	165	3,400	--
Fecal strep.(31679)	15	13	30	80	--	290	18,000	--
Turbidity	35	7.0	20	25	30	40	85	17
Arsenic	47	< 10	< 10	< 10	--	< 10	20	--
Cadmium	77	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	57	< 20	< 20	< 20	--	< 20	20	--
Copper	77	< 20	< 20	< 20	--	< 20	52	--
Lead	42	< 20	< 20	< 20	--	< 20	25	--
Iron	40	70	940	1,300	1,400	2,000	3,300	750
Manganese	43	36	110	180	180	230	390	87
Zinc	74	< 20	< 20	< 20	--	< 20	240	--
Aldrin	18	< .002	< .002	< .002	--	< .002	< .002	--
DDE	18	< .002	< .002	< .002	--	< .002	< .002	--
DDT	18	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	18	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	18	< .002	< .002	< .002	--	< .002	.002	--
Lindane	18	ND	ND	ND	--	ND	ND	--
Malathion	10	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	17	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	17	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	14	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 78.--Statistical summary of selected water-quality properties for Current River near Pocahontas, Ark., 07068850

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	96	1,060	1,510	2,400	3,310	3,840	15,600	2,730
Dissolved oxygen	120	6.6	8.4	9.2	9.5	10.4	14.7	1.4
pH	122	7.1	7.9	8.0	8.0	8.2	8.3	.2
Specific conductance	61	26	229	290	269	314	364	64
Total alkalinity	20	85	124	144	142	163	180	27
Total hardness	61	30	127	150	146	177	230	35
Dissolved magnesium	8	14.0	15.5	17.5	18.4	20.5	26.0	3.8
Dissolved sulfate	109	< 1.0	2.0	4.0	4.1	5.0	19.0	2.8
Dissolved chloride	118	1.5	3.5	4.0	4.2	5.0	9.0	1.2
Dissolved solids	79	114	149	166	163	178	267	24
Total phosphorus	120	< .01	.02	.04	.06	.07	.33	.06
Total nitrite + nitrate	65	.07	.17	.25	.25	.33	.50	.10
Total ammonia	95	< .10	< .10	< .10	--	< .10	.78	--
BOD	120	.4	1.1	1.5	1.7	2.2	4.6	.9
Fecal coliforms(31616)	120	2	8	20	--	99	9,100	--
Fecal strep.(31679)	14	8	19	47	--	145	230	--
Turbidity	57	2.0	3.6	6.0	19	10	280	41
Arsenic	46	< 10	< 10	< 10	--	< 10	< 10	--
Cadmium	86	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	80	< 20	< 20	< 20	--	< 20	24	--
Copper	84	< 20	< 20	< 20	--	< 20	110	--
Lead	61	< 20	< 20	< 20	--	< 20	95	--
Iron	29	160	230	360	480	570	1,600	370
Manganese	30	28	50	77	120	110	970	170
Zinc	78	< 20	< 20	< 20	20	26	140	24
Aldrin	19	< .002	< .002	< .002	--	< .002	< .002	--
DDE	19	< .002	< .002	< .002	--	< .002	< .002	--
DDT	19	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	19	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	19	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	19	ND	ND	ND	--	ND	ND	--
Malathion	9	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	19	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	19	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	13	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 79.--Statistical summary of selected water-quality properties for Black River at Pocahontas, Ark., 07069000

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	60	1,400	2,020	4,420	6,090	9,090	21,500	4,730
Dissolved oxygen	88	6.4	7.8	8.7	9.0	10.0	13.7	1.6
pH	92	7.4	7.7	7.9	7.9	8.1	8.9	.3
Specific conductance	29	129	207	258	250	301	339	57
Total alkalinity	12	76	103	135	133	168	170	32
Total hardness	52	56	102	138	135	164	390	50
Dissolved magnesium	0	--	--	--	--	--	--	--
Dissolved sulfate	81	< 1.0	3.0	5.0	5.2	6.5	20.0	2.9
Dissolved chloride	93	2.0	3.5	4.5	4.6	5.5	16.0	1.9
Dissolved solids	80	111	136	157	155	176	218	23
Total phosphorus	89	< .01	.04	.06	.07	.09	.26	.05
Total nitrite + nitrate	64	.06	.17	.22	.23	.28	.46	.09
Total ammonia	86	< .10	< .10	< .10	.05	< .10	.23	.03
BOD	86	.1	1.4	2.0	2.1	2.6	4.9	1.1
Fecal coliforms(31616)	87	2	20	44	--	170	2,100	--
Fecal strep.(31679)	0	--	--	--	--	--	--	--
Turbidity	57	2.3	15	20	25	32	90	17
Arsenic	32	< 10	< 10	< 10	--	< 10	13	--
Cadmium	75	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	65	< 20	< 20	< 20	--	< 20	< 20	--
Copper	74	< 20	< 20	< 20	--	< 20	350	--
Lead	44	< 20	< 20	< 20	--	< 20	36	--
Iron	17	190	380	750	1,100	1,000	5,800	1,500
Manganese	19	70	89	130	160	190	410	94
Zinc	68	< 20	< 20	< 20	20	29	94	19
Aldrin	11	< .002	< .002	< .002	--	< .002	< .002	--
DDE	11	< .002	< .002	< .002	--	< .002	< .002	--
DDT	11	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	11	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	11	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	11	ND	ND	ND	--	ND	ND	--
Malathion	4	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	11	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	11	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	9	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 80.--Statistical summary of selected water-quality properties for Black River at Pocahontas, Ark., 07069000 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	33	1,380	1,930	2,900	3,240	3,910	9,200	1,810
Dissolved oxygen	33	6.9	7.7	7.9	8.0	8.5	9.4	0.6
pH	34	7.6	7.9	8.0	8.0	8.1	8.9	0.2
Specific conductance	9	234	260	294	288	313	338	34
Total alkalinity	3	120	120	170	153	170	170	29
Total hardness	16	56	122	140	133	150	170	28
Dissolved magnesium	0	--	--	--	--	--	--	--
Dissolved sulfate	27	< 1.0	3.0	4.0	4.8	6.0	20.0	3.9
Dissolved chloride	33	2.5	4.0	5.0	5.2	5.5	16.0	2.6
Dissolved solids	29	124	152	165	163	176	188	15
Total phosphorus	31	< .01	.05	.06	.06	.07	.12	.02
Total nitrite + nitrate	23	.06	.17	.22	.23	.28	.43	.09
Total ammonia	30	< .10	< .10	< .10	.04	< .10	.10	.03
BOD	29	.6	1.4	2.0	2.1	2.6	4.8	1.0
Fecal coliforms(31616)	30	2	24	56	--	133	1,100	--
Fecal strep.(31679)	0	--	--	--	--	--	--	--
Turbidity	22	2.3	20	25	26	35	50	12
Arsenic	10	< 10	< 10	< 10	--	< 10	11	--
Cadmium	26	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	21	< 20	< 20	< 20	--	< 20	< 20	--
Copper	25	< 20	< 20	< 20	--	< 20	30	--
Lead	16	< 20	< 20	< 20	--	< 20	36	--
Iron	4	410	440	700	1,900	4,600	5,800	2,600
Manganese	5	70	78	130	160	240	330	100
Zinc	22	< 20	< 20	< 20	--	< 20	94	--
Aldrin	5	< .002	< .002	< .002	--	< .002	< .002	--
DDE	5	< .002	< .002	< .002	--	< .002	< .002	--
DDT	5	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	5	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	5	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	5	ND	ND	ND	--	ND	ND	--
Malathion	2	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	5	< .04	< .04	< .04	--	< .04	.01	--
Toxaphene	5	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	4	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 81.--Statistical summary of selected water-quality properties for Black River at Black Rock, Ark., 07072500

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, BTM=bottom material, ND=not detected, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), trace metals and pesticides (total or total recoverable in micrograms per liter), pesticides in bottom material (total in micrograms per kilogram), sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	90	2,230	4,050	6,860	9,530	12,300	56,100	8,790
Dissolved oxygen	82	5.4	7.6	8.6	8.9	10.1	13.8	1.7
pH	86	7.2	7.7	8.0	7.9	8.2	8.7	.3
Specific conductance	86	168	244	296	288	334	380	55
Total alkalinity	47	78	112	148	143	170	200	33
Total hardness	43	81	120	150	145	180	190	34
Dissolved calcium	43	17.0	26.0	31.0	30.5	36.0	41.0	6.4
Dissolved magnesium	43	2.4	13.0	18.0	16.8	21.0	23.0	4.6
Dissolved sodium	43	1.1	1.8	2.2	2.5	2.4	19.0	2.6
Dissolved potassium	43	.1	1.1	1.2	1.4	1.5	6.3	.9
Dissolved sulfate	43	< 5.0	< 5.0	5.4	5.8	6.7	12.0	2.1
Sodium adsorption ratio	43	.0	.1	.1	.1	.1	.9	.1
Dissolved chloride	43	2.1	2.6	2.9	3.1	3.3	7.5	.9
Dissolved fluoride	43	< .1	< .1	.1	.1	.1	.2	.0
Dissolved silica	20	6.3	7.2	8.0	8.0	8.8	9.9	1.1
Dissolved solids	20	124	156	169	169	191	208	24
Total phosphorus	83	< .01	.04	.05	.06	.09	.33	.05
Total nitrogen	81	.13	.45	.62	.75	.81	3.00	.48
Total organic nitrogen	32	.10	.29	.43	.61	.64	2.70	.60
Total nitrite + nitrate	84	< .10	.20	.25	.25	.30	.53	.08
Total ammonia	35	< .01	.02	.05	.06	.09	.30	.06
BOD	77	.6	1.4	1.7	1.9	2.0	5.0	.9
Fecal coliforms(31625)	62	1	22	52	--	230	8,600	--
Fecal strep.(31673)	53	0	62	170	--	915	19,000	--
Turbidity	17	1.0	3.6	13	13	18	54	13
Arsenic	9	< 1	< 1	1	1	1	1	0
Cadmium	9	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	9	< 20	< 20	< 20	--	< 20	< 20	--
Copper	9	< 20	< 20	< 20	--	< 20	< 20	--
Lead	7	< 2	2	4	4	5	7	2
Iron	9	230	370	490	700	880	1,900	510
Manganese	9	50	60	70	80	95	150	31
Zinc	9	< 20	< 20	20	--	30	30	--
Aldrin	3	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	--

Table 81.--Statistical summary of selected water-quality properties for Black River at Black Rock, Ark., 07072500--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Aldrin in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Chlordane	3	< .1	< .1	< .1	--	< .1	< .1	--
Chlordane in BTM	3	< 1.0	< 1.0	1.0	--	2.0	2.0	--
DDD	3	< .01	< .01	< .01	--	< .01	< .01	--
DDD in BTM	3	.2	.2	.3	0.4	.8	.8	.3
DDE	3	< .01	< .01	< .01	--	< .01	< .01	--
DDE in BTM	3	.2	.2	.3	0.4	.8	.8	.3
DDT	3	< .01	< .01	< .01	--	< .01	< .01	--
DDT in BTM	3	< .1	< .1	< .1	--	.3	.3	--
Diazinon	3	< .01	< .01	< .01	--	< .01	< .01	--
Diazinon in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Dieldrin	3	< .01	< .01	< .01	--	< .01	< .01	--
Dieldrin in BTM	3	< .1	.1	.1	--	.4	.4	--
Endosulfan	2	< .01	< .01	< .01	--	< .01	< .01	--
Endosulfan in BTM	0	--	--	--	--	--	--	--
Endrin	3	< .01	< .01	< .01	--	< .01	< .01	--
Endrin in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Ethion	3	< .01	< .01	< .01	--	< .01	< .01	--
Ethion in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor	3	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor epoxide	3	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor epoxide in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Lindane	3	< .01	< .01	< .01	--	< .01	< .01	--
Lindane in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Malathion	3	< .01	< .01	< .01	--	< .01	< .01	--
Malathion in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Methoxychlor	3	< .01	< .01	< .01	--	< .01	< .01	--
Methoxychlor in BTM	2	< .1	< .1	.6	--	1.1	1.1	--
Methyl parathion	3	< .01	< .01	< .01	--	< .01	< .01	--
Methyl parathion in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Methyl trithion	3	< .01	< .01	< .01	--	< .01	< .01	--
Methyl trithion in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Mirex	3	< .01	< .01	< .01	--	< .01	< .01	--
Mirex in BTM	0	--	--	--	--	--	--	--
Parathion	3	< .01	< .01	< .01	--	< .01	< .01	--
Parathion in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Perthane	2	< .1	< .1	< .1	--	< .1	< .1	--
Silvex	3	< .01	< .01	< .01	--	< .01	< .01	--
Toxaphene	3	< 1	< 1	< 1	--	< 1	< 1	--
Toxaphene in BTM	3	< 10	<10	<10	--	<10	<10	--
Trithion	3	< .01	< .01	< .01	--	< .01	< .01	--
Trithion in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
2,4-D	3	< .01	< .01	< .01	--	< .01	< .01	--
2,4,5-T	3	< .01	< .01	< .01	--	< .01	< .01	--
Suspended sediment concentration	1	13	13	13	13	13	13	0
finer than 0.062 mm (sd)	1	92	92	92	92	92	92	0

*Includes only discharges corresponding to a water-quality sample.

Table 82.--Statistical summary of selected water-quality properties for Black River at Black Rock, Ark., 07072500 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, BTM=bottom material, ND=not detected, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 millimeters), turbidity (nephelometric turbidity units), trace metals and pesticides (total or total recoverable in micrograms per liter) pesticides in bottom material (total in micrograms per kilogram), sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	28	2,350	3,470	4,795	6,010	7,160	16,000	3,700
Dissolved oxygen	28	5.4	7.0	7.5	7.3	7.8	8.5	.7
pH	29	7.3	7.7	8.0	8.0	8.2	8.7	.3
Specific conductance	29	185	263	308	298	335	364	48
Total alkalinity	16	101	123	157	150	172	200	29
Total hardness	15	92	120	150	147	170	190	31
Dissolved calcium	15	22.0	27.0	32.0	31.6	36.0	40.0	5.2
Dissolved magnesium	15	2.4	14.0	18.0	16.6	20.0	23.0	5.1
Dissolved sodium	15	1.1	2.0	2.2	3.3	2.4	19.0	4.4
Sodium adsorption ratio	15	.1	.1	.1	.1	.1	.9	.2
Dissolved potassium	15	.7	1.1	1.3	1.7	1.7	6.3	1.4
Dissolved sulfate	15	< 5.0	< 5.0	< 5.0	5.5	6.1	12.0	2.9
Dissolved chloride	15	2.2	2.6	2.9	3.2	3.3	5.4	1.0
Dissolved fluoride	15	< .1	< .1	.1	.1	.1	.2	.03
Dissolved silica	7	6.9	8.5	9.6	9.0	9.7	9.9	1.1
Dissolved solids	7	124	133	158	163	196	204	30
Total phosphorus	26	< .01	.04	.05	.07	.09	.33	.06
Total nitrogen	26	.27	.46	.66	.74	.85	1.60	.37
Total organic nitrogen	9	.18	.34	.47	.56	.86	1.10	.33
Total nitrite + nitrate	28	.12	.20	.25	.25	.30	.48	.07
Total ammonia	11	< .01	.02	.05	.06	.11	.16	.05
BOD	27	.6	1.3	1.5	5.7	2.0	106.0	20.1
Fecal coliforms(31625)	20	5	29	61	--	710	8,600	--
Fecal strep.(31673)	19	22	60	160	--	480	19,000	--
Turbidity	6	5.0	11	14	19	25	54	18
Arsenic	0	--	--	--	--	--	--	--
Cadmium	0	--	--	--	--	--	--	--
Chromium	0	--	--	--	--	--	--	--
Copper	0	--	--	--	--	--	--	--
Lead	0	--	--	--	--	--	--	--
Iron	0	--	--	--	--	--	--	--
Manganese	0	--	--	--	--	--	--	--
Zinc	0	--	--	--	--	--	--	--

Table 82 .--Statistical summary of selected water-quality properties for Black River at Black Rock, Ark., 07072500 (June through September)--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Aldrin	0	--	--	--	--	--	--	--
Aldrin in BTM	0	--	--	--	--	--	--	--
Chlordane	0	--	--	--	--	--	--	--
Chlordane in BTM	0	--	--	--	--	--	--	--
DDD	0	--	--	--	--	--	--	--
DDD in BTM	0	--	--	--	--	--	--	--
DDE	0	--	--	--	--	--	--	--
DDE in BTM	0	--	--	--	--	--	--	--
DDT	0	--	--	--	--	--	--	--
DDT in BTM	0	--	--	--	--	--	--	--
Diazinon	0	--	--	--	--	--	--	--
Diazinon in BTM	0	--	--	--	--	--	--	--
Dieldrin	0	--	--	--	--	--	--	--
Dieldrin in BTM	0	--	--	--	--	--	--	--
Endosulfan	0	--	--	--	--	--	--	--
Endrin	0	--	--	--	--	--	--	--
Endrin in BTM	0	--	--	--	--	--	--	--
Ethion	0	--	--	--	--	--	--	--
Ethion in BTM	0	--	--	--	--	--	--	--
Heptachlor	0	--	--	--	--	--	--	--
Heptachlor in BTM	0	--	--	--	--	--	--	--
Heptachlor epoxide	0	--	--	--	--	--	--	--
Lindane	0	--	--	--	--	--	--	--
Malathion	0	--	--	--	--	--	--	--
Malathion in BTM	0	--	--	--	--	--	--	--
Methoxychlor	0	--	--	--	--	--	--	--
Methoxychlor in BTM	0	--	--	--	--	--	--	--
Methyl parathion	0	--	--	--	--	--	--	--
Methyl parathion in BTM	0	--	--	--	--	--	--	--
Methyl trithion	0	--	--	--	--	--	--	--
Methyl trithion in BTM	0	--	--	--	--	--	--	--
Mirex	0	--	--	--	--	--	--	--
Parathion	0	--	--	--	--	--	--	--
Parathion in BTM	0	--	--	--	--	--	--	--
Perthane	0	--	--	--	--	--	--	--
Silvex	0	--	--	--	--	--	--	--
Toxaphene	0	--	--	--	--	--	--	--
Toxaphene in BTM	0	--	--	--	--	--	--	--
Trithion	0	--	--	--	--	--	--	--
Trithion in BTM	0	--	--	--	--	--	--	--
2,4-D	0	--	--	--	--	--	--	--
2,4,5-T	0	--	--	--	--	--	--	--
Suspended sediment	0	--	--	--	--	--	--	--

*Includes only discharges corresponding to a water-quality sample.

Table 83.--Statistical summary of selected water-quality properties for Black River at Jacksonport, Ark., 07074490

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hard ness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	0	--	--	--	--	--	--	--
Dissolved oxygen	92	6.7	8.2	9.2	9.5	10.7	13.6	1.6
pH	93	7.6	7.9	8.1	8.1	8.2	8.6	.2
Specific conductance	56	188	246	289	293	343	403	56
Total alkalinity	18	98	131	155	154	182	200	29
Total hardness	44	92	130	164	158	180	260	33
Dissolved magnesium	6	13.0	15.2	17.5	19.2	22.2	32.0	6.6
Dissolved sulfate	88	< 1.0	3.0	4.0	4.8	6.0	20.0	3.1
Dissolved chloride	86	3.5	4.5	5.5	5.8	6.5	12.0	1.6
Dissolved solids	52	132	167	183	180	193	211	18
Total phosphorus	90	< .01	.05	.07	.09	.11	.36	.06
Total nitrite + nitrate	39	< .05	.08	.23	.22	.31	.52	.14
Total ammonia	70	< .10	< .10	< .10	--	< .10	.23	--
BOD	89	.3	1.3	2.0	2.3	2.6	6.6	1.3
Fecal coliforms(31616)	92	0	10	20	--	130	2,700	--
Fecal strep.(31679)	9	7	14	77	--	135	350	--
Turbidity	30	5.0	19	25	31	35	110	22
Arsenic	43	< 10	< 10	< 10	--	< 10	21	--
Cadmium	61	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	50	< 20	< 20	< 20	--	< 20	< 20	--
Copper	63	< 20	< 20	< 20	--	< 20	630	--
Lead	36	< 20	< 20	< 20	--	< 20	30	--
Iron	29	230	710	1,400	1,500	1,800	4,800	1,000
Manganese	31	< 27	91	140	160	220	470	98
Zinc	55	< 20	< 20	< 20	--	< 20	80	--
Aldrin	15	< .002	< .002	< .002	--	< .002	< .002	--
DDE	15	< .002	< .002	< .002	--	< .002	< .002	--
DDT	15	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	15	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	15	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	15	ND	ND	ND	--	ND	ND	--
Malathion	4	< .05	< .05	< .05	--	< .05	< .005	--
Methyl parathion	15	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	15	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	10	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 84.--Statistical summary of selected water-quality properties for Black River at Jacksonport, Ark., 07074490 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	0	--	--	--	--	--	--	--
Dissolved oxygen	38	6.7	7.7	8.3	8.5	9.2	12.4	1.2
pH	37	7.8	7.9	8.1	8.1	8.3	8.6	.2
Specific conductance	22	193	281	309	309	343	403	49
Total alkalinity	5	131	136	165	165	195	200	30
Total hardness	13	92	128	150	146	172	182	27
Dissolved magnesium	2	16.0	16.0	16.5	16.5	17.0	17.0	.7
Dissolved sulfate	33	< 1.0	2.0	4.0	4.0	6.0	10.0	2.3
Dissolved chloride	34	4.0	5.0	6.0	6.4	7.0	12.0	2.0
Dissolved solids	20	156	177	185	184	195	208	14
Total phosphorus	33	.01	.06	.08	.09	.10	.36	.07
Total nitrite + nitrate	16	< .05	.06	.14	.16	.26	.34	.11
Total ammonia	28	< .10	< .10	< .10	--	< .10	.23	--
BOD	33	.7	1.2	2.3	2.5	3.1	6.6	1.5
Fecal coliforms(31616)	35	3	12	30	--	140	2,700	--
Fecal strep.(31679)	5	7	13	77	--	220	350	--
Turbidity	12	8.0	21	25	27	34	45	9.3
Arsenic	15	< 10	< 10	< 10	--	< 10	< 10	--
Cadmium	22	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	18	< 20	< 20	< 20	--	< 20	< 20	--
Copper	23	< 20	< 20	< 20	--	< 20	26	--
Lead	12	< 20	< 20	< 20	--	< 20	30	--
Iron	9	380	770	1,500	1,700	2,300	3,800	1,100
Manganese	10	< 27	127	180	171	212	310	77
Zinc	22	< 20	< 20	< 20	--	< 20	45	--
Aldrin	6	< .002	< .002	< .002	--	< .002	< .002	--
DDE	6	.002	< .002	< .002	--	< .002	< .002	--
DDT	6	.004	< .004	< .004	--	< .004	< .004	--
Dieldrin	6	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	6	.002	< .002	< .002	--	< .002	< .002	--
Lindane	6	ND	ND	ND	--	ND	ND	--
Malathion	2	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	6	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	6	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	5	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 85.--Statistical summary of selected water-quality properties for White River at Newport, Ark., 07074500

[N=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.=streptococci, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter), sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N.]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	73	4,170	11,300	18,100	27,100	28,600	296,000	37,200
Dissolved oxygen	60	7.0	8.2	9.0	9.3	10.4	14.0	1.5
pH	61	7.4	8.0	8.1	8.1	8.3	8.4	.2
Specific conductance	61	105	257	282	276	307	345	45
Total alkalinity	61	28	120	130	132	150	170	28
Total hardness	58	49	120	140	139	160	180	24
Dissolved calcium	58	14.0	30.0	34.0	32.9	36.0	41.0	4.9
Dissolved magnesium	59	3.4	12.0	14.0	13.8	16.0	20.0	3.3
Dissolved sodium	59	.9	2.3	2.7	2.9	3.3	8.9	1.3
Sodium adsorption ratio	58	.0	.1	.1	.1	.1	.3	.0
Dissolved potassium	60	.3	1.2	1.4	1.4	1.5	2.1	.3
Dissolved sulfate	61	< 5.0	6.0	7.5	7.5	8.7	12.0	1.9
Dissolved chloride	61	.7	3.5	4.2	4.5	5.0	19.0	2.5
Dissolved fluoride	61	< .1	< .1	.1	--	.1	.2	--
Dissolved silica	59	2.7	4.9	5.5	5.6	6.3	8.0	1.1
Dissolved solids	60	78	142	159	155	173	214	26
Total phosphorus	59	< .01	.03	.06	.06	.09	.18	.04
Total nitrogen	36	.45	.65	.79	.84	1.08	1.40	.25
Total organic nitrogen	36	.15	.40	.50	.57	.74	1.10	.23
Total nitrite + nitrate	37	< .10	.17	.25	.25	.34	.41	.09
Total ammonia	37	< .01	.01	.02	.03	.04	.27	.05
Fecal coliforms(31625)	57	1	20	67	--	220	3,200	--
Fecal strep.(31673)	59	2	36	90	--	430	6,900	--
Turbidity	56	1.0	9.3	16	23	23	160	28
Arsenic	18	< 1	1	1	1	1	2	0
Cadmium	19	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	19	< 20	< 20	< 20	--	< 20	30	--
Copper	19	< 20	< 20	< 20	--	< 20	130	--
Lead	17	< 2	6	10	11	17	20	6
Iron	18	80	470	760	860	1,100	2,400	600
Manganese	18	30	70	100	120	150	280	74
Zinc	19	< 20	30	40	43	50	90	22

Table 85.--Statistical summary of selected water-quality properties for White River at Newport, Ark., 07074500--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Aldrin	0	--	--	--	--	--	--	--
DDE	0	--	--	--	--	--	--	--
DDT	0	--	--	--	--	--	--	--
Dieldrin	0	--	--	--	--	--	--	--
Endrin	0	--	--	--	--	--	--	--
Lindane	0	--	--	--	--	--	--	--
Malathion	0	--	--	--	--	--	--	--
Methyl parathion	0	--	--	--	--	--	--	--
Toxaphene	0	--	--	--	--	--	--	--
2,4-D	0	--	--	--	--	--	--	--
Suspended								sediment
concentration	60	10	39	59	63	73	195	38
finer than 0.062 (sd)	60	14	68	80	77	87	99	15

*Includes only discharges corresponding to a water-quality sample.

Table 86.--Statistical summary of selected water-quality properties for White River at Newport, Ark., 07074500 (June through September)

[N=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.=streptococci, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimer at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter), sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	27	4,820	10,700	14,300	16,300	24,800	31,600	7,480
Dissolved oxygen	23	7.2	7.8	8.2	8.3	8.6	9.4	.6
pH	23	7.4	8.1	8.2	8.2	8.3	8.4	.2
Specific conductance	23	254	269	302	297	318	345	27
Total alkalinity	23	110	130	147	144	152	170	16
Total hardness	22	120	138	150	150	160	180	16
Dissolved calcium	22	30.0	34.8	36.0	35.5	37.3	40.0	2.7
Dissolved magnesium	22	9.7	12.8	15.0	15.0	17.0	19.0	2.7
Dissolved sodium	22	2.0	2.5	2.9	3.3	3.5	8.9	1.5
Sodium adsorption ratio	22	.1	.1	.1	.1	.1	.3	.1
Dissolved potassium	23	.3	1.3	1.4	1.4	1.5	2.1	.4
Dissolved sulfate	23	< 5.0	6.0	7.0	7.0	8.0	12.0	2.4
Dissolved chloride	23	3.0	3.9	4.6	5.5	5.2	19.0	3.4
Dissolved fluoride	23	< .1	< .1	.1	.1	.1	.2	.0
Dissolved silica	22	3.5	5.0	6.0	5.9	6.9	8.0	1.3
Dissolved solids	23	143	159	171	172	185	214	17
Total phosphorus	22	.02	.04	.06	.06	.08	.14	.03
Total nitrogen	14	.48	.68	.79	.83	1.00	1.20	.20
Total organic nitrogen	14	.39	.43	.51	.58	.72	.99	.19
Total nitrite + nitrate	14	< .10	.10	.24	.22	.36	.41	.14
Total ammonia	14	< .01	.01	.01	.03	.03	.18	.05
Fecal coliforms(31625)	22	1	26	63	--	150	1,900	--
Fecal strep.(31673)	23	2	40	89	--	140	4,800	--
Turbidity	22	4.5	9.3	11	16	19	70	14
Arsenic	6	< 1	1	1	1	2	2	1
Cadmium	6	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	6	< 20	< 20	< 20	15	23	30	8
Copper	6	< 20	< 20	< 20	--	< 20	75	--
Lead	5	4	7	13	13	18	18	6
Iron	6	570	600	890	1,100	1,500	2,100	590
Manganese	6	70	78	160	170	280	280	92
Zinc	6	20	28	55	55	83	90	27

Table 86.--Statistical summary of selected water-quality properties for White River at Newport, Ark., 07074500 (June through September)--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Aldrin	0	--	--	--	--	--	--	--
DDE	0	--	--	--	--	--	--	--
DDT	0	--	--	--	--	--	--	--
Dieldrin	0	--	--	--	--	--	--	--
Endrin	0	--	--	--	--	--	--	--
Lindane	0	--	--	--	--	--	--	--
Malathion	0	--	--	--	--	--	--	--
Methyl parathion	0	--	--	--	--	--	--	--
Toxaphene	0	--	--	--	--	--	--	--
2,4-D	0	--	--	--	--	--	--	--
Suspended sediment concentration	23	23	43	56	58	69	157	28
finer than 0.062 mm (sd)	23	60	69	79	77	83	93	10

*Includes only discharges corresponding to a water-quality sample.

Table 87.--Statistical summary of selected water-quality properties for White River near Augusta, Ark., 07074850

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	58	86	8,570	14,700	24,100	26,000	245,000	34,300
Dissolved oxygen	99	6.0	8.5	9.4	9.6	10.6	13.2	1.5
pH	101	7.0	7.9	8.1	8.1	8.2	8.5	.2
Specific conductance	59	174	239	284	272	310	352	45
Total alkalinity	18	96	128	144	138	150	170	20
Total hardness	49	49	129	144	143	163	220	34
Dissolved magnesium	6	11.0	12.5	16.5	16.7	20.7	23.0	4.4
Dissolved sulfate	91	< 1.0	4.0	5.0	5.3	7.0	13.0	2.4
Dissolved chloride	92	3.0	5.0	5.5	5.9	6.5	10.0	1.2
Dissolved solids	57	124	153	167	164	179	195	17
Total phosphorus	97	< .01	.04	.06	.09	.10	.74	.09
Total nitrite + nitrate	43	< .05	.16	.22	.23	.30	.47	.09
Total ammonia	73	< .10	< .10	< .10	--	< .10	.30	--
BOD	93	.3	1.3	1.9	2.2	2.5	7.1	1.4
Fecal coliforms(31616)	96	2	7	25	--	78	1,625	--
Fecal strep.(31679)	11	5	20	190	--	310	465	--
Turbidity	36	5.4	16	25	33	40	190	31
Arsenic	46	< 10	< 10	< 10	--	< 10	18	--
Cadmium	63	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	54	< 20	< 20	< 20	--	< 20	30	--
Copper	68	< 20	< 20	< 20	--	< 20	660	--
Lead	36	< 20	< 20	< 20	--	< 20	70	--
Iron	30	210	660	920	1,200	1,800	3,300	730
Manganese	33	80	100	150	160	210	390	74
Zinc	65	< 20	< 20	20	32	41	140	31
Aldrin	12	< .002	< .002	< .002	--	< .002	< .002	--
DDE	12	< .002	< .002	< .002	--	< .002	< .002	--
DDT	12	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	12	< .002	< .002	< .002	--	< .002	.010	--
Endrin	12	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	12	ND	ND	ND	--	ND	ND	--
Malathion	4	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	12	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	12	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	9	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 88.--Statistical summary of selected water-quality properties for White River near Augusta, Ark., 07074850 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	27	5,660	10,200	13,800	13,800	16,500	25,000	5,230
Dissolved oxygen	35	6.0	8.1	8.5	8.5	9.1	10.6	1.0
pH	35	7.6	8.0	8.1	8.1	8.3	8.5	.2
Specific conductance	21	174	287	303	290	317	336	45
Total alkalinity	5	131	141	150	151	162	163	13
Total hardness	13	49	140	144	140	155	184	32
Dissolved magnesium	1	17.0	17.0	17.0	17.0	17.0	17.0	-
Dissolved sulfate	31	< 1.0	3.0	4.0	4.6	6.0	9.0	2.0
Dissolved chloride	32	4.5	5.5	6.0	6.3	7.0	8.5	1.0
Dissolved solids	18	143	158	171	170	180	195	14
Total phosphorus	32	.01	.04	.06	.07	.09	.23	.05
Total nitrite + nitrate	15	< .05	.20	.25	.22	.27	.30	.07
Total ammonia	26	< .10	< .10	< .10	--	< .10	.30	--
BOD	29	.7	1.4	1.8	2.1	2.6	4.7	1.0
Fecal coliforms(31616)	32	2	12	42	--	110	1,625	--
Fecal strep.(31679)	5	20	125	310	--	392	465	--
Turbidity	11	9.5	15	25	29	40	60	16
Arsenic	12	< 10	< 10	< 10	--	< 10	14	--
Cadmium	17	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	15	< 20	< 20	< 20	--	< 20	< 20	--
Copper	19	< 20	< 20	< 20	16	21	40	11
Lead	9	< 20	< 20	< 20	--	< 20	29	--
Iron	7	210	590	900	930	1,200	1,900	530
Manganese	9	120	130	160	190	240	300	65
Zinc	18	< 20	< 20	26	33	45	96	27
Aldrin	3	< .002	< .002	< .002	--	< .002	< .002	--
DDE	3	< .002	< .002	< .002	--	< .002	< .002	--
DDT	3	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	3	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	3	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	3	ND	ND	ND	--	ND	ND	--
Malathion	1	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	3	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	3	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	3	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 89.--Statistical summary of selected water-quality properties for Little Red River at Judsonia, Ark., 07076634

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	0	--	--	--	--	--	--	--
Dissolved oxygen	101	6.9	8.8	9.7	9.7	10.5	13.6	1.3
pH	102	6.2	6.9	7.0	7.0	7.2	7.8	.3
Specific conductance	60	36	47	51	53	57	88	10
Total alkalinity	18	9	15	17	17	21	25	4
Total hardness	49	12	17	20	27	28	130	21
Dissolved magnesium	6	1.0	1.0	2.0	3.0	6.0	6.0	2.4
Dissolved sulfate	92	< 1.0	3.0	4.0	4.0	5.0	11.0	2.0
Dissolved chloride	94	2.5	4.0	4.5	4.7	5.0	9.0	1.2
Dissolved solids	57	6	36	45	46	54	129	17
Total phosphorus	99	< .01	.04	.06	.09	.10	.85	.10
Total nitrite + nitrate	42	.05	.18	.24	.46	.45	2.20	.53
Total ammonia	74	< .10	< .10	< .10	.10	.12	.44	.07
BOD	95	.3	1.1	1.5	1.7	2.0	7.4	.9
Fecal coliforms(31616)	93	2	35	88	--	220	2,400	--
Fecal strep.(31679)	11	7	40	130	--	240	1,300	--
Turbidity	36	4.2	7.9	22	23	25	110	18
Arsenic	47	< 10	< 10	< 10	--	< 10	11	--
Cadmium	80	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	55	< 20	< 20	< 20	--	< 20	25	--
Copper	84	< 20	< 20	< 20	26	30	190	36
Lead	36	< 20	< 20	< 20	--	30	70	--
Iron	49	170	390	690	1,100	1,000	6,000	1,100
Manganese	49	30	140	190	220	240	1,500	210
Zinc	81	< 20	< 20	30	36	43	160	28
Aldrin	12	< .002	< .002	< .002	--	< .002	< .002	--
DDE	12	< .002	< .002	< .002	--	< .002	< .002	--
DDT	12	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	12	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	12	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	12	ND	ND	ND	--	ND	ND	--
Malathion	4	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	12	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	12	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	9	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 90.--Statistical summary of selected water-quality properties for Little Red River at Judsonia, Ark., 07076634 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.=streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	0	--	--	--	--	--	--	--
Dissolved oxygen	35	6.9	8.3	9.0	9.0	9.7	10.5	.9
pH	35	6.2	6.9	7.1	7.0	7.3	7.5	.3
Specific conductance	21	39	48	51	52	56	66	7
Total alkalinity	5	16	16	17	18	20	21	2
Total hardness	13	16	18	20	24	28	67	13
Dissolved magnesium	2	1.0	1.0	2.0	2.0	3.0	3.0	1.4
Dissolved sulfate	31	< 1.0	1.0	3.0	3.1	4.0	8.0	1.7
Dissolved chloride	32	2.5	4.0	4.0	4.3	4.5	8.0	.9
Dissolved solids	18	6	35	44	44	47	129	24
Total phosphorus	32	.01	.04	.06	.07	.08	.20	.04
Total nitrite + nitrate	15	.05	.14	.21	.21	.25	.44	.09
Total ammonia	26	< .10	< .10	< .10	.09	.12	.28	.07
BOD	29	.7	1.2	1.5	1.6	1.9	3.4	.7
Fecal coliforms(31616)	31	2	52	110	--	210	470	--
Fecal strep.(31679)	5	40	52	130	--	315	390	--
Turbidity	11	15	20	25	24	25	30	4.5
Arsenic	13	< 10	< 10	< 10	--	< 10	< 10	--
Cadmium	25	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	16	< 20	< 20	< 20	--	< 20	< 20	--
Copper	26	< 20	< 20	< 20	23	30	110	25
Lead	10	< 20	< 20	< 20	--	< 20	70	--
Iron	13	260	500	680	1,100	1,100	4,600	1,200
Manganese	15	30	170	220	210	270	470	110
Zinc	25	< 20	< 20	30	39	46	140	33
Aldrin	4	< .002	< .002	< .002	--	< .002	< .002	--
DDE	4	< .002	< .002	< .002	--	< .002	< .002	--
DDT	4	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	4	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	4	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	4	ND	ND	ND	--	ND	ND	--
Malathion	2	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	4	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	4	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	4	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 91.--Statistical summary of selected water-quality properties for White River at DeValls Bluff, Ark., 07077000

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	92	5,090	9,760	16,200	24,100	28,600	85,900	19,800
Dissolved oxygen	129	5.2	8.3	9.3	9.4	10.4	13.1	1.5
pH	129	7.2	7.8	8.0	8.0	8.2	8.6	.3
Specific conductance	66	134	206	243	237	269	314	42
Total alkalinity	23	63	110	120	121	132	160	23
Total hardness	60	11	106	128	125	142	330	40
Dissolved magnesium	12	8.0	12.2	13.0	13.6	14.7	23.0	3.6
Sodium adsorption ratio	5	.1	.1	.1	.1	.1	.1	.0
Dissolved sulfate	120	< 1.0	4.0	5.0	5.3	6.0	16.0	2.4
Dissolved chloride	122	2.5	5.0	6.0	5.9	7.0	18.0	2.1
Dissolved solids	88	106	137	147	149	161	198	17
Total phosphorus	113	< .01	.05	.07	.09	.10	1.10	.11
Total nitrite + nitrate	71	< .05	.11	.20	.22	.30	.71	.15
Total ammonia	98	< .10	< .10	< .10	.06	< .10	.65	.08
BOD	131	.6	1.6	2.1	2.2	2.7	6.6	.9
Fecal coliforms(31616)	119	1	10	40	--	100	1,600	--
Fecal strep.(31679)	13	2	15	67	--	148	605	--
Turbidity	55	6.8	20	25	31	40	130	19
Arsenic	50	< 10	< 10	< 10	--	< 10	13	--
Cadmium	98	< 20	< 20	< 20	--	< 20	20	--
Chromium	82	< 20	< 20	< 20	--	< 20	30	--
Copper	94	< 20	< 20	< 20	--	< 20	120	--
Lead	57	< 20	< 20	< 20	--	< 20	28	--
Iron	36	190	760	1,200	2,000	2,000	9,000	2,200
Manganese	38	< 27	83	110	200	170	1,100	250
Zinc	80	< 20	< 20	< 20	22	21	180	37
Aldrin	29	< .002	< .002	< .002	--	< .002	< .002	--
DDE	29	< .002	< .002	< .002	--	< .002	< .002	--
DDT	29	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	29	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	29	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	26	ND	ND	ND	--	ND	ND	--
Malathion	9	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	27	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	28	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	14	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 92.--Statistical summary of selected water-quality properties for White River at DeValls Bluff, Ark., 07077000 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	45	5,820	9,270	15,000	17,200	23,200	58,000	9,750
Dissolved oxygen	49	5.2	7.9	8.3	8.3	8.9	10.5	1.0
pH	50	7.2	7.9	8.1	8.0	8.2	8.6	.3
Specific conductance	26	176	244	261	255	278	314	34
Total alkalinity	11	90	115	120	125	139	150	18
Total hardness	20	96	130	137	147	150	330	46
Dissolved magnesium	8	10.0	13.0	13.5	13.4	14.7	15.0	1.6
Dissolved sulfate	49	< 1.0	3.0	5.0	5.2	6.0	16.0	3.1
Dissolved chloride	46	3.4	5.0	6.0	6.3	7.0	18.0	2.4
Dissolved solids	33	106	141	149	150	162	179	14
Total phosphorus	41	< .01	.06	.07	.09	.10	.30	.06
Total nitrite + nitrate	28	< .05	.05	.15	.18	.29	.51	.14
Total ammonia	39	< .10	< .10	< .10	--	< .10	.65	--
BOD	51	.6	1.8	2.4	2.4	3.0	4.3	.8
Fecal coliforms(31616)	41	2	10	64	--	160	1,200	--
Fecal strep.(31679)	4	10	24	76	--	475	605	--
Turbidity	20	10	20	25	26	30	50	10
Arsenic	18	< 10	< 10	< 10	--	< 10	13	--
Cadmium	36	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	31	< 20	< 20	< 20	--	< 20	30	--
Copper	36	< 20	< 20	< 20	--	< 20	120	--
Lead	24	< 20	< 20	< 20	--	< 20	200	--
Iron	15	220	410	1,200	2,800	3,900	9,000	3,200
Manganese	16	54	102	140	330	490	1,100	340
Zinc	31	< 20	< 20	< 20	25	30	170	35
Aldrin	14	< .002	< .002	< .002	--	< .002	< .002	--
DDE	14	< .002	< .002	< .002	--	< .002	< .002	--
DDT	14	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	14	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	14	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	11	ND	ND	ND	--	ND	.01	--
Malathion	4	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	13	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	14	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	5	ND	ND	.01	.02	.04	.04	.02

*Includes only discharges corresponding to a water-quality sample.

Table 93.--Statistical summary of selected water-quality properties for Cache River near Cash, Ark., 07077400

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	72	.0	44	200	630	772	7,500	1,120
Dissolved oxygen	100	2.7	6.5	7.8	8.0	9.9	12.8	2.2
pH	97	6.5	7.2	7.5	7.5	7.9	8.7	.5
Specific conductance	75	29	86	159	194	315	436	119
Total alkalinity	21	16	26	63	81	140	200	62
Total hardness	50	8	42	63	80	115	210	49
Dissolved magnesium	9	1.9	4.0	5.0	7.1	11.0	13.0	3.9
Dissolved sulfate	93	< 1.0	6.0	9.0	10.6	13.5	51.0	7.0
Dissolved chloride	92	3.0	6.5	9.0	10.6	13.0	30.0	5.6
Dissolved solids	56	3	184	212	223	258	472	76
Total phosphorus	90	.01	.22	.30	.36	.43	2.00	.26
Total nitrite + nitrate	43	< .05	.11	.20	.31	.37	2.50	.41
Total ammonia	76	< .10	< .10	.15	.22	.25	2.30	.30
BOD	97	1.1	2.5	3.5	3.7	4.5	10.0	1.7
Fecal coliforms(31616)	90	2	40	94	--	232	4,600	--
Fecal strep.(31679)	13	10	37	150	--	1,375	4,800	--
Turbidity	34	25	60	100	200	180	1,000	250
Arsenic	53	< 10	< 10	< 10	--	< 10	24	--
Cadmium	80	< 20	< 20	< 20	--	< 20	20	--
Chromium	59	< 20	< 20	< 20	--	< 20	30	--
Copper	95	< 20	< 20	< 20	30	28	230	48
Lead	51	< 20	< 20	< 20	21	22	275	42
Iron	55	280	2,400	4,800	6,500	8,300	39,000	7,000
Manganese	58	37	170	300	410	580	1,800	350
Zinc	83	< 20	20	40	56	70	460	63
Aldrin	38	< .002	< .002	< .002	--	< .002	< .002	--
DDE	38	< .002	< .002	< .002	--	< .002	< .002	--
DDT	38	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	38	< .002	< .002	< .002	--	< .002	.020	--
Endrin	38	< .002	< .002	< .002	--	< .002	.002	--
Lindane	38	ND	ND	ND	--	ND	.01	--
Malathion	15	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	37	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	37	< 2	< 2	< 2	--	< 2	2	--
2,4-D	21	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 94.--Statistical summary of selected water-quality properties for Cache River near Cash, Ark., 07077400 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	37	26	135	260	393	465	2,220	432
Dissolved oxygen	37	4.6	6.1	6.8	6.8	7.5	12.2	1.4
pH	35	7.1	7.4	7.8	7.8	8.0	8.7	.4
Specific conductance	28	79	151	299	259	338	436	115
Total alkalinity	6	34	66	129	125	185	200	63
Total hardness	14	32	82	106	114	150	210	51
Dissolved magnesium	3	4.0	4.0	9.0	8.7	13.0	13.0	4.5
Dissolved sulfate	34	< 1.0	5.0	7.0	9.7	12.0	51.0	8.6
Dissolved chloride	33	4.5	8.0	12.0	12.4	16.3	25.0	23.7
Dissolved solids	18	154	191	219	221	252	292	39
Total phosphorus	30	.09	.18	.24	.26	.32	.58	.11
Total nitrite + nitrate	15	< .05	.10	.16	.27	.45	.88	.29
Total ammonia	27	< .10	< .10	< .10	.14	.19	.55	.15
BOD	34	1.1	2.1	3.3	3.7	5.2	10.0	2.1
Fecal coliforms(31616)	35	16	60	130	--	270	3,600	--
Fecal strep.(31679)	5	20	30	150	--	1925	3,100	--
Turbidity	12	40	56	68	82	94	210	47
Arsenic	17	< 10	< 10	< 10	--	< 10	12	--
Cadmium	29	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	21	< 20	< 20	< 20	--	< 20	< 20	--
Copper	36	< 20	< 20	< 20	29	28	169	45
Lead	16	< 20	< 20	< 20	33	26	275	68
Iron	19	280	1,500	3,500	5,200	5,400	30,000	6,600
Manganese	20	37	230	320	420	570	1,600	360
Zinc	34	< 20	< 20	26	53	73	220	58
Aldrin	22	< .002	< .002	< .002	--	< .002	< .002	--
DDE	22	.002	< .002	< .002	--	< .002	< .002	--
DDT	22	.004	< .004	< .004	--	< .004	< .004	--
Dieldrin	22	< .002	< .002	< .002	--	< .002	.020	--
Endrin	22	.002	< .002	< .002	--	< .002	.002	--
Lindane	22	ND	ND	ND	--	ND	ND	--
Malathion	8	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	22	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	22	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	11	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 95.--Statistical summary of selected water-quality properties for Cache River at Patterson, Ark., 07077500

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, BTM=bottom material, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter), pesticides in bottom material (total in micrograms per kilogram), and sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	36	33	320	830	1,370	1,230	6,300	1,400
Dissolved oxygen	90	0.0	5.3	6.9	7.1	8.5	13.6	2.5
pH	99	6.4	7.0	7.3	7.3	7.6	8.2	.4
Specific conductance	99	44	84	132	169	240	449	108
Total alkalinity	99	7	22	40	63	94	205	53
Total hardness	98	15	26	43	62	88	180	45
Dissolved calcium	98	3.7	6.3	10.5	15.5	22.3	46.0	11.7
Dissolved magnesium	99	1.4	2.5	3.7	5.5	7.5	16.0	3.8
Dissolved sodium	99	2.8	5.8	8.8	9.8	12.0	27.0	5.2
Sodium adsorption ratio	98	.3	.4	.6	.6	.7	1	.2
Dissolved potassium	99	.4	2.2	2.9	3.0	3.7	7.6	1.3
Dissolved sulfate	99	< 5.0	7.3	10.0	10.2	13.0	26.0	4.1
Dissolved chloride	99	1.7	5.1	7.3	7.5	9.5	20.0	3.4
Dissolved fluoride	99	< .1	.1	.1	.2	.2	.4	.1
Dissolved silica	75	2.7	7.1	11.0	11.6	15.0	28.0	5.6
Dissolved solids	71	41	75	104	114	140	242	52
Total phosphorus	99	.12	.18	.22	.26	.31	.59	.10
Total nitrogen	97	.40	1.10	1.50	1.59	2.00	3.40	.70
Total organic nitrogen	41	.11	.76	1.10	1.17	1.35	3.00	.64
Total nitrite + nitrate	99	< .10	.17	.33	.37	.50	1.10	.23
Total ammonia	41	< .01	.10	.15	.16	.19	.50	.09
BOD	96	.8	2.1	2.5	2.7	3.2	6.4	1.0
Fecal coliforms(31625)	73	10	79	130	--	250	1,700	--
Fecal strep.(31673)	62	3	200	320	--	682	14,000	--
Turbidity	28	17	36	94	130	220	330	110
Arsenic	13	1	2	2	3	4	7	2
Cadmium	13	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	13	< 20	< 20	< 20	--	< 20	30	--
Copper	13	< 20	< 20	< 20	--	< 20	23	--
Lead	8	3	3	5	10	12	37	11
Iron	13	700	1,000	2,200	3,100	4,000	10,000	3,000
Manganese	13	70	160	310	440	670	1,300	390
Zinc	13	< 20	< 20	30	50	40	360	95

Table 95.--Statistical summary of selected water-quality properties for Cache River at Patterson, Ark., 07077500--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Aldrin	7	< .01	< .01	< .01	--	< .01	< .01	--
Aldrin in BTM	7	< .1	< .1	< .1	--	< .1	.2	--
Chlordane	5	< .1	< .1	< .1	--	< .1	< .1	--
Chlordane in BTM	7	< 1.0	< 1.0	< 1.0	--	< 1.0	1.0	--
DDD	7	< .01	< .01	< .01	--	< .01	< .01	--
DDD in BTM	7	.4	1.0	2.2	5.7	9.0	19	6.6
DDE	7	< .01	< .01	< .01	--	< .01	< .01	--
DDE in BTM	7	.6	1.7	2.5	5.7	9.2	18	6.2
DDT	7	< .01	< .01	< .01	--	< .01	< .01	--
DDT in BTM	7	< .1	.2	4.1	4.9	7.6	17	6.1
Diazinon	5	< .01	< .01	< .01	--	< .01	< .01	--
Diazinon in BTM	5	< .1	< .1	< .1	--	< .1	< .1	--
Dieldrin	6	< .01	< .01	< .01	--	< .01	< .01	--
Dieldrin in BTM	7	.1	.2	.4	.8	1.2	2.7	.9
Endosulfan	4	< .01	< .01	< .01	--	< .01	< .01	--
Endosulfan in BTM	0	--	--	--	--	--	--	--
Endrin	7	< .01	< .01	< .01	--	< .01	< .01	--
Endrin in BTM	7	< .1	< .1	< .1	.2	.3	.3	.1
Ethion	5	< .01	< .01	< .01	--	< .01	< .01	--
Ethion in BTM	5	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor	7	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor in BTM	7	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor epoxide	7	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor epoxide in BTM	7	< .1	< .1	< .1	--	< .1	< .1	--
Lindane	5	< .01	< .01	< .01	--	< .01	< .01	--
Lindane in BTM	7	< .1	< .1	< .1	--	< .1	< .1	--
Malathion	5	< .01	< .01	< .01	--	< .01	< .01	--
Malathion in BTM	5	< .1	< .1	< .1	--	< .1	< .1	--
Methoxychlor	5	< .01	< .01	< .01	--	< .01	< .01	--
Methoxychlor in BTM	4	< .1	< .1	< .1	--	< .1	< .1	--
Methyl parathion	7	< .01	< .01	< .01	--	< .01	< .01	--
Methyl parathion in BTM	5	< .1	< .1	< .1	--	< .1	< .1	--
Methyl trithion	5	< .01	< .01	< .01	--	< .01	< .01	--
Methyl trithion in BTM	5	< .1	< .1	< .1	--	< .1	< .1	--
Mirex	3	< .01	< .01	< .01	--	< .01	< .01	--
Mirex in BTM	0	--	--	--	--	--	--	--
Parathion	5	< .01	< .01	< .01	--	< .01	< .01	--
Parathion in BTM	5	< .1	< .1	< .1	--	< .1	< .1	--
Perthane	2	< .1	< .1	< .1	--	< .1	< .1	--
Silvex	6	< .01	< .01	< .01	--	.03	.08	--
Toxaphene	7	< 1	< 1	< 1	--	< 1	< 1	--
Toxaphene in BTM	7	<10	<10	<10	--	<10	26	--
Trithion	5	< .01	< .01	< .01	--	< .01	< .01	--
Trithion in BTM	5	< .1	< .1	< .1	--	< .1	< .1	--
2,4-D	6	< .01	.01	.02	.02	.05	.07	.03
2,4,5-T	6	.02	.02	.06	.06	.08	.10	.03
Suspended sediment concentration finer than	17	30	61	88	109	170	220	62
0.062 mm (sd)	16	70	78	93	88	97	98	10

*Includes only discharges corresponding to a water-quality sample.

Table 96.--Statistical summary of selected water-quality properties for Cache River at Patterson, Ark., 07077500 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, BTM=bottom material, ND=not detected, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 millimeters), turbidity (nephelometric turbidity units), trace metals and pesticides (total or total recoverable in micrograms per liter) pesticides in bottom material (total in micrograms per kilogram), sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	12	199	352	643	934	1,160	3,770	990
Dissolved oxygen	28	1.5	4.6	5.1	5.0	5.7	6.5	1.0
pH	30	6.8	7.4	7.6	7.6	7.8	8.1	.3
Specific conductance	30	85	165	207	247	346	434	104
Total alkalinity	30	20	61	83	101	146	205	53
Total hardness	30	25	60	77	94	140	180	45
Dissolved calcium	30	6.1	15.0	19.5	23.6	35.0	46.0	11.6
Dissolved magnesium	30	2.4	5.5	6.9	8.3	11.3	16.0	3.9
Dissolved sodium	30	5.0	9.0	12.5	13.6	18.0	24.0	5.0
Sodium adsorption ratio	30	.4	.6	.6	.6	.7	.9	.1
Dissolved potassium	30	.8	2.4	2.7	2.8	3.2	4.5	.7
Dissolved sulfate	30	< 5.0	7.9	10.0	10.6	12.3	26.0	4.6
Dissolved chloride	30	3.4	5.8	8.1	8.0	9.8	13.0	2.5
Dissolved fluoride	30	< .1	.2	.2	.2	.2	.4	.1
Dissolved silica	22	7.3	12.0	15.0	15.3	19.0	22.0	4.3
Dissolved solids	21	67	115	139	153	208	229	50
Total phosphorus	30	.12	.16	.20	.23	.26	.50	.10
Total nitrogen	30	.40	1.00	1.60	1.60	2.00	3.40	.71
Total organic nitrogen	13	.11	.65	1.00	.97	1.25	1.80	.43
Total nitrite + nitrate	30	.10	.22	.50	.50	.69	1.10	.27
Total ammonia	13	< .01	.07	.11	.13	.14	.50	.12
BOD	30	1.1	2.2	2.4	2.9	3.2	6.4	1.3
Fecal coliforms(31625)	21	11	93	180	--	315	670	--
Fecal strep.(31673)	18	70	230	400	--	617	14,000	--
Turbidity	7	29	34	58	57	76	100	26
Arsenic	2	4	4	6	6	7	7	2
Cadmium	2	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	2	< 20	< 20	< 20	--	30	30	--
Copper	2	< 20	< 20	< 20	--	23	23	--
Lead	0	--	--	--	--	--	--	--
Iron	2	2,200	2,200	6,100	6,100	10,000	10,000	5,500
Manganese	2	270	270	340	340	400	400	92
Zinc	2	30	30	195	195	360	360	233

Table 96.--Statistical summary of selected water-quality properties for Cache River at Patterson, Ark., 07077500 (June through September)--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Aldrin	2	< .01	< .01	< .01	--	< .01	< .01	--
Aldrin in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Chlordane	1	< .1	< .1	< .1	--	< .1	< .1	--
Chlordane in BTM	1	<1.0	<1.0	<1.0	--	<1.0	<1.0	--
DDD	2	< .01	< .01	< .01	--	< .01	< .01	--
DDD in BTM	1	1.0	1.0	1.0	1.0	1.0	1.0	.0
DDE	2	< .01	< .01	< .01	--	< .01	< .01	--
DDE in BTM	1	2.1	2.1	2.1	2.1	2.1	2.1	.0
DDT	2	< .01	< .01	< .01	--	< .01	< .01	--
DDT in BTM	1	4.9	4.9	4.9	4.9	4.9	4.9	.0
Diazinon	1	< .01	< .01	< .01	--	< .01	< .01	--
Diazinon in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Dieldrin	1	< .01	< .01	< .01	--	< .01	< .01	--
Dieldrin in BTM	1	.2	.2	.2	.2	.2	.2	.0
Endosulfan	1	< .01	< .01	< .01	--	< .01	< .01	--
Endosulfan in BTM	0	--	--	--	--	--	--	--
Endrin	2	< .01	< .01	< .01	--	< .01	< .01	--
Endrin in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Ethion	1	< .01	< .01	< .01	--	< .01	< .01	--
Ethion in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor	2	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor epoxide	2	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor epoxide in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Lindane	1	< .01	< .01	< .01	--	< .01	< .01	--
Lindane in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Malathion	1	< .01	< .01	< .01	--	< .01	< .01	--
Malathion in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Methoxychlor	1	< .01	< .01	< .01	--	< .01	< .01	--
Methoxychlor in BTM	0	--	--	--	--	--	--	--
Methyl parathion	2	< .01	< .01	< .01	--	< .01	< .01	--
Methyl parathion in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Methyl trithion	1	< .01	< .01	< .01	--	< .01	< .01	--
Methyl trithion in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Mirex	0	--	--	--	--	--	--	--
Mirex in BTM	0	--	--	--	--	--	--	--
Parathion	1	< .01	< .01	< .01	--	< .01	< .01	--
Parathion in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Perthane	0	--	--	--	--	--	--	--
Silvex	1	< .01	< .01	< .01	--	< .01	< .01	--
Toxaphene	2	< 1	< 1	< 1	--	< 1	< 1	--
Toxaphene in BTM	1	<10	<10	<10	--	<10	<10	--
Trithion	1	< .01	< .01	< .01	--	< .01	< .01	--
Trithion in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
2,4-D	1	< .01	< .01	< .01	--	< .01	< .01	--
2,4,5-T	1	.08	.08	.08	.08	.08	.08	.00
Suspended sediment concentration	2	61	61	120	120	179	179	83
finer than 0.062 mm (sd)	2	95	95	95	95	95	95	0

*Includes only discharges corresponding to a water-quality sample.

Table 97.--Statistical summary of selected water-quality properties for Cache River at Brasfield, Ark., 07077600

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	0	--	--	--	--	--	--	--
Dissolved oxygen	107	3.9	5.6	6.9	7.2	8.6	12.7	2.1
pH	107	6.6	7.0	7.3	7.3	7.6	8.1	0.4
Specific conductance	77	51	90	142	167	232	435	92
Total alkalinity	25	5	29	55	67	110	164	43
Total hardness	50	16	41	62	72	100	190	39
Dissolved magnesium	12	1.0	7.0	8.7	9.3	13.6	17.0	4.7
Sodium adsorption ratio	5	.5	.6	.7	.6	.7	.7	.1
Dissolved sulfate	98	< 1.0	4.0	6.0	7.1	9.0	22.0	4.2
Dissolved chloride	99	3.5	7.5	12.0	13.2	16.0	55.0	8.5
Dissolved solids	65	97	155	182	185	210	302	43
Total phosphorus	95	.02	.13	.20	.22	.31	.45	.10
Total nitrite + nitrate	48	< .05	.13	.22	.28	.37	1.20	.22
Total ammonia	79	< .10	< .10	.13	.14	.20	.51	.09
BOD	107	.9	1.9	2.5	2.9	3.3	12.0	1.7
Fecal coliforms(31616)	95	2	20	67	--	230	3,900	--
Fecal strep.(31679)	16	20	70	290	--	487	7,800	--
Turbidity	32	10	32	75	93	150	200	61
Arsenic	55	< 10	< 10	< 10	--	< 10	15	--
Cadmium	85	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	62	< 20	< 20	< 20	--	< 20	50	--
Copper	93	< 20	< 20	< 20	--	< 20	108	--
Lead	43	< 20	< 20	< 20	--	< 20	200	--
Iron	57	290	1,700	3,700	4,000	5,700	9,300	2,400
Manganese	61	< 27	120	210	310	460	980	260
Zinc	90	< 20	< 20	< 20	25	30	230	37
Aldrin	46	< .002	< .002	< .002	--	< .002	< .002	--
DDE	46	< .002	< .002	< .002	--	< .002	.010	--
DDT	46	< .004	< .004	< .004	--	< .004	.010	--
Dieldrin	46	< .002	< .002	< .002	--	< .002	.004	--
Endrin	46	< .002	< .002	< .002	--	< .002	.010	--
Lindane	43	ND	ND	ND	--	ND	ND	--
Malathion	20	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	44	< .04	< .04	< .04	--	< .04	.11	--
Toxaphene	43	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	25	ND	ND	ND	--	ND	.04	--

*Includes only discharges corresponding to a water-quality sample.

Table 98.--Statistical summary of selected water-quality properties for Bayou DeView near Gibson, Ark., 07077660

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	58	.0	5.2	17	83	58	1,900	255
Dissolved oxygen	116	.7	5.7	8.5	8.0	10.2	15.3	3.3
pH	115	6.4	7.1	7.4	7.5	7.8	8.8	.5
Specific conductance	59	51	117	190	236	352	578	146
Total alkalinity	19	15	34	68	75	107	150	44
Total hardness	60	13	39	55	75	94	580	76
Dissolved magnesium	8	2.4	3.2	5.0	6.4	8.7	15.0	4.2
Dissolved sulfate	110	< 1.0	11.7	16.0	19.2	22.3	230.0	22.0
Dissolved chloride	112	2.5	10.0	17.0	20.8	28.8	71.0	13.7
Dissolved solids	76	81	149	202	210	254	375	70
Total phosphorus	106	.08	.48	.97	1.60	2.00	10.00	1.69
Total nitrite + nitrate	64	< .05	.34	.68	.94	1.08	4.10	.91
Total ammonia	93	< .10	< .10	.18	1.65	.65	37.00	5.17
BOD	110	1.0	3.1	4.9	9.1	9.0	157.8	17.5
Fecal coliforms(31616)	106	2	86	395	--	2,075	122,000	--
Fecal strep.(31679)	7	10	20	100	--	180	860	--
Turbidity	55	6.4	20	45	67	80	550	85
Arsenic	46	< 10	< 10	< 10	--	< 10	36	--
Cadmium	103	< 20	< 20	< 20	--	< 20	30	--
Chromium	76	< 20	< 20	< 20	--	< 20	< 20	--
Copper	119	< 20	< 20	< 20	25	20	250	43
Lead	57	< 20	< 20	< 20	--	< 20	170	--
Iron	57	650	2,400	3,600	4,700	6,000	20,000	3,700
Manganese	60	< 27	250	360	480	680	1,500	350
Zinc	102	< 20	20	30	51	60	420	67
Aldrin	30	< .002	< .002	< .002	--	< .002	< .002	--
DDE	30	< .002	< .002	< .002	--	< .002	< .002	--
DDT	30	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	30	< .002	< .002	< .002	--	< .002	.010	--
Endrin	30	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	30	ND	ND	ND	--	ND	ND	--
Malathion	8	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	30	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	30	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	11	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 99.--Statistical summary of selected water-quality properties for Bayou Deview near Gibson, Ark., 07077660 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	30	.0	3.1	12	40	53	276	69
Dissolved oxygen	41	.7	4.1	6.3	6.3	8.5	12.3	2.8
pH	39	6.7	7.4	7.8	7.7	8.0	8.8	.4
Specific conductance	21	100	156	343	324	438	578	154
Total alkalinity	5	107	119	140	135	149	150	18
Total hardness	17	42	75	94	130	130	580	123
Dissolved magnesium	2	9.0	9.0	12.0	12.0	15.0	15.0	4.2
Dissolved sulfate	39	< 1.0	13.0	19.0	20.9	28.0	48.0	10.1
Dissolved chloride	39	5.5	17.0	27.0	26.9	36.0	58.0	12.7
Dissolved solids	26	145	223	249	254	291	375	61
Total phosphorus	34	.08	.49	.97	1.51	2.35	4.70	1.43
Total nitrite + nitrate	22	< .05	.05	.62	.76	1.05	3.10	.84
Total ammonia	32	< .10	< .10	.11	2.31	.94	37.00	6.89
BOD	36	1.0	2.7	4.5	7.6	11.0	30.0	7.1
Fecal coliforms(31616)	36	2	92	260	--	2,525	122,000	--
Fecal strep.(31679)	3	140	140	180	--	860	860	--
Turbidity	20	6.4	20	25	53	38	550	118
Arsenic	15	< 10	< 10	< 10	--	< 10	36	--
Cadmium	35	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	27	< 20	< 20	< 20	--	< 20	< 20	--
Copper	42	< 20	< 20	< 20	23	22	166	33
Lead	22	< 20	< 20	< 20	--	< 20	90	--
Iron	17	650	2,200	2,900	4,600	7,400	11,000	3,300
Manganese	18	86	230	440	610	1,100	1,500	450
Zinc	38	< 20	< 20	30	40	60	150	35
Aldrin	19	< .002	< .002	< .002	--	< .002	< .002	--
DDE	19	< .002	< .002	< .002	--	< .002	< .002	--
DDT	19	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	19	< .002	< .002	< .002	--	< .002	.010	--
Endrin	19	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	19	ND	ND	ND	--	ND	ND	--
Malathion	4	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	19	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	19	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	6	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 100.--Statistical summary of selected water-quality properties for Bayou DeView at Morton, Ark., 07077700

[N=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.=streptococci, BTM=bottom material, ND=not detected, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), trace metals and pesticides (total or total recoverable in micrograms per liter) and pesticides in bottom material (total in micrograms per kilogram). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	36	0.0	83	260	558	602	2,530	666
Dissolved oxygen	89	1.6	4.4	6.1	6.4	8.4	11.9	2.6
pH	99	6.2	7.0	7.2	7.3	7.6	8.1	.4
Specific conductance	99	49	95	146	187	255	463	115
Total alkalinity	98	7	26	43	66	91	210	54
Total hardness	99	15	30	44	68	95	200	50
Dissolved calcium	99	4.2	7.6	11.0	17.5	24.0	52.0	13.1
Dissolved magnesium	99	1.1	2.7	3.9	5.8	8.2	17.0	4.1
Dissolved sodium	98	3.3	6.6	9.4	10.7	14.0	26.0	5.3
Sodium adsorption ratio	98	.2	.5	.6	.6	.7	1	.2
Dissolved potassium	99	.5	2.3	3.1	3.6	4.5	13.0	2.0
Dissolved sulfate	99	< 5.0	9.0	13.0	13.3	17.0	34.0	5.6
Dissolved chloride	99	2.0	5.8	8.7	9.6	12.0	28.0	4.9
Dissolved fluoride	99	< .1	.1	.2	.2	.2	.5	.1
Dissolved silica	75	3.4	6.6	9.8	11.0	14.0	26.0	5.3
Dissolved solids	68	49	84	119	129	164	275	57
Total phosphorus	99	.03	.18	.24	.27	.34	.94	.13
Total nitrogen	98	.69	1.28	1.80	1.86	2.30	4.10	.75
Total organic nitrogen	41	.31	.83	1.20	1.25	1.70	3.30	.58
Total nitrite + nitrate	99	< .10	.15	.30	.35	.47	1.00	.25
Total ammonia	41	.02	.08	.18	.23	.28	.91	.19
BOD	96	.8	3.0	3.7	3.9	4.5	8.6	1.5
Fecal coliforms(31625)	74	4	53	130	--	372	3,900	--
Fecal strep.(31673)	60	5	112	320	--	1,223	16,000	--
Turbidity	28	17	35	93	120	170	430	110
Arsenic	12	2	2	2	2	3	5	1
Cadmium	13	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	13	< 20	< 20	< 20	--	< 20	20	--
Copper	13	< 20	< 20	< 20	--	< 20	29	--
Lead	8	4	5	6	6	7	9	2
Iron	13	850	1,200	1,800	2,600	4,200	7,200	2,100
Manganese	13	160	220	440	480	670	1,200	290
Zinc	13	< 20	20	30	28	30	50	12
Aldrin	5	< .01	< .01	< .01	--	< .01	< .01	--
Aldrin in BTM	4	< .1	< .1	.2	--	.8	.9	--

Table 100.--Statistical summary of selected water-quality properties for Bayou DeView at Morton, Ark., 07077700--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Chlordane	5	< .1	< .1	< .1	--	< .1	< .1	--
Chlordane in BTM	3	< 1.0	< 1.0	< 1.0	--	9.0	9.0	5.2
DDD	5	< .01	< .01	< .01	--	< .01	< .01	--
DDD in BTM	4	2.8	4.3	9.3	9.1	14	15	5.0
DDE	5	< .01	< .01	< .01	--	< .01	< .01	--
DDE in BTM	4	2.1	2.9	7.6	9.1	17	19	7.3
DDT	5	< .01	< .01	< .01	--	< .01	< .01	--
DDT in BTM	4	.4	1.4	5.6	5.1	8.3	8.9	3.6
Diazinon	5	< .01	< .01	< .01	--	< .01	< .01	--
Diazinon in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Dieldrin	5	< .01	< .01	.01	--	.01	.01	--
Dieldrin in BTM	4	.4	1.6	5.6	4.6	6.6	6.8	2.8
Endosulfan	2	< .01	< .01	< .01	--	< .01	< .01	--
Endosulfan in BTM	0	--	--	--	--	--	--	--
Endrin	5	< .01	< .01	< .01	--	< .01	< .01	--
Endrin in BTM	4	< .1	< .1	< .1	--	.2	.2	--
Ethion	5	< .01	< .01	< .01	--	< .01	< .01	--
Ethion in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor	5	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor in BTM	4	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor epoxide	5	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor epoxide in BTM	4	< .1	< .1	< .1	--	< .1	< .1	--
Lindane	5	< .01	< .01	< .01	--	< .01	< .01	--
Lindane in BTM	4	< .1	< .1	< .1	--	< .1	< .1	--
Malathion	5	< .01	< .01	< .01	--	< .01	< .01	--
Malathion in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Methoxychlor	3	< .01	< .01	< .01	--	< .01	< .01	--
Methoxychlor in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Methyl parathion	3	< .01	< .01	< .01	--	< .01	< .01	--
Methyl parathion in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Methyl trithion	5	< .01	< .01	< .01	--	< .01	< .01	--
Methyl trithion in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Mirex	3	< .01	< .01	< .01	--	< .01	< .01	--
Mirex in BTM	0	--	--	--	--	--	--	--
Parathion	5	< .01	< .01	< .01	--	< .01	< .01	--
Parathion in BTM	3	< .1	< .1	< .1	--	< .1	< .1	--
Perthane	2	< .1	< .1	< .1	--	< .1	< .1	--
Silvex	6	< .01	< .01	< .01	--	.01	.02	--
Toxaphene	5	< 1	< 1	< 1	--	< 1	< 1	--
Toxaphene in BTM	4	<10	<10	<10	--	30	40	--
Trithion	5	< .01	< .01	< .01	--	< .01	< .01	--
Trithion in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
2,4-D	6	< .01	< .01	.05	.04	.06	.08	.03
2,4,5-T	6	.03	.04	.08	.11	.17	.27	.09
Suspended sediment concentration	17	18	50	101	115	156	289	79
finer than 0.062 mm (sd)	16	78	87	94	92	97	100	6

*Includes only discharges corresponding to a water-quality sample.

Table 101.--Statistical summary of selected water-quality properties for Bayou Deview at Morton, Ark., 07077700 (June through September)

[Number=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.=streptococci, BTM=bottom material, ND=not detected, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), trace metals and pesticides (total or total recoverable in micrograms per liter), and pesticides in bottom material (total in micrograms per kilogram). Alkalinity and hardness are reported as $CaCO_3$, sufate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	12	.0	91	214	386	401	1,670	511
Dissolved oxygen	28	1.6	3.3	4.4	4.2	5.0	7.0	1.1
pH	30	6.9	7.4	7.6	7.6	7.8	8.1	.3
Specific conductance	30	114	215	294	290	366	463	106
Total alkalinity	30	25	76	110	115	161	210	55
Total hardness	30	38	65	105	113	150	200	51
Dissolved calcium	30	8.0	17.0	27.0	29.4	40.3	52.0	13.7
Dissolved magnesium	30	3.2	6.6	9.0	9.5	12.3	17.0	4.1
Dissolved sodium	30	6.6	11.0	14.0	14.6	18.2	26.0	5.0
Sodium adsorption ratio	30	.4	.6	.6	.6	.7	.8	.1
Dissolved potassium	30	1.1	2.3	2.9	2.9	3.2	5.2	.9
Dissolved sulfate	30	< 5.0	13.0	15.0	16.3	20.3	34.0	6.3
Dissolved chloride	30	4.3	7.7	9.7	10.4	13.0	20.0	3.8
Dissolved fluoride	30	< .1	.2	.2	.2	.3	.5	.1
Dissolved silica	22	8.0	12.0	17.5	16.4	21.0	26.0	5.3
Dissolved solids	22	64	148	174	180	219	275	57
Total phosphorus	30	.03	.15	.18	.21	.23	.56	.11
Total nitrogen	30	.73	1.35	1.90	1.86	2.33	3.10	.68
Total organic nitrogen	13	.67	.83	1.20	1.27	1.70	2.00	.44
Total nitrite + nitrate	30	< .10	.19	.43	.46	.66	1.00	.28
Total ammonia	13	.03	.09	.16	.24	.37	.70	.19
BOD	29	1.6	3.1	3.9	4.2	5.0	7.5	1.5
Fecal coliforms(31625)	22	11	80	155	--	375	1,900	--
Fecal strep.(31673)	17	70	175	320	--	745	6,700	--
Turbidity	7	22	36	43	58	90	100	30.0
Arsenic	1	5	5	5	5	5	5	--
Cadmium	2	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	2	< 20	< 20	< 20	--	20	20	--
Copper	2	< 20	< 20	< 20	--	< 20	< 20	--
Lead	0	--	--	--	--	--	--	--
Iron	2	1,600	1,600	4,400	4,400	7,200	7,200	4,000
Manganese	2	250	250	300	300	350	350	71
Zinc	2	30	30	40	40	50	50	14
Aldrin	1	< .01	< .01	< .01	--	< .01	< .01	--
Aldrin in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--

Table 101.--Statistical summary of selected water-quality properties for Bayou Deview at Morton, Ark., 07077700 (June through September)--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Chlordane	1	< .1	< .1	< .1	--	< .1	< .1	--
Chlordane in BTM	0	--	--	--	--	--	--	--
DDD	1	< .01	< .01	< .01	--	< .01	< .01	--
DDD in BTM	1	9.7	9.7	9.7	9.7	9.7	9.7	0
DDE	1	< .01	< .01	< .01	--	< .01	< .01	--
DDE in BTM	1	5.3	5.3	5.3	5.3	5.3	5.3	0
DDT	1	< .01	< .01	< .01	--	< .01	< .01	--
DDT in BTM	1	6.6	6.6	6.6	6.6	6.6	6.6	0
Diazinon	1	< .01	< .01	< .01	--	< .01	< .01	--
Diazinon in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Dieldrin	1	.01	.01	.01	.01	.01	.01	0
Dieldrin in BTM	1	5.1	5.1	5.1	5.1	5.1	5.1	0
Endosulfan	0	--	--	--	--	--	--	--
Endosulfan in BTM	0	--	--	--	--	--	--	--
Endrin	1	< .01	< .01	< .01	--	< .01	< .01	--
Endrin in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Ethion	1	< .01	< .01	< .01	--	< .01	< .01	--
Ethion in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor	1	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor epoxide	1	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor epoxide in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Lindane	1	< .01	< .01	< .01	--	< .01	< .01	--
Lindane in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Malathion	1	< .01	< .01	< .01	--	< .01	< .01	--
Malathion in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Methoxychlor	0	--	--	--	--	--	--	--
Methoxychlor in BTM	0	--	--	--	--	--	--	--
Methyl parathion	1	< .01	< .01	< .01	--	< .01	< .01	--
Methyl parathion in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Methyl trithion	1	< .01	< .01	< .01	--	< .01	< .01	--
Methyl trithion in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Mirex	0	--	--	--	--	--	--	--
Mirex in BTM	0	--	--	--	--	--	--	--
Parathion	1	< .01	< .01	< .01	--	< .01	< .01	--
Parathion in BTM	1	< .1	< .1	< .1	--	< .1	< .1	--
Perthane	0	--	--	--	--	--	--	--
Silvex	1	< .01	< .01	< .01	--	< .01	< .01	--
Toxaphene	1	< 1	< 1	< 1	--	< 1	< 1	--
Toxaphene in BTM	1	< 10	<10	<10	--	<10	<10	--
Trithion	1	< .01	< .01	< .01	--	< .01	< .01	--
Trithion in BTM	1	< 0.1	< .1	< .1	--	< .1	< .1	--
2,4-D	1	.05	.05	.05	.05	.05	.05	0
2,4,5-T	1	.27	.27	.27	.27	.27	.27	.00
Suspended sediment concentration	2	74	74	163	163	251	251	125
finer than 0.062 mm (sd)	2	96	96	96	96	97	97	1

*Includes only discharges corresponding to a water-quality sample.

Table 102.--Statistical summary of selected water-quality properties for Bayou DeView near Brasfield, Ark., 07077750

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	0	--	--	--	--	--	--	--
Dissolved oxygen	102	1.8	5.2	6.1	6.5	7.9	13.1	2.4
pH	102	6.6	7.0	7.2	7.2	7.4	8.2	.3
Specific conductance	62	55	84	131	145	187	347	69
Total alkalinity	19	19	25	45	51	70	139	30
Total hardness	45	21	36	50	59	69	160	30
Dissolved magnesium	7	3.0	6.0	8.0	9.3	14.0	16.0	4.6
Dissolved sulfate	93	< 1.0	5.0	7.0	8.5	10.0	29.0	5.5
Dissolved chloride	93	4.0	6.5	10.0	10.3	13.2	22.0	4.2
Dissolved solids	60	109	131	154	163	192	286	38
Total phosphorus	90	.03	.13	.21	.21	.28	.46	.10
Total nitrite + nitrate	43	< .05	.05	.09	.14	.18	.52	.12
Total ammonia	74	< .10	< .10	.10	.12	.14	.47	.08
BOD	102	.4	1.2	1.5	2.0	2.2	12.0	1.7
Fecal coliforms(31616)	98	2	22	62	--	110	1,800	--
Fecal strep.(31679)	14	5	57	97	--	255	2,900	--
Turbidity	33	8.4	25	50	61	98	180	42
Arsenic	46	< 10	< 10	< 10	--	< 10	33	--
Cadmium	85	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	57	< 20	< 20	< 20	--	< 20	30	--
Copper	92	< 20	< 20	< 20	20	20	230	36
Lead	48	< 20	< 20	< 20	36	30	878	126
Iron	57	550	1,800	3,700	3,800	5,200	9,600	2,300
Manganese	60	< 27	110	180	390	250	8,000	1,100
Zinc	89	< 20	< 20	30	51	60	290	57
Aldrin	31	< .002	< .002	< .002	--	< .002	< .002	--
DDE	31	< .002	< .002	< .002	--	< .002	.010	--
DDT	31	< .004	< .004	< .004	--	< .004	.010	--
Dieldrin	31	< .002	< .002	< .002	--	< .002	.003	--
Endrin	31	< .002	< .002	< .002	--	< .002	.004	--
Lindane	31	ND	ND	ND	--	ND	ND	--
Malathion	5	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	30	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	30	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	10	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 103.--Statistical summary of selected water-quality properties for White River at Clarendon, Ark., 07077800

[N=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.=streptococci, BTM=bottom material, ND=not detected, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), trace metals and pesticides (total or total recoverable in micrograms per liter), pesticides in bottom material (total in micrograms per kilogram), sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	100	84	10,600	17,800	25,100	33,500	102,000	21,900
Dissolved oxygen	97	5.5	7.5	8.4	8.8	10.1	12.8	1.7
pH	98	6.9	7.6	7.9	7.8	8.1	8.8	.4
Specific conductance	99	112	203	238	236	278	326	48
Total alkalinity	98	40	91	110	109	128	168	25
Total hardness	99	48	97	120	115	140	170	25
Dissolved calcium	99	12.0	23.0	27.0	27.6	32.0	39.0	5.8
Dissolved magnesium	99	4.3	9.5	11.0	11.2	13.0	18.0	2.7
Dissolved sodium	98	1.6	2.9	3.6	3.9	4.3	19.0	2.1
Sodium adsorption ratio	98	.1	.1	.1	.2	.2	.8	.1
Dissolved potassium	99	.4	1.4	1.6	1.6	1.8	3.1	.4
Dissolved sulfate	98	< 5.0	5.6	7.1	7.4	9.0	24.0	2.7
Dissolved chloride	98	2.4	3.7	4.7	5.1	5.6	28.0	2.9
Dissolved fluoride	98	< .1	.1	.1	.1	.1	.3	.1
Dissolved silica	99	.6	5.0	5.8	5.9	6.7	21.0	2.0
Dissolved solids	99	68	118	131	135	153	196	26
Total phosphorus	99	< .01	.06	.09	.11	.11	1.80	.18
Total nitrogen	75	.16	.58	.77	.90	1.00	6.20	.77
Total organic nitrogen	45	.14	.46	.59	.72	.82	2.60	.50
Total nitrite + nitrate	80	< .10	.11	.20	.26	.27	5.10	.56
Total ammonia	49	< .01	.01	.03	.04	.06	.14	.03
Fecal coliforms(31625)	72	2	11	33	--	91	730	--
Fecal strep.(31673)	63	0	40	120	--	460	3,100	--
Turbidity	55	1.0	17	26	33	41	100	25
Arsenic	92	< 1	1	1	1	2	3	1
Cadmium	38	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	38	< 20	< 20	< 20	--	< 20	40	--
Copper	38	< 20	< 20	< 20	17	21	100	18
Lead	18	2	7	13	17	18	98	21
Iron	38	440	990	1,600	2,000	2,400	6,500	1,400
Manganese	38	60	120	140	150	170	370	64
Zinc	36	< 20	20	30	45	57	150	35
Aldrin	22	< .01	< .01	< .01	--	< .01	< .01	--
Aldrin in BTM	8	< .1	< .1	< .1	--	< .1	.1	--

Table 103.--Statistical summary of selected water-quality properties for White River at Clarendon, Ark., 07077800--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Chlordane	21	< .1	< .1	< .1	--	< .1	< .1	--
Chlordane in BTM	8	< 1	< 1	< 1	--	< 1	5	--
DDD	21	< .01	< .01	< .01	--	< .01	< .01	--
DDD in BTM	8	< .1	< .1	< .1	--	< .1	.8	--
DDE	22	< .01	< .01	< .01	--	< .01	< .01	--
DDE in BTM	8	< .1	< .1	< .1	--	< .1	.4	--
DDT	22	< .01	< .01	< .01	--	< .01	< .01	--
DDT in BTM	8	< .01	< .1	< .1	--	< .1	< .1	--
Diazinon	20	< .01	< .01	< .01	--	< .01	.02	--
Diazinon in BTM	6	< .1	< .1	< .1	--	< .1	< .1	--
Dieldrin	22	< .01	< .01	< .01	--	< .01	< .01	--
Dieldrin in BTM	8	< .1	< .1	< .1	--	< .1	.3	--
Endosulfan	2	< .01	< .01	< .01	--	< .01	< .01	--
Endosulfan in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Endrin	22	< .01	< .01	< .01	--	< .01	< .01	--
Endrin in BTM	8	< .1	< .1	< .1	--	< .1	.1	--
Ethion	20	< .01	< .01	< .01	--	< .01	.01	--
Ethion in BTM	6	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor	21	< .01	< .01	< .01	--	< .01	.01	--
Heptachlor in BTM	8	< .1	< .1	< .1	--	< .1	< .1	--
Heptachlor epoxide	21	< .01	< .01	< .01	--	< .01	.01	--
Heptachlor epoxide in BTM	8	< .1	< .1	< .1	--	< .1	< .1	--
Lindane	21	< .01	< .01	< .01	--	< .01	< .01	--
Lindane in BTM	8	< .1	< .1	< .1	--	< .1	< .1	--
Malathion	21	< .01	< .01	< .01	--	< .01	< .01	--
Malathion in BTM	6	< .1	< .1	< .1	--	< .1	< .1	--
Methoxychlor	21	< .01	< .01	< .01	--	< .01	< .01	--
Methoxychlor in BTM	8	< .1	< .1	< .1	--	< .1	< .1	--
Methyl parathion	21	< .01	< .01	< .01	--	< .01	< .01	--
Methyl parathion in BTM	6	< .1	< .1	< .1	--	< .1	< .1	--
Methyl trithion	20	< .01	< .01	< .01	--	< .01	< .01	--
Methyl trithion in BTM	6	< .1	< .1	< .1	--	< .1	< .1	--
Mirex	6	< .01	< .01	< .01	--	< .01	< .01	--
Mirex in BTM	2	< .1	< .1	< .1	--	< .1	< .1	--
Parathion	20	< .01	< .01	< .01	--	< .01	< .01	--
Parathion in BTM	6	< .1	< .1	< .1	--	< .1	< .1	--
Perthane	2	< .1	< .1	< .1	--	.1	.1	--
Silvex	15	< .01	< .01	< .01	--	< .01	.01	--
Toxaphene	22	< 1	< 1	< 1	--	< 1	< 1	--
Toxaphene in BTM	8	<10	<10	<10	--	<10	<10	--
Trithion	20	< .01	< .01	< .01	--	< .01	< .01	--
Trithion in BTM	6	< .1	< .1	< .1	--	< .1	< .1	--
2,4-D	15	< .01	< .01	< .01	0.01	.01	.03	.01
2,4,5-T	15	< .01	< .01	< .01	--	.01	.03	--
Suspended sediment concentration	92	8	49	63	79	98	337	55
finer than 0.062 mm(sd)	92	19	76	87	82	94	100	17

*Includes only discharges corresponding to a water-quality sample.

Table 104.--Statistical summary of selected water-quality properties for White River at Clarendon, Ark., 07077800 (June through September)

[N=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, BTM=bottom material, ND=not detected, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), trace metals and pesticides (total recoverable in micrograms per liter), pesticides in bottom material (total in micrograms per kilogram), sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	36	125	10,600	14,000	17,000	23,800	62,400	11,900
Dissolved oxygen	35	5.6	7.0	7.3	7.4	8.0	8.5	.7
pH	35	6.9	7.8	8.0	8.0	8.2	8.8	.3
Specific conductance	36	181	237	251	255	283	318	33
Total alkalinity	36	82	102	116	118	130	160	19
Total hardness	36	91	113	120	125	140	160	18
Dissolved calcium	36	21.0	26.3	30.0	29.9	33.0	39.0	4.2
Dissolved magnesium	36	9.2	11.0	12.0	12.2	14.0	16.0	2.0
Dissolved sodium	36	2.2	3.2	3.8	4.1	4.6	10.0	1.5
Sodium adsorption ratio	36	.1	.1	.2	.2	.2	.4	.1
Dissolved potassium	36	.6	1.3	1.6	1.6	1.8	2.8	.4
Dissolved sulfate	36	< 5.0	5.4	7.0	7.4	9.0	24.0	3.9
Dissolved chloride	36	2.6	3.9	5.1	5.2	5.6	14.0	2.0
Dissolved fluoride	36	< .1	.1	.1	.1	.1	.3	.0
Dissolved silica	36	.6	5.5	6.3	6.2	7.1	8.5	1.4
Dissolved solids	36	106	127	146	146	161	192	22
Total phosphorus	36	.02	.06	.08	.08	.10	.18	.03
Total nitrogen	29	.23	.52	.66	.88	.82	6.20	1.06
Total organic nitrogen	21	.14	.40	.54	.57	.66	1.40	.28
Total nitrite + nitrate	30	< .10	< .10	.19	.32	.26	5.10	.91
Total ammonia	21	< .01	.01	.01	.03	.04	.14	.04
Fecal coliforms(31625)	26	2	10	30	--	95	300	--
Fecal strep.(31673)	26	0	30	101	--	200	820	--
Turbidity	21	13	22	26	27	33	48	8.7
Arsenic	14	< 1	1	2	2	2	3	1
Cadmium	14	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	14	< 20	< 20	< 20	15	20	40	9
Copper	14	< 20	< 20	< 20	25	40	100	25
Lead	5	2	3	7	9	17	20	8
Iron	14	860	1,200	1,800	1,700	2,200	3,200	660
Manganese	14	120	130	150	170	180	320	54
Zinc	14	< 20	20	30	29	33	60	12

Table 104.--Statistical summary of selected water-quality properties for White River at Clarendon, Ark., 07077800 (June through September)--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Aldrin	7	< .01	< .01	< .01	--	< .01	< .01	--
Aldrin in BTM	0	--	--	--	--	--	--	--
Chlordane	7	< .1	< .1	< .1	--	< .1	< .1	--
Chlordane in BTM	0	--	--	--	--	--	--	--
DDD	7	< .01	< .01	< .01	--	< .01	< .01	--
DDD in BTM	0	--	--	--	--	--	--	--
DDE	7	< .01	< .01	< .01	--	< .01	< .01	--
DDE in BTM	0	--	--	--	--	--	--	--
DDT	7	< .01	< .01	< .01	--	< .01	< .01	--
DDT in BTM	0	--	--	--	--	--	--	--
Diazinon	7	< .01	< .01	< .01	--	< .01	< .01	--
Diazinon in BTM	0	--	--	--	--	--	--	--
Dieldrin	7	< .01	< .01	< .01	--	< .01	< .01	--
Dieldrin in BTM	0	--	--	--	--	--	--	--
Endosulfan	0	--	--	--	--	--	--	--
Endosulfan in BTM	0	--	--	--	--	--	--	--
Endrin	7	< .01	< .01	< .01	--	< .01	< .01	--
Endrin in BTM	0	--	--	--	--	--	--	--
Ethion	7	< .01	< .01	< .01	--	< .01	< .01	--
Ethion in BTM	0	--	--	--	--	--	--	--
Heptachlor	7	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor in BTM	0	--	--	--	--	--	--	--
Heptachlor epoxide	7	< .01	< .01	< .01	--	< .01	< .01	--
Heptachlor epoxide in BTM	0	--	--	--	--	--	--	--
Lindane	7	< .01	< .01	< .01	--	< .01	< .01	--
Lindane in BTM	0	--	--	--	--	--	--	--
Malathion	7	< .01	< .01	< .01	--	< .01	< .01	--
Malathion in BTM	0	--	--	--	--	--	--	--
Methoxychlor	7	< .01	< .01	< .01	--	< .01	< .01	--
Methoxychlor in BTM	0	--	--	--	--	--	--	--
Methyl parathion	0	--	--	--	--	--	--	--
Methyl trithion	7	< .01	< .01	< .01	--	< .01	< .01	--
Methyl trithion in BTM	0	--	--	--	--	--	--	--
Mirex	4	< .01	< .01	< .01	--	< .01	< .01	--
Mirex in BTM	0	--	--	--	--	--	--	--
Parathion	7	< .01	< .01	< .01	--	< .01	< .01	--
Parathion in BTM	0	--	--	--	--	--	--	--
Perthane	0	--	--	--	--	--	--	--
Silvex	5	< .01	< .01	< .01	--	< .01	< .01	--
Toxaphene	7	<1	<1	<1	--	<1	<1	--
Toxaphene in BTM	0	--	--	--	--	--	--	--
Trithion	7	< .01	< .01	< .01	--	< .01	< .01	--
Trithion in BTM	0	--	--	--	--	--	--	--
2,4-D	5	< .01	< .01	.01	.01	.01	.02	.01
2,4,5-T	5	< .01	< .01	< .01	.01	.02	.03	.01
Suspended sediment concentration	33	8	57	74	90	98	337	68
finer than 0.062 mm (sd)	33	23	80	89	84	95	98	16

*Includes only discharges corresponding to a water-quality sample.

Table 105.--Statistical summary of selected water-quality properties for White River at St. Charles, Ark., 07077820

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	3	7,020	7,020	7,720	13,500	25,900	25,900	10,700
Dissolved oxygen	132	5.5	7.8	8.7	9.0	10.4	13.6	1.8
pH	127	7.2	7.7	7.9	7.9	8.1	8.5	0.3
Specific conductance	69	120	188	235	225	258	321	49
Total alkalinity	25	58	81	110	105	122	170	28
Total hardness	66	36	95	117	115	133	270	35
Dissolved magnesium	15	3.0	9.0	12.0	11.1	14.0	17.0	3.9
Sodium adsorption ratio	5	.1	.2	.2	.2	.2	.2	.1
Dissolved sulfate	124	< 1.0	4.0	5.0	5.6	7.0	12.0	2.3
Dissolved chloride	120	2.5	5.0	6.0	6.3	7.4	25.0	2.5
Dissolved solids	85	61	131	144	144	159	185	22
Total phosphorus	120	.02	.07	.09	.10	.13	.33	.05
Total nitrite + nitrate	73	< .05	.13	.20	.22	.29	.85	.14
Total ammonia	99	< .10	< .10	< .10	.05	< .10	.23	.04
BOD	127	.5	1.7	2.3	2.5	3.1	6.0	1.1
Fecal coliforms(31616)	122	2	9	27	--	58	550	--
Fecal strep.(31679)	20	2	14	62	--	160	510	--
Turbidity	55	2.0	25	35	37	50	100	20
Arsenic	58	< 10	< 10	< 10	--	< 10	12	--
Cadmium	81	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	77	< 20	< 20	< 20	--	< 20	30	--
Copper	84	< 20	< 20	< 20	--	< 20	70	--
Lead	52	< 20	< 20	< 20	--	< 20	26	--
Iron	29	300	1,100	1,500	2,100	2,800	7,800	1,600
Manganese	30	37	81	120	130	140	340	67
Zinc	77	< 20	< 20	< 20	--	< 20	40	--
Aldrin	26	< .002	< .002	< .002	--	< .002	< .002	--
DDE	26	< .002	< .002	< .002	--	< .002	< .002	--
DDT	26	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	26	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	26	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	24	ND	ND	ND	--	ND	ND	--
Malathion	9	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	26	< .04	< .04	< .04	--	< .04	.26	--
Toxaphene	26	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	15	ND	ND	ND	--	ND	.03	--

*Includes only discharges corresponding to a water-quality sample.

Table 106.--Statistical summary of selected water-quality properties for Big Creek near Watkins Corner, Ark., 07077960

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	36	5.8	132	380	761	957	4,100	995
Dissolved oxygen	106	2.7	5.3	6.6	7.1	8.7	12.2	2.2
pH	106	6.6	7.1	7.4	7.4	7.7	8.1	.4
Specific conductance	65	42	86	144	221	303	739	177
Total alkalinity	21	19	28	53	85	120	312	77
Total hardness	47	26	46	81	103	160	272	67
Dissolved magnesium	10	4.0	5.8	14.0	14.7	21.7	33.0	9.3
Dissolved sulfate	99	< 1.0	5.0	8.0	9.9	14.0	45.0	6.8
Dissolved chloride	99	3.0	6.5	10.0	12.0	17.0	34.0	7.1
Dissolved solids	61	1	158	198	203	256	372	74
Total phosphorus	92	.04	.19	.31	.42	.47	2.70	.42
Total nitrite + nitrate	44	< .05	.19	.29	.34	.45	.85	.20
Total ammonia	75	< .10	.11	.18	.21	.25	.81	.15
BOD	106	.7	1.8	2.4	3.3	3.2	75.0	7.1
Fecal coliforms(31616)	93	2	40	100	--	295	110,000	--
Fecal strep.(31679)	17	49	100	310	--	2,750	13,000	--
Turbidity	33	35	55	80	200	155	1,400	320
Arsenic	46	< 10	< 10	< 10	--	< 10	17	--
Cadmium	81	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	57	< 20	< 20	< 20	--	< 20	30	--
Copper	90	< 20	< 20	< 20	18	20	260	35
Lead	38	< 20	< 20	< 20	22	31	80	21
Iron	54	570	2,000	5,400	7,600	9,500	33,000	7,600
Manganese	58	< 27	220	350	530	740	2,100	430
Zinc	86	< 20	20	35	50	64	190	43
Aldrin	45	< .002	< .002	< .002	--	< .002	< .002	--
DDE	45	< .002	< .002	< .002	--	< .002	.020	--
DDT	45	< .004	< .004	< .004	--	< .004	.080	--
Dieldrin	45	< .002	< .002	< .002	--	< .002	.020	--
Endrin	45	< .002	< .002	< .002	--	< .002	.030	--
Lindane	45	ND	ND	ND	--	ND	ND	--
Malathion	14	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	44	< .04	< .04	< .04	--	< .04	.52	--
Toxaphene	44	< 2	< 2	< 2	--	< 2	2	--
2,4-D	22	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 107.--Statistical summary of selected water-quality properties for Big Creek near Watkins Corner, Ark., 07077960 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	26	5.8	128	290	583	685	4,800	940
Dissolved oxygen	38	2.7	4.6	5.3	5.3	5.8	8.3	1.1
pH	39	6.7	7.2	7.6	7.5	7.9	8.1	.4
Specific conductance	23	42	126	269	314	490	642	204
Total alkalinity	6	23	34	72	80	120	178	56
Total hardness	12	42	80	140	137	205	230	67
Dissolved magnesium	4	9.0	10.0	15.0	15.7	22.2	24.0	6.4
Dissolved sulfate	39	< 1.0	5.0	8.0	9.2	13.0	24.0	5.5
Dissolved chloride	36	3.5	7.3	12.5	13.4	17.8	31.0	7.3
Dissolved solids	21	1	113	212	205	287	372	100
Total phosphorus	29	.04	.17	.28	.52	.53	2.70	.67
Total nitrite + nitrate	16	< .05	.22	.41	.43	.63	.85	.23
Total ammonia	28	< .10	< .10	.13	.19	.25	.74	.19
BOD	39	.9	1.9	2.4	4.4	3.3	75.0	11.6
Fecal coliforms(31616)	32	2	55	220	--	575	4,600	--
Fecal strep.(31679)	8	49	76	185	--	875	4,500	--
Turbidity	13	35	45	65	250	122	1,400	449
Arsenic	12	< 10	< 10	< 10	--	< 10	10	--
Cadmium	27	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	20	< 20	< 20	< 20	--	< 20	22	--
Copper	31	< 20	< 20	< 20	--	< 20	50	--
Lead	14	< 20	< 20	< 20	22	27	75	20
Iron	16	570	1,300	3,400	6,800	9,800	28,000	8,100
Manganese	19	10	340	600	770	1,300	2,100	540
Zinc	30	< 20	< 20	26	46	61	190	51
Aldrin	28	< .002	< .002	< .002	--	< .002	< .002	--
DDE	28	< .002	< .002	< .002	--	< .002	.020	--
DDT	28	< .004	< .004	< .004	--	< .004	.080	--
Dieldrin	28	< .002	< .002	< .002	--	< .002	.020	--
Endrin	28	< .002	< .002	< .002	--	< .002	.030	--
Lindane	28	ND	ND	ND	--	ND	ND	--
Malathion	9	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	27	< .04	< .04	< .04	--	< .04	.25	--
Toxaphene	27	< 2	< 2	< 2	--	< 2	2	--
2,4-D	12	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 108.--Statistical summary of selected water-quality properties for White River at Arkansas Post Canal near Nady, Ark., 07078285

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	0	--	--	--	--	--	--	--
Dissolved oxygen	105	2.2	7.7	8.6	8.7	9.9	12.7	2.0
pH	102	6.6	7.5	7.9	7.8	8.0	8.5	.4
Specific conductance	78	101	187	224	227	272	329	56
Total alkalinity	21	58	70	97	96	117	160	28
Total hardness	50	26	81	108	108	139	170	36
Dissolved magnesium	10	5.5	6.7	10.5	10.6	13.7	16.0	3.8
Dissolved sulfate	99	<1.0	4.0	6.0	6.6	8.0	19.0	3.0
Dissolved chloride	95	3.5	6.0	7.0	7.5	8.5	17.0	2.5
Dissolved solids	58	103	134	152	150	166	191	21
Total phosphorus	100	< .01	.07	.11	.11	.15	.33	.06
Total nitrite + nitrate	47	< .05	.09	.16	.19	.26	.59	.13
Total ammonia	75	< .10	< .10	< .10	.11	< .10	.48	.06
BOD	101	1.0	1.8	2.6	2.8	3.4	6.6	1.2
Fecal coliforms(31616)	102	2	9	29	--	77	1,100	--
Fecal strep.(31679)	22	5	30	155	--	365	2,700	--
Turbidity	35	7.8	30	35	45	60	180	30
Arsenic	53	< 10	< 10	< 10	--	< 10	14	--
Cadmium	59	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	53	< 20	< 20	< 20	--	< 20	20	--
Copper	59	< 20	< 20	< 20	--	< 20	36	--
Lead	37	< 20	< 20	< 20	--	< 20	< 20	--
Iron	27	340	910	1,700	1,900	2,600	6,600	1,300
Manganese	27	< 27	55	100	110	130	480	92
Zinc	61	< 20	< 20	< 20	--	< 20	50	--
Aldrin	39	< .002	< .002	< .002	--	< .002	< .002	--
DDE	38	< .002	< .002	< .002	--	< .002	< .002	--
DDT	40	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	40	< .002	< .002	< .002	--	< .002	.002	--
Endrin	40	< .002	< .002	< .002	--	< .002	.003	--
Lindane	39	ND	ND	ND	--	ND	ND	--
Malathion	10	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	39	< .04	< .04	< .04	--	< .04	.05	--
Toxaphene	39	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	18	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 109.--Statistical summary of selected water-quality properties for Arkansas River at Murray Dam at Little Rock, Ark., 07263450

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units),and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	80	800.0	10,800	29,200	46,700	63,200	218,000	48,200
Dissolved oxygen	120	6.6	8.1	9.1	9.7	11.2	14.1	1.9
pH	119	6.7	7.6	7.9	7.9	8.1	8.7	.4
Specific conductance	87	104	330	494	501	617	1,240	219
Total alkalinity	18	50	70	82	85	101	115	18
Total hardness	61	24	78	109	107	139	170	37
Dissolved magnesium	8	5.0	7.0	9.0	9.7	11.7	18.0	4.0
Dissolved sulfate	113	5.0	28.0	39.0	41.0	51.5	120.0	18.4
Dissolved chloride	106	2.5	44.5	77.5	92.0	120.0	550.0	69.5
Dissolved solids	76	77	210	299	312	409	579	122
Total phosphorus	111	.04	.06	.08	.09	.12	.27	.04
Total nitrite + nitrate	65	< .05	.09	.32	.36	.53	1.60	.26
Total ammonia	94	< .10	< .10	< .10	.07	< .10	.22	.04
BOD	118	.7	1.3	1.6	2.0	2.3	24.0	2.2
Fecal coliforms(31616)	117	2	6	20	--	110	880	--
Fecal strep.(31679)	13	1	2	56	--	110	285	--
Turbidity	54	2.8	9.5	25	32	41	150	28
Arsenic	59	< 10	< 10	< 10	--	< 10	28	--
Cadmium	94	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	77	< 20	< 20	< 20	--	< 20	< 20	--
Copper	112	< 20	< 20	< 20	--	< 20	70	--
Lead	69	< 20	< 20	< 20	29	37	169	35
Iron	56	< 30	500	920	1,200	1,700	3,300	820
Manganese	55	10	73	110	120	140	790	120
Zinc	104	< 20	< 20	21	39	45	580	67
Aldrin	22	< .002	< .002	< .002	--	< .002	< .002	--
DDE	22	< .002	< .002	< .002	--	< .002	< .002	--
DDT	22	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	22	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	22	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	22	ND	ND	ND	--	ND	ND	--
Malathion	5	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	22	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	22	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	11	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 110.--Statistical summary of selected water-quality properties for Arkansas River at David D. Terry Lock and Dam below Little Rock, Ark., 07263620

[N=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.=streptococci, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), trace metals and pesticides (total or total recoverable in micrograms per liter), and sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	108	329	6,740	16,900	35,900	56,200	162,000	40,200
Dissolved oxygen	101	6.1	7.4	8.8	9.2	10.8	15.8	2.1
pH	109	6.1	7.7	7.9	7.8	8.0	8.6	.4
Specific conductance	109	135	364	514	532	674	1,040	198
Total alkalinity	108	36	62	80	79	95	140	21
Total hardness	107	43	89	120	113	140	170	31
Dissolved calcium	107	12.0	25.0	34.0	32.7	40.0	50.0	9.0
Dissolved magnesium	108	3.1	6.1	7.7	7.6	9.1	13.0	2.2
Dissolved sodium	108	8.5	36.3	55.0	60.1	77.7	150.0	29.5
Sodium adsorption ratio	107	.6	2	2	2	3	6	1
Dissolved potassium	108	1.3	2.7	3.4	3.4	3.9	6.0	.9
Dissolved sulfate	109	14.0	29.5	39.0	39.6	48.0	77.0	13.0
Dissolved chloride	109	11.0	50.5	83.0	91.3	120.0	220.0	47.3
Dissolved fluoride	109	< .1	.2	.2	.2	.2	.6	.1
Dissolved silica	108	.2	1.2	3.7	3.9	5.3	48.0	4.8
Dissolved solids	108	86	205	286	295	367	558	106
Total phosphorus	109	< .01	.08	.10	.10	.12	.28	.04
Total nitrogen	78	.11	.85	1.00	1.14	1.30	4.80	.68
Total organic nitrogen	42	.35	.62	.77	.84	.98	3.30	.45
Total nitrite + nitrate	84	< .10	.11	.24	.29	.43	.70	.17
Total ammonia	48	< .01	.06	.10	.11	.13	.46	.08
Fecal coliforms (31625)	80	1	78	400	--	1,400	16,000	--
Fecal strep. (31673)	68	1	22	82	--	280	10,000	--
Turbidity	64	2.0	5.5	17	30	31	660	82
Arsenic	32	< 1	1	1	2	2	4	1
Cadmium	33	<20	<20	<20	--	<20	160	--
Chromium	33	<20	<20	<20	--	<20	30	--
Copper	33	<20	<20	<20	24	30	110	24
Lead	17	< 2	5	12	14	17	63	14
Iron	33	180	460	680	810	960	2,600	570
Manganese	33	40	60	80	79	95	140	23
Zinc	33	<20	20	30	32	40	110	19

Table 110.--Statistical summary of selected water-quality properties for Arkansas River at David D. Terry Lock and Dam below Little Rock, Ark., 07263620--Continued

Property	N	Minimum	25th percentile	Media	Mean	75th percentile	Maximum	Standard deviation
Aldrin	1	< .01	< .01	< .01	--	< .01	< .01	--
DDE	1	< .01	< .01	< .01	--	< .01	< .01	--
DDT	1	< .01	< .01	< .01	--	< .01	< .01	--
Dieldrin	1	< .01	< .01	< .01	--	< .01	< .01	--
Endrin	1	< .01	< .01	< .01	--	< .01	< .01	--
Lindane	1	< .01	< .01	< .01	--	< .01	< .01	--
Malathion	1	< .01	< .01	< .01	--	< .01	< .01	--
Methyl parathion	1	< .01	< .01	< .01	--	< .01	< .01	--
Toxaphene	1	< 1	< 1	< 1	--	< 1	< 1	--
2,4-D	0	--	--	--	--	--	--	--
Suspended sediment concentration	103	2	20	27	51	46	644	84
finer than 0.062 mm (sd)	103	14	61	79	73	90	99	20

*Includes only discharges corresponding to a water-quality sample.

Table 111.--Statistical summary of selected water-quality properties for Arkansas River at David D. Terry Lock and Dam below Little Rock, Ark., 07263620 (June through September)

[N=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.=streptococci, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimer at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), trace metals and pesticides (total or total recoverable in micrograms per liter), and sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	37	1,290	5,950	12,200	26,200	36,400	158,000	34,000
Dissolved oxygen	37	6.1	6.9	7.3	7.3	7.9	9.7	.8
pH	38	7.0	7.8	7.9	8.0	8.2	8.6	.3
Specific conductance	38	361	518	635	659	774	1020	167
Total alkalinity	38	56	80	92	89	99	112	15
Total hardness	37	72	120	130	133	150	170	22
Dissolved calcium	37	20.0	35.0	40.0	38.3	42.5	47.0	6.1
Dissolved magnesium	38	5.4	7.9	8.5	8.9	10.0	13.0	1.8
Dissolved sodium	38	42.0	53.0	74.5	77.7	100.0	140.0	27.3
Sodium adsorption ratio	37	2	2	3	3	4	5	.9
Dissolved potassium	38	2.6	3.4	3.8	3.8	4.2	6.0	.8
Dissolved sulfate	38	33.0	40.0	46.0	48.4	52.3	77.0	10.8
Dissolved chloride	38	58.0	84.3	110.0	120.4	160.0	220.0	46.2
Dissolved fluoride	38	.1	.2	.2	.2	.3	.6	.1
Dissolved silica	38	.2	.8	3.5	4.3	5.3	48.0	7.6
Dissolved solids	38	204	294	353	363	427	542	86
Total phosphorus	38	< .01	.08	.10	.10	.11	.22	.04
Total nitrogen	28	.48	.80	.96	1.18	1.28	4.00	.79
Total organic nitrogen	17	.41	.61	.78	.96	1.10	3.30	.66
Total nitrite + nitrate	29	< .10	< .10	.15	.22	.39	.70	.19
Total ammonia	18	.02	.06	.08	.09	.12	.18	.04
Fecal coliforms(31625)	29	12	57	390	--	1,750	16,000	--
Fecal strep.(31673)	26	1	20	48	--	89	2,500	--
Turbidity	26	2.0	4.9	12	42	27	660	130
Arsenic	9	1	2	2	2	2	4	1
Cadmium	10	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	10	< 20	< 20	< 20	13	20	20	5
Copper	10	< 20	< 20	< 20	21	30	49	13
Lead	6	< 2	4	7	8	13	14	5
Iron	10	400	520	640	670	760	1,100	200
Manganese	10	60	68	70	77	92	100	15
Zinc	10	< 20	< 20	25	29	38	70	21

Table 111.--Statistical summary of selected water-quality properties for Arkansas River at David D. Terry Lock and Dam below Little Rock, Ark., 07263620 (June through September)--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Aldrin	1	< .01	< .01	< .01	--	< .01	< .01	--
DDE	1	< .01	< .01	< .01	--	< .01	< .01	--
DDT	1	< .01	< .01	< .01	--	< .01	< .01	--
Dieldrin	1	< .01	< .01	< .01	--	< .01	< .01	--
Endrin	1	< .01	< .01	< .01	--	< .01	< .01	--
Lindane	1	< .01	< .01	< .01	--	< .01	< .01	--
Malathion	1	< .01	< .01	< .01	--	< .01	< .01	--
Methyl parathion	1	< .01	< .01	< .01	--	< .01	< .01	--
Toxaphene	1	<1	<1	<1	--	<1	<1	--
2,4-D	0	--	--	--	--	--	--	--
Suspended sediment concentration	37	2	20	25	37	39	281	46
finer than 0.062 mm (sd)	37	28	58	77	72	90	96	20

*Includes only discharges corresponding to a water-quality sample.

Table 112.--Statistical summary of selected water-quality properties for Arkansas River at Lock and Dam 3 near Swan Lake, Ark., 07263750

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units),and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	66	0.0	4,900	22,900	37,000	48,200	158,000	41,200
Dissolved oxygen	103	5.5	8.3	9.3	9.7	10.8	18.9	2.0
pH	100	7.0	7.7	7.9	7.8	8.0	8.6	.3
Specific conductance	75	167	397	497	521	631	1,150	202
Total alkalinity	20	31	63	74	75	90	107	19
Total hardness	50	24	74	111	109	140	250	42
Dissolved magnesium	10	3.2	5.7	8.0	7.3	9.0	9.0	2.0
Dissolved sulfate	99	7.0	27.0	40.0	39.8	48.0	87.0	16.1
Dissolved chloride	96	.5	60.0	85.5	97.6	150.0	280.0	55.4
Dissolved solids	56	67	232	324	346	464	598	127
Total phosphorus	99	.02	.08	.12	.13	.16	.76	.09
Total nitrite + nitrate	47	< .05	.13	.33	.33	.46	.79	.20
Total ammonia	75	< .10	< .10	< .10	.09	.12	.24	.05
BOD	100	.6	1.5	2.1	2.4	2.6	13.0	1.6
Fecal coliforms(31616)	99	2	8	80	--	320	2,900	--
Fecal strep.(31679)	19	2	5	20	--	163	570	--
Turbidity	35	2.8	8.0	20	32	50	150	130
Arsenic	46	< 10	< 10	< 10	--	< 10	28	--
Cadmium	64	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	55	< 20	< 20	< 20	--	< 20	20	--
Copper	74	< 20	< 20	< 20	28	21	350	63
Lead	51	< 20	< 20	< 20	31	30	340	53
Iron	39	160	390	970	1,500	2,300	5,200	1,300
Manganese	43	< 27	71	120	160	160	1,100	200
Zinc	77	< 20	< 20	32	60	57	900	117
Aldrin	47	< .002	< .002	< .002	--	< .002	< .002	--
DDE	46	< .002	< .002	< .002	--	< .002	< .002	--
DDT	46	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	47	< .002	< .002	< .002	--	< .002	.006	--
Endrin	47	< .002	< .002	< .002	--	< .002	.050	--
Lindane	47	ND	ND	ND	--	ND	ND	--
Malathion	17	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	46	< .04	< .04	< .04	--	< .04	.04	--
Toxaphene	47	< 2	< 2	< 2	--	< 2	3	--
2,4-D	24	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 113.--Statistical summary of selected water-quality properties for Bayou Meto near Lonoke, Ark., 07264000

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units),and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	100	2.3	20	106	296	456	1,970	409
Dissolved oxygen	99	.8	3.6	5.2	5.6	7.3	11.2	2.7
pH	100	6.2	7.0	7.2	7.2	7.5	8.1	.4
Specific conductance	74	39	157	274	332	428	1,530	274
Total alkalinity	17	18	26	61	60	88	123	33
Total hardness	46	11	36	58	80	120	250	58
Dissolved magnesium	8	1.6	4.2	9.0	7.7	11.0	11.0	3.7
Dissolved sulfate	96	< 1.0	8.0	12.0	17.4	20.0	130.0	18.0
Dissolved chloride	91	9.0	18.0	38.0	62.1	62.0	550.0	88.4
Dissolved solids	56	77	115	163	220	250	1,120	177
Total phosphorus	96	.08	.20	.25	.29	.35	.85	.13
Total nitrite + nitrate	44	.19	.36	.50	.48	.60	.98	.18
Total ammonia	74	< .10	< .10	.14	.17	.22	.50	.12
BOD	93	.5	2.1	2.7	3.2	3.4	12.0	1.9
Fecal coliforms(31616)	92	2	87	155	--	371	7,400	--
Fecal strep.(31679)	17	25	205	500	--	700	12,000	--
Turbidity	33	3.0	20	35	42	52	100	28
Arsenic	45	< 10	< 10	< 10	--	< 10	22	--
Cadmium	73	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	50	< 20	< 20	< 20	--	< 20	20	--
Copper	86	< 20	< 20	< 20	17	20	89	14
Lead	36	< 20	< 20	20	25	30	70	16
Iron	52	260	1,000	1,800	2,000	2,400	6,300	1,300
Manganese	54	< 27	130	270	360	480	1,500	330
Zinc	84	< 20	< 20	27	40	50	320	53
Aldrin	18	< .002	< .002	< .002	--	< .002	< .002	--
DDE	18	< .002	< .002	< .002	--	< .002	< .002	--
DDT	18	< .004	< .004	< .004	--	< .004	.010	--
Dieldrin	18	< .002	< .002	< .002	--	< .002	.006	--
Endrin	18	< .002	< .002	< .002	--	< .002	.006	--
Lindane	18	ND	ND	ND	--	ND	ND	--
Malathion	6	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	18	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	18	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	11	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 114.--Statistical summary of selected water-quality properties for Bayou Meto near Lonoke, Ark., 07264000 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	45	1.0	10	30	83	66	848	164
Dissolved oxygen	33	0.8	2.4	3.1	3.1	4.0	5.5	1.1
pH	35	6.7	7.2	7.5	7.4	7.6	8.0	.3
Specific conductance	26	39	259	423	384	479	660	158
Total alkalinity	5	76	77	98	91	103	107	14
Total hardness	13	44	65	120	108	132	190	45
Dissolved magnesium	3	9.0	9.0	11.0	10.3	11.0	11.0	1.2
Dissolved sulfate	35	< 1.0	8.0	16.0	19.7	26.0	93.0	17.1
Dissolved chloride	31	17.0	37.0	50.0	59.0	74.0	170.0	34.7
Dissolved solids	19	135	162	247	249	309	458	91
Total phosphorus	32	.14	.20	.23	.28	.33	.58	.12
Total nitrite + nitrate	15	.23	.38	.56	.51	.61	.71	.15
Total ammonia	27	< .10	< .10	.17	.19	.22	.50	.13
BOD	31	.5	2.2	2.7	3.9	5.1	12.0	2.9
Fecal coliforms(31616)	29	2	100	210	--	515	5,000	--
Fecal strep.(31679)	5	400	470	620	--	700	720	--
Turbidity	11	6.0	20	30	33	40	100	25
Arsenic	13	< 10	< 10	< 10	--	< 10	22	--
Cadmium	24	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	16	< 20	< 20	< 20	--	< 20	< 20	--
Copper	26	< 20	< 20	< 20	21	21	89	18
Lead	12	< 20	< 20	20	20	29	32	9
Iron	16	460	820	1,600	1,500	2,200	3,300	780
Manganese	16	10	390	530	630	800	1,500	450
Zinc	29	< 20	< 20	22	43	45	320	62
Aldrin	6	< .002	< .002	< .002	--	< .002	< .002	--
DDE	6	< .002	< .002	< .002	--	< .002	< .002	--
DDT	6	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	6	< .002	< .002	< .002	--	< .002	.006	--
Endrin	6	< .002	< .002	< .002	--	< .002	.006	--
Lindane	6	ND	ND	ND	--	ND	ND	--
Malathion	1	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	7	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	7	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	2	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 115.--Statistical summary of selected water-quality properties for Bayou Two Prairie near Cabot, Ark., 07264050

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units),and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	52	.0	3.0	16	65	64	445	111
Dissolved oxygen	95	.5	2.7	4.5	4.9	6.6	11.7	2.6
pH	98	5.5	6.5	6.8	6.8	7.1	7.6	.4
Specific conductance	61	43	76	114	140	182	849	117
Total alkalinity	19	9	13	35	38	62	82	25
Total hardness	47	13	20	36	40	56	91	21
Dissolved magnesium	6	2.0	2.7	5.5	5.8	8.7	11.0	3.4
Dissolved sulfate	90	< 1.0	5.0	8.0	8.1	10.0	21.0	4.2
Dissolved chloride	88	4.5	8.0	11.5	13.7	18.0	39.0	7.5
Dissolved solids	53	45	83	102	110	137	201	35
Total phosphorus	95	.01	.21	.39	.65	.77	7.90	.95
Total nitrite + nitrate	42	< .05	.18	.25	.28	.38	.77	.17
Total ammonia	71	< .10	.22	.39	1.07	1.00	9.50	1.69
BOD	83	1.2	2.1	2.9	3.9	4.7	20.0	2.8
Fecal coliforms(31616)	90	2	88	180	--	332	4,400	--
Fecal strep.(31679)	11	5	380	860	--	1,600	2,200	--
Turbidity	32	4.6	20	30	32	39	130	24
Arsenic	45	< 10	< 10	< 10	--	< 10	30	--
Cadmium	77	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	52	< 20	< 20	< 20	--	< 20	< 20	--
Copper	92	< 20	< 20	< 20	18	23	127	20
Lead	42	< 20	< 20	< 20	--	< 20	52	--
Iron	59	320	1,500	1,900	2,200	3,200	4,400	1,000
Manganese	61	< 27	165	600	1,200	1,400	13,000	2,100
Zinc	90	< 20	< 20	23	42	51	390	58
Aldrin	39	< .002	< .002	< .002	--	< .002	< .002	--
DDE	39	< .002	< .002	< .002	--	< .002	< .002	--
DDT	39	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	39	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	38	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	39	ND	ND	ND	--	ND	ND	--
Malathion	13	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	38	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	38	< 2	< 2	< 2	--	< 2	5	--
2,4-D	18	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 116.--Statistical summary of selected water-quality properties for Bayou Two Prairie near Cabot, Ark., 07264050 (June through September)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	27	.0	.0	3	14	25	74	22
Dissolved oxygen	31	1.5	2.3	2.6	3.3	4.3	6.6	1.5
pH	32	6.4	6.9	7.0	7.0	7.3	7.6	.3
Specific conductance	21	76	122	145	157	204	269	53
Total alkalinity	5	35	36	54	56	79	82	22
Total hardness	11	26	41	55	52	64	82	16
Dissolved magnesium	1	4.0	4.0	4.0	4.0	4.0	4.0	-
Dissolved sulfate	28	< 1.0	4.0	6.5	7.2	9.7	17.0	3.8
Dissolved chloride	27	7.0	10.5	13.0	15.7	21.0	29.0	6.1
Dissolved solids	14	102	112	132	135	159	187	28
Total phosphorus	29	.01	.32	.64	.68	.92	2.85	.53
Total nitrite + nitrate	13	< .05	.24	.27	.37	.53	.77	.22
Total ammonia	23	.23	.35	.54	1.06	1.45	6.60	1.34
BOD	23	1.5	2.2	2.8	4.2	6.4	13.0	3.1
Fecal coliforms(31616)	29	48	131	220	--	350	3,800	--
Fecal strep.(31679)	5	5	202	870	--	1,550	2,200	--
Turbidity	9	6.2	14	30	29	38	65	18
Arsenic	12	< 10	< 10	< 10	--	< 10	< 10	--
Cadmium	24	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	15	< 20	< 20	< 20	--	< 20	< 20	--
Copper	26	< 20	< 20	< 20	20	21	127	26
Lead	13	< 20	< 20	< 20	--	20	52	--
Iron	19	1,200	2,400	3,300	3,000	3,700	4,300	930
Manganese	19	13	700	1,400	2,400	2,200	13,000	3,300
Zinc	28	< 20	< 20	32	35	50	90	25
Aldrin	23	< .002	< .002	< .002	--	< .002	< .002	--
DDE	23	< .002	< .002	< .002	--	< .002	< .002	--
DDT	23	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	23	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	22	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	23	ND	ND	ND	--	ND	ND	--
Malathion	7	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	23	< .04	< .04	< .04	--	< .04	< .04	--
Toxaphene	23	< 2	< 2	< 2	--	< 2	5	--
2,4-D	8	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample. Table

Table 117.--Statistical summary of selected water-quality properties for Bayou Meto near Bayou Meto, Ark., 07265099

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.= streptococci, ND=not detected. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units),and trace metals and pesticides (total or total recoverable in micrograms per liter). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	65	.0	56	952	1,348	2,070	6,050	1,480
Dissolved oxygen	118	2.5	4.8	6.0	6.3	7.9	11.4	2.1
pH	116	6.3	6.9	7.2	7.2	7.4	8.3	.4
Specific conductance	64	69	104	160	195	253	678	124
Total alkalinity	20	19	27	41	50	77	110	30
Total hardness	62	12	38	48	64	81	174	37
Dissolved magnesium	10	2.4	3.0	7.0	7.0	10.5	13.0	3.9
Dissolved sulfate	113	< 1.0	7.0	9.0	10.6	13.0	43.0	5.5
Dissolved chloride	109	4.5	11.0	16.0	18.5	25.2	56.0	10.4
Dissolved solids	73	56	133	155	164	180	390	52
Total phosphorus	108	.03	.17	.22	.25	.30	.95	.13
Total nitrite + nitrate	61	< .05	.17	.24	.25	.33	1.00	.12
Total ammonia	89	< .10	< .10	.10	.12	.15	.36	.07
BOD	109	.3	1.7	2.3	2.4	2.9	8.0	1.2
Fecal coliforms(31616)	112	2	20	68	--	148	4,167	--
Fecal strep.(31679)	21	10	44	110	--	605	4,000	--
Turbidity	48	8.0	35	55	100	80	2,000	280
Arsenic	46	< 10	< 10	< 10	--	< 10	19	--
Cadmium	92	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	70	< 20	< 20	< 20	--	< 20	20	--
Copper	106	< 20	< 20	< 20	--	< 20	66	--
Lead	53	< 20	< 20	< 20	--	< 20	40	--
Iron	55	460	1,700	2,900	3,700	4,800	14,000	2,900
Manganese	58	< 27	98	180	240	280	1,400	230
Zinc	102	< 20	< 20	< 20	23	30	110	19
Aldrin	50	< .002	< .002	< .002	--	< .002	< .002	--
DDE	49	< .002	< .002	< .002	--	< .002	.010	--
DDT	49	< .004	< .004	< .004	--	< .004	.010	--
Dieldrin	49	< .002	< .002	< .002	--	< .002	.010	--
Endrin	50	< .002	< .002	< .002	--	< .002	.030	--
Lindane	50	ND	ND	ND	--	ND	ND	--
Malathion	16	< .05	< .05	< .05	--	< .05	< .05	--
Methyl parathion	49	< .04	< .04	< .04	--	< .04	.36	--
Toxaphene	50	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	21	ND	ND	ND	--	ND	ND	--

*Includes only discharges corresponding to a water-quality sample.

Table 118.--Statistical summary of selected water-quality properties for Arkansas River at Dam No. 2 near Gillett, Ark., 07265283

[N=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.=streptococci, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter), sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	95	.0	9,500	26,300	40,800	61,700	166,000	41,400
Dissolved oxygen	91	5.9	7.8	8.8	9.2	10.6	13.9	1.8
pH	94	7.0	7.7	7.9	7.8	8.0	8.6	.3
Specific conductance	95	157	383	501	522	616	1,260	208
Total alkalinity	62	36	61	75	77	98	117	23
Total hardness	62	23	81	110	111	132	170	34
Dissolved calcium	58	4.2	23.5	33.5	31.8	39.3	49.0	9.9
Dissolved magnesium	59	3.0	5.5	7.7	7.8	9.5	18.0	2.8
Dissolved sodium	49	21.0	40.0	56.0	64.0	83.5	130.0	31.8
Dissolved potassium	49	1.7	2.8	3.3	3.5	4.1	6.3	1.0
Dissolved sulfate	91	10.0	28.0	40.0	41.3	51.0	100.0	17.4
Sodium adsorption ratio	49	1	2	3	3	3	5	1
Dissolved chloride	89	21.0	56.0	78.0	90.4	110.5	310.0	51.7
Dissolved fluoride	49	.1	.2	.2	.2	.3	.3	.1
Dissolved silica	49	.3	1.6	4.2	4.8	5.0	65.0	9.0
Dissolved solids	61	139	211	286	303	379	540	111
Total phosphorus	95	.02	.08	.11	.13	.15	1.30	.13
Total nitrogen	25	.68	1.10	1.20	1.39	1.60	4.20	.67
Total organic nitrogen	25	.33	.68	.94	.92	1.20	1.50	.33
Total nitrite + nitrate	38	< .10	.16	.42	.42	.49	2.70	.42
Total ammonia	43	< .01	.05	.08	.10	.13	.51	.09
Fecal coliforms(31626)	48	1	23	85	--	270	90,000	--
Fecal strep.(31673)	49	2	23	180	--	640	52,000	--
Turbidity	48	< 1.0	6.4	23	28	40	80	23
Arsenic	31	< 10	< 10	< 10	--	< 10	< 10	--
Cadmium	36	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	33	< 20	< 20	< 20	--	< 20	< 20	--
Copper	49	< 20	< 20	< 20	--	21	127	26
Lead	13	< 2	< 3	< 4	12	8	75	21
Iron	47	200	570	1,100	1,500	2,100	5,200	1,200
Manganese	49	53	90	110	120	160	260	44
Zinc	48	< 20	< 20	20	40	40	302	54

Table 118--Statistical summary of selected water-quality properties for Arkansas River at Dam No. 2 near Gillett, Ark., 07265283--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Aldrin	23	< .002	< .002	< .002	--	< .002	< .002	--
DDE	21	< .002	< .002	< .002	--	< .002	< .002	--
DDT	22	< .004	< .004	< .004	--	< .004	.004	--
Dieldrin	23	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	23	< .002	< .002	< .002	--	< .002	.012	--
Lindane	0	--	--	--	--	--	--	--
Malathion	0	--	--	--	--	--	--	--
Methyl parathion	22	< .04	< .04	< .04	--	< .04	.10	--
Toxaphene	23	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	0	--	--	--	--	--	--	--
Suspended sediment concentration	47	4	15	43	61	77	531	89
finer than 0.062 mm(sd)	47	12	54	67	67	86	98	22

*Includes only discharges corresponding to a water-quality sample.

Table 119.--Statistical summary of selected water-quality properties for Arkansas River at Dam No. 2, near Gillett, Ark., 07265283 (June through September)

[N=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), strep.=streptococci, mm=millimeter, sd=sieve diameter. Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimer at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter), sediment particle-size distribution (percent). Alkalinity and hardness are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Discharge*	36	.0	3,580	22,300	32,800	41,200	144,000	37,100
Dissolved oxygen	33	5.9	7.1	7.6	7.8	8.4	10.4	1.0
pH	36	7.5	7.9	8.0	8.0	8.1	8.6	.2
Specific conductance	36	313	506	599	645	770	1260	202
Total alkalinity	24	52	79	94	90	103	110	16
Total hardness	25	97	120	130	132	140	170	20
Dissolved calcium	23	28.0	34.0	38.0	38.0	41.0	48.0	5.8
Dissolved magnesium	23	6.5	7.7	8.0	9.0	10.0	13.0	1.9
Dissolved sodium	19	39.0	49.0	65.0	76.1	100.0	130.0	30.9
Sodium adsorption ratio	19	2	2	3	3	4	5	1
Dissolved potassium	19	1.9	3.1	3.5	3.8	4.1	6.3	1.1
Dissolved sulfate	36	20.0	40.0	44.0	50.0	56.2	92.0	15.2
Dissolved chloride	36	46.0	71.3	98.5	115.7	147.5	310.0	56.3
Dissolved fluoride	19	.1	.2	.2	.2	.3	.3	.1
Dissolved silica	19	.4	.9	3.0	2.9	5.0	6.3	2.0
Dissolved solids	23	198	294	354	367	451	540	97
Total phosphorus	36	.02	.07	.11	.14	.14	1.30	.20
Total nitrogen	10	.98	1.10	1.20	1.58	1.65	4.20	.96
Total organic nitrogen	10	.44	.82	1.05	1.01	1.30	1.40	.33
Total nitrite + nitrate	14	< .10	< .10	.31	.46	.52	2.70	.68
Total ammonia	17	< .01	.03	.06	.07	.10	.18	.05
Fecal coliforms(31625)	18	6	26	93	--	355	90,000	--
Fecal strep.(31673)	19	2	50	600	--	4,800	52,000	--
Turbidity	19	<1.0	5.0	19	21	30	80.0	21.8
Arsenic	10	< 10	< 10	< 10	--	< 10	< 10	--
Cadmium	15	< 20	< 20	< 20	--	< 20	< 20	--
Chromium	14	< 20	< 20	< 20	--	< 20	20	--
Copper	19	< 20	< 20	< 20	--	< 20	110	--
Lead	5	3	4	6	19	41	75	31
Iron	18	270	490	960	1,100	1,300	4,600	1,000
Manganese	18	66	90	100	120	140	200	42
Zinc	19	< 20	< 20	20	29	31	140	30

Table 119.--Statistical summary of selected water-quality properties for Arkansas River at Dam No. 2, near Gillett, Ark., 07265283 (June through September)--Continued

Property	N	Minimum	25th percentile	Median	Mean	75th percentile	Maximum	Standard deviation
Aldrin	16	< .002	< .002	< .002	--	< .002	< .002	--
DDE	14	< .002	< .002	< .002	--	< .002	< .002	--
DDT	16	< .004	< .004	< .004	--	< .004	< .004	--
Dieldrin	16	< .002	< .002	< .002	--	< .002	< .002	--
Endrin	16	< .002	< .002	< .002	--	< .002	< .002	--
Lindane	16	ND	ND	ND	--	ND	ND	--
Malathion	0	--	--	--	--	--	--	--
Methyl parathion	16	< .04	< .04	< .04	--	.04	.10	--
Toxaphene	16	< 2	< 2	< 2	--	< 2	< 2	--
2,4-D	0	--	--	--	--	--	--	--
Suspended sediment concentration	19	4	11	43	86	78	531	132
finer than 0.062 mm (sd)	19	12	44	57	59	84	98	25

*Includes only discharges corresponding to a water-quality sample.

Table 120.--Water quality of selected rivers in study area

[Ranges and single values shown are representative of medians for individual stations operated by Arkansas Department of Pollution Control and Ecology or U.S. Geological Survey as part of water-quality programs. Letters following typical values indicate most common directions of time trends (most common direction listed first): increasing (I), decreasing (D), or no trend (NT). °C= degrees Celsius, µS = microsiemens per centimeter at 25 °Celsius, mg/L = milligrams per liter, $CaCO_3$ = calcium carbonate, mL = milliliters, and µg/L = micrograms per liter]

River and number of stations	Specific conductance in µS	Total alkalinity in mg/L as $CaCO_3$	Total hardness in mg/L[a] as $CaCO_3$
Arkansas River (4)	490-520 (NT)	70- 85	110-120
Bayou Meto-Bayou Two Prairie (3)	110-275 (NT)	35- 65	35- 60
Black River-Current River (5)	230-300 (NT)	100-160	115-165
Cache River-Bayou DeView (6)	130-190 (NT)	40- 70	40- 65
St. Francis River (4)	185-310 (NT)	70-130	90-140
St. Francis River tributaries (6)	245-470 (NT)	70-200	75-110
White River (7)	225-285 (NT)	95-145	110-145

River and number of stations	Dissolved sulfate as SO_4, in mg/L	Dissolved chloride, in mg/L	Dissolved solids, in mg/L
Arkansas River (4)	40 (NT)	75-85 (NT)	285-325
Bayou Meto-Bayou Two Prairie (3)	8-12 (I)	10-40 (NT)	100-165
Black River-Current River (5)	4- 8 (I)	3- 6 (NT)	140-185
Cache River-Bayou DeView (6)	6-16 (NT,I)	7-17 (I,NT)	100-210
St. Francis River (4)	9-19 (I,NT)	6- 8 (I,NT)	130-200
St. Francis River tributaries (6)	12-32 (NT)	6-13 (NT)	140-310
White River (7)	5- 8 (I)	4- 7 (NT)	130-170

[a]0-60 mg/L, soft; 61-120 mg/L, moderately hard; 121-180 mg/L, hard; greater than 180 mg/L, very hard (from Durfor and Becker, 1964, p. 27) in Hem, 1985, p. 159).

Table 120.--Water quality of selected rivers in study area--Continued

River and number of stations	Total phosphorus as P, in mg/L	Total ammonia as N, in mg/L	Total nitrite plus nitrate as N, in mg/L
Arkansas River (4)	0.08- .12 (NT)	<0.10- .10 (D)	0.20- .42
Bayou Meto-Bayou Two Prairie (3)	.20- .40 (NT)	.10- .40 (NT)	.25- .50
Black River-Current River (5)	.04- .09 (NT)	< .10 (D)	.15- .25
Cache River-Bayou DeView (6)	.20- .97 (NT)	.10- .20 (D)	.10- .68
St. Francis River (4)	.13- .32 (NT)	< .10- .11 (D)	.09- .41
St. Francis River tributaries (6)	.21- .70 (NT)	< .10- .31 (NT)	.05- .63
White River (7)	.03- .11 (NT)	< .10 (D)	.15- .27

River and number of stations	5-day biochemical oxygen demand, in mg/L	Fecal coliform bacteria, colonies per 100 mL	Turbidity, in nephelometric turbidity units
Arkansas River (4)	1.5-2.5	20-400 (D,NT)	15- 25
Bayou Meto-Bayou Two Prairie (3)	2.3-2.9	70-180 (NT)	30- 55
Black River-Current River (5)	1.5-2.1	20- 60 (NT)	5- 25
Cache River-Bayou DeView (6)	2.5-4.9	60-400 (D)	45-100
St. Francis River (4)	2.6-3.2	50-170 (D,NT)	30- 90
St. Francis River tributaries (6)	2.3-5.4	20-285 (D,NT)	25- 85
White River (7)	1.9-2.6	25- 70 (NT,D)	5- 35

River and number of stations	Total arsenic, in µg/L	Total recoverable cadmium, in µg/L	Total recoverable chromium, in µg/L
Arkansas River (4)	<20	<20	<20
Bayou Meto-Bayou Two Prairie (3)	<10	<20	<20
Black River-Current River (5)	<10	<20	<20
Cache River-Bayou DeView (6)	<10	<20	<20
St. Francis River (4)	<10	<20	<20
St. Francis River tributaries (6)	<10	<20	<20
White River (7)	<10	<20	<20

Table 120.--Water quality of selected rivers in study area--Continued

River and number of stations	Total recoverable copper, in µg/L	Total recoverable iron, in µg/L	Total recoverable lead, in µg/L
Arkansas River (4)	<20	700-1,100	< 20
Bayou Meto-Bayou Two Prairie (3)	<20	1,800-2,900	< 20
Black River-Current River (5)	<20	350-1,400	< 20
Cache River-Bayou DeView (6)	<20	1,800-4,800	< 20
St. Francis River (4)	<20	2,300-7,600	< 20
St. Francis River tributaries (6)	<20	1,700-4,900	< 20
White River (7)	<20	250-1,700	< 20

River and number of stations	Total recoverable manganese, in µg/L	Total recoverable zinc, in µg/L	Total aldrin, in µg/L
Arkansas River (4)	80-120	20-35	<0.01
Bayou Meto-Bayou Two Prairie (3)	180-600	<20-27	< .002
Black River-Current River (5)	70-180	<20	< .002
Cache River-Bayou DeView (6)	300-440	<20-40	< .01
St. Francis River (4)	170-340	<20-60	< .01
St. Francis River tributaries (6)	140-520	<20-50	< .01
White River (7)	70-150	<20-40	< .01

River and number of stations	Total DDE, in µg/L	Total DDT, in µg/L	Total dieldrin, in µg/L	Total endrin, in µg/L	Total lindane, in µg/L
Arkansas River (4)	<0.01	<0.01	<0.01	<0.01	<0.01
Bayou Meto-Bayou Two Prairie (3)	< .002	< .004	< .002	< .002	ND
Black River-Current River (5)	< .002	< .004	< .002	< .002	ND
Cache River-Bayou DeView (6)	< .01	< .01	<.01-.01	< .01	< .01
St. Francis River (4)	< .01	< .01	< .01	< .01	ND
St. Francis River tributaries (6)	< .01	< .01	<.002-.01	< .01	< .01
White River (7)	< .01	< .01	< .01	< .01	< .01

Table 120.--Water quality of selected rivers in study area--Continued

River and number of stations	Total malathion, in µg/L	Total methyl parathion, in µg/L	Total toxaphene, in µg/L	Total 2,4-D in µg/L
Arkansas River (4)	<0.05	<0.04	<2	ND
Bayou Meto-Bayou Two Prairie (3)	< .05	< .04	<2	ND
Black River-Current River (5)	< .05	< .04	<2	ND
Cache River-Bayou DeView (6)	< .05	< .04	<2	ND-0.05
St. Francis River (4)	< .05	< .04	<2	ND
St. Francis River tributaries (6)	< .05	< .04	<2	ND- .04
White River (7)	< .05	< .04	<2	ND

River and number of stations	Suspended sediment, in mg/L	Suspended sediment percent finer than 0.062 millimeters
Arkansas River (2)	27- 43	67-79
Bayou Meto-Bayou Two Prairie (0)	--	--
Black River-Current River (0)	--	--
Cache River-Bayou DeView (3)	67-101	93-94
St. Francis River (9)	103-174	74-96
St. Francis River tributaries (14)	51-237	65-97
White River (2)	59- 74	80-87

Table 121.--Statistical summary of daily discharge and suspended sediment data for Cache River at Patterson, Ark., 07077500

[Water year 1988 summarized. Number of observations was 366. Highest suspended sediment concentrations occurred at discharges of 1,000 to 2,500 cubic feet per second. Suspended sediment concentrations seldom exceeded 75 milligrams per liter at discharges greater than 4,000 cubic feet per second]

	Mean discharge (cubic feet per second)	Mean suspended sediment concentration (milligrams per liter)	Suspended sediment discharge (tons per day)
Minimum	5	18	<1
10th Percentile	22	37	3
20th Percentile	63	46	12
30th Percentile	247	55	53
40th Percentile	393	64	85
50th Percentile	603	72	118
60th Percentile	824	82	166
70th Percentile	1,050	98	313
80th Percentile	1,610	132	443
90th Percentile	2,870	183	645
95th Percentile	3,600	235	933
99th Percentile	8,200	292	2,060
Maximum	9,110	310	3,240

Table 122.--Statistical summary of daily discharge and suspended sediment data for Cache River near Cotton Plant, Ark., 07077555

[Water year 1988 summarized. Number of observations was 366. Highest suspended sediment concentrations occurred at discharges of less than 1,000 cubic feet per second. Suspended sediment concentrations seldom exceeded 60 milligrams per liter at discharges greater than 4,000 cubic feet per second]

	Mean discharge (cubic feet per second)	Mean suspended sediment concentration (milligrams per liter)	Suspended sediment discharge (tons per day)
Minimum	25	22	3
10th Percentile	50	38	10
20th Percentile	107	46	35
30th Percentile	257	54	70
40th Percentile	492	63	99
50th Percentile	723	71	143
60th Percentile	987	81	215
70th Percentile	1,200	92	286
80th Percentile	1,810	116	333
90th Percentile	3,490	154	448
95th Percentile	5,520	207	606
99th Percentile	8,690	263	1,360
Maximum	9,290	346	1,760

Table 123.--Statistical summary of daily discharge and suspended sediment data for St. Francis River at St. Francis, Ark., 07040100

[Water years 1986 through 1988 summarized. Number of observations was 1,096. The relation between suspended sediment concentration and discharge is highly variable but highest suspended sediment concentrations occurred at discharges of approximately 1,000 to 5,000 cubic feet per second]

	Mean discharge (cubic feet per second)	Mean suspended sediment concentration (milligrams per liter)	Suspended sediment discharge (tons per day)
Minimum	71	19	4
10th Percentile	82	70	49
20th Percentile	248	89	84
30th Percentile	362	107	129
40th Percentile	548	131	208
50th Percentile	826	159	359
60th Percentile	1,260	187	629
70th Percentile	2,020	224	1,150
80th Percentile	3,040	294	1,780
90th Percentile	4,210	482	3,100
95th Percentile	5,110	720	5,090
99th Percentile	6,480	1,700	20,300
Maximum	11,600	4,050	43,200

Table 124.--Statistical summary of pesticides data for a selected U.S. Army Corps of Engineers station on Whitemans Creek about 4 miles northwest of Trumann, Ark.

[U.S. Army Corps of Engineers provided data upon which summary is based. Concentrations in water are in micrograms per liter. Data are for August 1983 through August 1985]

Pesticide	Number of observation	Minimum	Median	Maximum
Aldrin	9	< 0.01	< 0.01	< 0.01
Chlordane	9	< .01	< .01	< .01
DDD	9	< .01	< .01	< .01
DDE	9	< .01	< .01	.02
DDT	9	< .01	< .01	< .01
Diazinon	9	< .01	< .01	< .01
Dieldrin	9	< .01	< .01	< .01
Endrin	9	< .01	< .01	< .01
Ethion	9	< .01	< .01	< .01
Ethyl parathion	9	< .01	< .01	< .01
Heptachlor	9	< .01	< .01	< .01
Lindane	9	< .01	< .01	.01
Malathion	9	< .01	< .01	< .01
Methoxychlor	9	< .01	< .01	< .01
Methyl parathion	9	< .01	< .01	< .01
Toxaphene	9	< .01	< .5	< .5

Table 125.--Statistical summary of pesticides data for a selected U.S. Army Corps of Engineers station on Eightmile Creek about 5 miles southeast of Paragould, Ark.

[U.S. Army Corps of Engineers provided data upon which summary is based. BTM=bottom material. Concentrations in water are in micrograms per liter. Concentrations in bottom material are in micrograms per kilogram. Data are for January 1986 through December 1987]

Pesticide	Number of observation	Minimum	Median	Maximum
Aldrin	9	< 0.01	< 0.01	< 0.01
Aldrin in BTM	1	< 10	< 10	< 10
Chlordane	9	< .01	< .01	< .1
Chlordane in BTM	1	< 10	< 10	< 10
DDD	9	< .01	< .01	< .1
DDD in BTM	1	< 10	< 10	< 10
DDE	9	< .01	< .01	< .1
DDE in BTM	1	< 10	< 10	< 10
DDT	9	< .01	< .01	< .1
DDT in BTM	1	< 10	< 10	< 10
Diazinon	9	< .01	< .01	1.1
Diazinon in BTM	1	< 10	< 10	< 10
Dieldrin	9	< .01	< .01	< .1
Dieldrin in BTM	1	< 10	< 10	< 10
Endrin	9	< .01	< .01	< .1
Endrin in BTM	1	< 10	< 10	< 10
Ethion	9	< .01	< .01	< .1
Ethion in BTM	1	< 10	< 10	< 10
Heptachlor	9	< .01	< .01	< .1
Heptachlor in BTM	1	< 10	< 10	< 10
Lindane	9	< .01	< .01	< .1
Lindane in BTM	1	< 10	< 10	< 10
Malathion	9	< .01	< .01	< .1
Malathion in BTM	1	< 10	< 10	< 10
Methoxychlor	9	< .01	< .01	< .1
Methoxychlor in BTM	1	< 10	< 10	< 10
Methyl parathion	9	< .01	< .01	< .1
Methyl parathion in BTM	1	< 10	< 10	< 10
Parathion	9	< .01	< .01	< .1
Parathion in BTM	1	< 10	< 10	< 10
Toxaphene	9	< .5	< .5	< .5
Toxaphene in BTM	1	< 500	< 500	< 500

Table 126.--Bottom-material pesticide quality at selected locations in study area

[Values are medians in micrograms per kilogram. Data for basins are from Lamb (1979), Bryant and others (1979), Petersen (1981a), Lamb (1978a) and Lamb (1978b)]

	Aldrin	Chlordane	DDD	DDE	DDT
Bayou DeView at Morton	0.2	<1	9.3	7.6	5.6
Black River at Black Rock	< .1	1	.3	.3	< .1
Cache River at Patterson	< .1	<1	2.2	2.5	4.1
Flat Bayou basin	.1	<1	76	100	13
L'Anguille River near Colt	.6	<1	17	16	5.6
L'Anguille River basin	.4	<1	18	16	6.4
Larkin Creek basin	< .1	<1	5.3	< .1	1.9
St. Francis River at Parkin	< .1	<1	< .1	< .1	< .1
Tyronza River basin	< .1	<1	1.0	1.1	.6
Village Creek basin	< .1	<1	5.1	5.9	3.4
White River at Clarendon	< .1	<1	< .1	< .1	< .1

	Diazinon	Dieldrin	Endosulfan	Endrin	Ethion
Bayou DeView at Morton	<0.1	5.6	--	<0.1	<0.1
Black River at Black Rock	< .1	.1	--	< .1	< .1
Cache River at Patterson	< .1	.4	--	< .1	< .1
Flat Bayou basin	< .1	.1	--	2.6	< .1
L'Anguille River near Colt	< .1	3.8	--	.4	< .1
L'Anguille River basin	--	2.5	--	< .1	--
Larkin Creek basin	< .1	1.0	--	.2	< .1
St. Francis River at Parkin	< .1	.6	< .1	< .1	< .1
Tyronza River basin	< .1	.1	--	< .1	< .1
Village Creek basin	< .1	< .1	< .1	< .1	< .1
White River at Clarendon	< .1	< .1	< .1	< .1	< .1

Table 126.--Bottom-material pesticide quality at selected locations in study area--Continued

	Heptachlor	Heptachlor epoxide	Lindane	Malathion	Methoxychlor
Bayou DeView at Morton	<0.1	<0.1	<0.1	<0.1	<0.1
Black River at Black Rock	< .1	< .1	< .1	< .1	.6
Cache River at Patterson	< .1	< .1	< .1	< .1	< .1
Flat Bayou basin	< .1	.1	< .1	< .1	< .1
L'Anguille River near Colt	< .1	< .1	< .1	< .1	< .1
L'Anguille River basin	< .1	< .1	< .1	--	--
Larkin Creek basin	< .1	< .1	< .1	< .1	< .1
St. Francis River at Parkin	< .1	< .1	< .1	< .1	< .1
Tyronza River basin	< .1	< .1	< .1	< .1	< .1
Village Creek basin	< .1	< .1	< .1	< .1	< .1
White River at Clarendon	< .1	< .1	< .1	< .1	< .1

	Methyl parathion	Methyl trithion	Mirex	Parathion	Toxaphene	Trithion
Bayou DeView at Morton	<0.1	<0.1	--	<0.1	< 10	<0.1
Black River at Black Rock	< .1	< .1	--	< .1	< 10	< .1
Cache River at Patterson	< .1	< .1	--	< .1	< 10	< .1
Flat Bayou basin	< .1	< .1	--	< .1	< 10	< .1
L'Anguille River near Colt	< .1	< .1	--	< .1	< 10	< .1
L'Anguille River basin	--	--	--	--	< 10	--
Larkin Creek basin	< .1	< .1	< .1	< .1	30	< .1
St. Francis River at Parkin	< .1	< .1	< .1	< .1	< 10	< .1
Tyronza River basin	< .1	< .1	--	< .1	< 10	< .1
Village Creek basin	< .1	< .1	--	< .1	< 10	< .1
White River at Clarendon	< .1	< .1	< .1	< .1	< 10	< .1

Table 127.--Selected water-quality standards and criteria

[Standards and criteria are often for specific conditions. Refer to cited reference for complete descriptions. µg/L = microgram per liter, mg/L = milligrams per liter, NTU = nephelometric turbidity unit]

Property and units	Arkansas water-quality standards[a]	Freshwater aquatic life acute criteria[b]	Freshwater aquatic life chronic criteria[b]	Fish consumption criteria[b]	Irrigation criteria
Aldrin (µg/L)	3.0	4.0	--	0.000079	--
Ammonia as N (mg/L)	--	[c]50-200	[c]0.7-2	--	--
Arsenic (µg/L)	--	--	--	17,500	--
Fecal coliform bacteria (colonies/ 100 mL)	[d] 200	--	--	--	--
Chlordane (µg/L)	2.4	2.4	.0043	.00048	--
Chloride (mg/L)	[e]10-250	860	230	--	[f]709
Copper (µg/L)	--	[g]18	[g]12	--	--
DDT (µg/L)	1.1	1.1	.001	.000024	--
DDE (µg/L)	1.1	1,050	--	--	--
Dieldrin (µg/L)	2.5	1.0	.0019	.000076	--
Endosulfan (µg/L)	.22	.22	.056	159	--
Endrin (µg/L)	.18	.18	.0023	--	--
Heptachlor (µg/L)	.52	.52	.0038	.0002	--
Iron (µg/L)	--	--	1,000	--	--
Lead (µg/L)	--	[g]82	[g]3.2	--	--
Lindane (µg/L)	.08	2.0	.08	.045	--
Malathion (µg/L)	--	.01	--	--	--
Methoxychlor (µg/L)	--	--	.03	--	--
Mirex (µg/L)	--	--	.001	--	--
Oxygen, dissolved (mg/L)	2-5	[h]3.0	[i]6.0	--	--
Parathion (µg/L)	--	.065	.013	--	--
Total phosphorus (µg/L)	[j].100	--	--	--	--
Solids, dissolved (mg/L)	180-600	--	--	--	[k]500-1,000
Sodium adsorption ratio	--	--	--	--	[l]18
Sulfate (mg/L)	20-100	--	--	--	--
Turbidity (NTU)	45-75	--	Variable[m]	--	--
Toxaphene (µg/L)	.73	.73	.0002	.0002	--
Zinc (µg/L)	--	[g]120	[g]110	--	--

[a]Arkansas Department of Pollution Control and Ecology (1988)

[b]U.S. Environmental Protection Agency (1986)

[c]Range based on pH of 7 to 8 and temperature range of 10 to 25 °Celsius. See U.S. Environmental Protection Agency (1986) for tables.

[d]30-day geometric mean between April 1 and September 30 in primary contact waters

[e]Not to be exceeded in more than 1 of 10 samples collected during 30 to 360 days

[f]20 milliequivalents per liter (709 mg/L) (National Academy of Sciences-National Academy of Engineering, 1974)

[g]Value shown is for hardness of 100 mg/L

[h]Warm-water instantaneous minimum to protect all but early life stages

[i]Warm-water 7-day mean to protect early life stages

[j]Guideline only

[k]Can have detrimental effects on sensitive crops (in U.S. Environmental Protection Agency, 1986 from National Technical Advisory Committee, 1968)

[l]Sodium adsorption ratio of 8 to 18 generally considered usable for general crops (in U.S. Environmental Protection Agency, 1986 from National Technical Advisory Committee, 1968)

[m]Settleable and suspended solids should not reduce the depth of the compensation point for photosynthetic activity by more than 10 percent from the seasonally established norm

Table 128.--Detected water-quality differences between Little Red River at Judsonia (07076634) and Bayou Two Prairie near Cabot (07264050)

[Listed are properties with significantly different ($p < 0.10$) mean values. June through September data were ranked and compared with a t-test. p is the probability associated with the computed t-statistic. The five-digit numbers in parentheses are parameter codes]

Property	p	River with higher mean value
Dissolved oxygen	< 0.001	Little Red River
Specific conductance	< .001	Bayou Two Prairie
Total alkalinity	.001	Bayou Two Prairie
Total hardness	< .001	Bayou Two Prairie
Dissolved sulfate	< .001	Bayou Two Prairie
Dissolved chloride	< .001	Bayou Two Prairie
Dissolved solids	< .001	Bayou Two Prairie
Total phosphorus	< .001	Bayou Two Prairie
Total nitrite plus nitrate	.011	Bayou Two Prairie
Total ammonia	< .001	Bayou Two Prairie
Biochemical oxygen demand	< .001	Bayou Two Prairie
Fecal coliforms (31616)	.009	Bayou Two Prairie
Turbidity	.027	Bayou Two Prairie
Total recoverable iron	< .001	Bayou Two Prairie
Total recoverable manganese	< .001	Bayou Two Prairie
Toxaphene	.003	Bayou Two Prairie

Table 129.--Minimum, median, and maximum values of selected water-quality properties for Wattensaw Bayou near Hazen, Ark., 07076950 (water years 1984 through 1987)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2). Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Hardness is reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	Median	Maximum
Discharge	31	0	24	760
Dissolved oxygen	44	1.1	7.2	12.6
pH	44	6.5	7.3	8.2
Total hardness	34	22	65	170
Dissolved sulfate	42	3.0	8.0	38
Dissolved chloride	46	3.0	14	48
Dissolved solids	45	12	145	285
Total phosphorus	41	.05	.17	.44
Total nitrite + nitrate	46	.01	.17	1.2
Total ammonia	40	< .01	.06	.32
BOD	41	1.3	2.6	6.4
Fecal coliforms (31616)	45	4	170	5,600
Turbidity	41	7.8	40	180
Cadmium	41	<27	<27	<27
Chromium	40	<10	<10	10
Copper	45	<15	<15	28
Lead	39	<1	4	18
Zinc	34	<10	30	210
Aldrin	8	<.002	<.002	.002
DDE	3	<.001	<.001	<.001
DDT	3	<.002	<.002	<.002
Dieldrin	3	<.001	<.001	<.001
Endrin	8	<.001	<.001	.002
Lindane	3	<.01	<.01	<.01
Methyl parathion	3	<.01	<.01	<.01
Toxpahene	8	<1	<1	<1

*Includes only discharges corresponding to a water-quality sample.

Table 130.--Detected water-quality differences between White River at DeValls Bluff (07077000) and Bayou Two Prairie near Cabot (07264050)

[Listed are properties with significantly different ($p < 0.10$) mean values. June through September data were ranked and compared with a t-test. p is the probability associated with the computed t-statistic. The five-digit number in parentheses is a parameter code]

Property	p	River with higher mean value
Discharge	< 0.001	White River
Dissolved oxygen	< .001	White River
pH	< .001	White River
Specific conductance	< .001	White River
Total alkalinity	< .001	White River
Total hardness	< .001	White River
Dissolved sulfate	.022	Bayou Two Prairie
Dissolved chloride	< .001	Bayou Two Prairie
Dissolved solids	.073	White River
Total phosphorus	< .001	Bayou Two Prairie
Total nitrite plus nitrate	.003	Bayou Two Prairie
Total ammonia	< .001	Bayou Two Prairie
Biochemical oxygen demand	.015	Bayou Two Prairie
Fecal coliforms (31616)	< .001	Bayou Two Prairie
Total recoverable cadmium	.048	Bayou Two Prairie
Total recoverable copper	.055	Bayou Two Prairie
Total recoverable manganese	< .001	Bayou Two Prairie
Total recoverable zinc	.025	Bayou Two Prairie
2,4-D	.074	White River

Table 131.--Detected water-quality differences between Arkansas River at David D. Terry Lock and Dam below Little Rock (07263620) and Bayou Meto near Lonoke (07264000)

[Listed are properties with significantly different ($p < 0.10$) mean values. June through September data were ranked and compared with a t-test. p is the probability associated with the computed t-statistic]

Property	p	River with higher mean value
Discharge	< 0.001	Arkansas River
Dissolved oxygen	< .001	Arkansas River
pH	< .001	Arkansas River
Specific conductance	< .001	Arkansas River
Total hardness	.026	Arkansas River
Dissolved magnesium	.098	Bayou Meto
Dissolved sulfate	< .001	Arkansas River
Dissolved chloride	< .001	Arkansas River
Dissolved solids	< .001	Arkansas River
Total phosphorus	< .001	Bayou Meto
Total nitrite plus nitrate	< .001	Bayou Meto
Total ammonia	.001	Bayou Meto
Turbidity	< .001	Bayou Meto
Total arsenic	.064	Bayou Meto
Total recoverable iron	.001	Bayou Meto
Total recoverable manganese	< .001	Bayou Meto
Total recoverable lead	.099	Bayou Meto

Table 132.--Detected water-quality differences between Arkansas River at David D. Terry Lock and Dam below Little Rock (07263620) and Bayou Two Prairie near Cabot (07264050)

[Listed are properties with significantly different ($p < 0.10$) mean values. June through September data were ranked and compared with a t-test. p is the probability associated with the computed t-statistic]

Property	p	River with higher mean value
Discharge	< 0.001	Arkansas River
Dissolved oxygen	< .001	Arkansas River
pH	< .001	Arkansas River
Specific conductance	< .001	Arkansas River
Total alkalinity	.002	Arkansas River
Total hardness	< .001	Arkansas River
Dissolved sulfate	< .001	Arkansas River
Dissolved chloride	< .001	Arkansas River
Dissolved solids	< .001	Arkansas River
Total phosphorus	< .001	Bayou Two Prairie
Total nitrite plus nitrate	.021	Bayou Two Prairie
Total ammonia	< .001	Bayou Two Prairie
Turbidity	.003	Bayou Two Prairie
Total arsenic	.092	Bayou Two Prairie
Total recoverable cadmium	.073	Bayou Two Prairie
Total recoverable iron	< .001	Bayou Two Prairie
Total recoverable manganese	< .001	Bayou Two Prairie

Table 133.--Detected water-quality differences between Black River at Black Rock (07072500) and Bayou DeView near Gibson (07077660)

[Listed are properties with significantly different ($p < 0.10$) mean values. June through September data were ranked and compared with a t-test. p is the probability associated with the computed t-statistic]

Property	p	River with higher mean value
Discharge	< 0.001	Black River
Dissolved oxygen	.012	Black River
pH	.004	Black River
Total hardness	.005	Black River
Dissolved sulfate	< .001	Bayou DeView
Dissolved chloride	< .001	Bayou DeView
Dissolved solids	< .001	Bayou DeView
Total phosphorus	< .001	Bayou DeView
Total ammonia	.053	Bayou DeView
Biochemical oxygen demand	< .001	Bayou DeView
Turbidity	< .001	Bayou DeView

Table 134.--Detected water-quality differences between Black River at Black Rock (07072500) and Bayou DeView at Morton (07077700)

[Listed are properties with significantly different ($p < 0.10$) mean values. June through September data were ranked and compared with a t-test. p is the probability associated with the computed t-statistic. The five-digit number in parentheses is a parameter code]

Property	p	River with higher mean value
Discharge	< 0.001	Black River
Dissolved oxygen	< .001	Black River
pH	< .001	Black River
Total alkalinity	.096	Black River
Total hardness	.027	Black River
Dissolved magnesium	< .001	Black River
Sodium adsorption ratio	< .001	Bayou DeView
Dissolved sulfate	< .001	Bayou DeView
Dissolved chloride	< .001	Bayou DeView
Total phosphorus	< .001	Bayou DeView
Total nitrite plus nitrate	.005	Bayou DeView
Total ammonia	.002	Bayou DeView
Biochemical oxygen demand	< 001	Bayou DeView
Fecal streptococci (31673)	.073	Bayou DeView
Turbidity	< .001	Bayou DeView

Table 135.--Detected water-quality differences between Black River at Black Rock (07072500) and L'Anguille River near Colt (07047942)

[Listed are properties with significantly different ($p < 0.10$) mean values. June through September data were ranked and compared with a t-test. p is the probability associated with the computed t-statistic. The five-digit numbers in parentheses are parameter codes]

Property	p	River with higher mean value
Discharge	< 0.001	Black River
Dissolved oxygen	< .001	Black River
pH	< .001	Black River
Specific conductance	.010	L'Anguille River
Sodium adsorption ratio	< .001	L'Anguille River
Dissolved sulfate	< .001	L'Anguille River
Dissolved chloride	< .001	L'Anguille River
Dissolved solids	.034	L'Anguille River
Total phosphorus	< .001	L'Anguille River
Total nitrite plus nitrate	.015	L'Anguille River
Total ammonia	.010	L'Anguille River
Biochemical oxygen demand	< .001	L'Anguille River
Fecal coliforms (31625)	.067	L'Anguille River
Fecal streptococci (31673)	.002	L'Anguille River
Turbidity	< .001	L'Anguille River

Table 136.--Detected water-quality differences between Black River at Black Rock (07072500) and L'Anguille River at Marianna (07047964)

[Listed are properties with significantly different ($p < 0.10$) mean values. June through September data were ranked and compared with a t-test. p is the probability associated with the computed t-statistic]

Property	p	River with higher mean value
Discharge	0.008	Black River
Dissolved oxygen	< .001	Black River
pH	< .001	Black River
Dissolved sulfate	< .001	L'Anguille River
Dissolved chloride	< .001	L'Anguille River
Dissolved solids	.037	L'Anguille River
Total phosphorus	< .001	L'Anguille River
Total nitrite plus nitrate	.022	L'Anguille River
Total ammonia	.016	L'Anguille River
Biochemical oxygen demand	< .001	L'Anguille River
Turbidity	< .001	L'Anguille River

Table 137.--Detected water-quality differences between Black River at Black Rock (07072500) and Big Creek near Watkins Corner (07077960)

[Listed are properties with significantly different ($p < 0.10$) mean values. June through September data were ranked and compared with a t-test. p is the probability associated with the computed t-statistic]

Property	p	River with higher mean value
Discharge	< 0.001	Black River
Dissolved oxygen	< .001	Black River
pH	< .001	Black River
Total alkalinity	.013	Black River
Dissolved sulfate	.009	Big Creek
Dissolved chloride	< .001	Big Creek
Dissolved solids	.088	Big Creek
Total phosphorus	< .001	Big Creek
Total nitrite plus nitrate	.015	Big Creek
Total ammonia	.007	Big Creek
Biochemical oxygen demand	< .001	Big Creek
Turbidity	< .001	Big Creek

Table 138.--Detected water-quality differences between White River at DeValls Bluff (07077000) and Big Creek near Watkins Corner (07077960)

[Listed are properties with significantly different ($p < 0.10$) mean values. June through September data were ranked and compared with a t-test. p is the probability associated with the computed t-statistic. The five-digit number in parentheses is a parameter code]

Property	p	River with higher mean value
Discharge	< 0.001	White River
Dissolved oxygen	< .001	White River
pH	< .001	White River
Total alkalinity	.034	White River
Dissolved sulfate	< .001	Big Creek
Dissolved chloride	< .001	Big Creek
Dissolved solids	.039	Big Creek
Total phosphorus	< .001	Big Creek
Total nitrite plus nitrate	< .001	Big Creek
Total ammonia	< .001	Big Creek
Fecal coliforms (31616)	.001	Big Creek
Turbidity	< .001	Big Creek
Total recoverable copper	.098	Big Creek
Total recoverable lead	.007	Big Creek
Total recoverable iron	.048	Big Creek
Total recoverable manganese	.003	Big Creek
2,4-D	.073	White River

Table 139.--Minimum, median, and maximum values of selected water-quality properties for Boat Gunwale Slash near Holly Grove, Ark., 07077862 (water years 1984 through 1987)

[N=number of observations, BOD=5-day biochemical oxygen demand, five-digit numbers in parentheses=bacteria parameter codes (see table 2). Units are milligrams per liter (mg/L) except discharge (cubic feet per second), pH, specific conductance (microsiemens per centimeter at 25 °Celsius), bacteria (colonies per 100 milliliters), turbidity (nephelometric turbidity units), and trace metals and pesticides (total or total recoverable in micrograms per liter). Hardness is reported as $CaCO_3$, sulfate is reported as SO_4, and the phosphorus and nitrogen species are reported as P and N]

Property	N	Minimum	Median	Maximum
Discharge	0	--	--	--
Dissolved oxygen	41	0.1	3.6	10.6
pH	43	6.1	7.0	7.8
Total hardness	34	24	56	140
Dissolved sulfate	39	1.0	6.0	94
Dissolved chloride	40	2.0	5.0	13
Dissolved solids	44	34	110	217
Total phosphorus	40	.06	.20	3.4
Total nitrite + nitrate	45	< .01	.03	.31
Total ammonia	39	< .01	.06	3.7
BOD	39	0.3	2.2	19
Fecal coliforms (31616)	45	4	70	2,900
Turbidity	44	2.0	15	360
Cadmium	40	<27	<27	<27
Chromium	42	<10	<10	52
Copper	42	<15	<15	32
Lead	41	<1	2	22
Zinc	28	<10	30	80
Aldrin	16	<.002	<.002	<.002
DDE	8	<.001	<.001	.002
DDT	8	<.002	<.002	.006
Dieldrin	11	<.001	<.001	.003
Endrin	16	<.001	<.001	.004
Lindane	8	<.01	<.01	<.01
Methyl parathion	11	<.10	<.10	<.10
Toxpahene	16	<1	<1	<1

Table 140.--Statistical summary of selected water-quality properties of water from the alluvial aquifer in potential artificial recharge areas

[Number=number of observations, five-digit numbers in parentheses=bacteria parameter codes (see table 2), ND=not detected. Units are milligrams per liter except pH, turbidity (nephelometric turbidity units), bacteria (colonies per 100 milliliters), and total and dissolved iron (micrograms per liter). Hardness and alkalinity are reported as $CaCO_3$, sulfate is reported as SO_4, silica is reported as SiO_2, and nitrate is reported as N]

Property	N	Minimum	25th percentile	50th percentile	75th percentile	Maximum
Grand Prairie area (Arkansas, Lonoke, and Prairie Counties)						
pH	193	5.6	7.1	7.4	8.0	8.6
Fecal coliforms (31616)	2	1	1	1	1	1
Fecal coliforms (31625)	1	1	1	1	1	1
Total hardness	181	10	150	240	350	640
Total alkalinity	121	11	138	180	268	474
Dissolved calcium	60	2.2	33	55	82	190
Dissolved magnesium	58	1.1	8.4	14	21	44
Dissolved sodium	172	2.3	16	26	48	120
Dissolved potassium	142	.40	1.4	2.0	3.1	5.9
Dissolved sulfate	124	5	5	10	22	200
Dissolved chloride	199	2.0	16	28	57	400
Dissolved fluoride	19	.1	.10	.20	.30	.50
Dissolved silica	20	8.6	15	26	33	42
Dissolved solids	59	88	186	260	436	832
Total nitrate	2	.02	.02	.04	.07	.07
Dissolved nitrate	48	.01	.07	.12	.22	5.2
Total recoverable iron	98	ND	4,400	12,000	17,000	40,000
Dissolved iron	41	ND	30	120	980	6,000
West of Crowleys Ridge (Cross, Poinsett, St. Francis, and Woodruff Counties)						
pH	30	5.5	6.7	7.0	7.6	8.2
Fecal coliforms (31616)	0	--	--	--	--	--
Fecal coliforms (31625)	0	--	--	--	--	--
Total hardness	30	13	66	170	260	330
Total alkalinity	30	10	77	186	276	341
Dissolved calcium	30	2.2	15	45	72	92
Dissolved magnesium	30	1.6	6.4	13	20	30
Dissolved sodium	30	3.9	6.7	9.0	16	45
Potassium	30	.1	1.0	1.4	1.7	3.1
Sulfate	30	.7	5.6	9.7	15	130
Chloride	30	1.5	4.6	6.4	11	23
Fluoride	8	.1	.1	.2	.2	.3
Dissolved silica	27	2.3	25	32	35	36
Dissolved solids	11	235	342	369	411	465
Total nitrate	0	--	--	--	--	--
Dissolved nitrate	11	.01	.01	.02	.23	.81
Total recoverable iron	3	490	490	3,700	6,400	6,400
Dissolved iron	28	ND	3	12	1,100	6,900

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