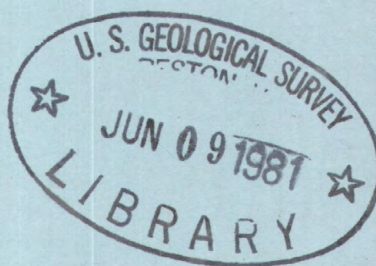


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Water Resources Data for Tennessee



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TN-79-1

WATER YEAR 1979

Prepared in cooperation with the Tennessee
Department of Conservation, Division of Water
Resources; the Tennessee Valley Authority; and
with other State, municipal, and Federal agencies

CALENDAR FOR WATER YEAR 1979

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Water Resources Data for Tennessee

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UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. William Menard, Director

For information on the water program in Tennessee write to
District Chief, Water Resources Division
U.S. Geological Survey
A-413 Federal Building, U.S. Courthouse
Nashville, Tennessee 37203

1981

PREFACE

This report was prepared by personnel of the Tennessee district of the Water Resources Division of the U.S. Geological Survey under the supervision of Stanley P. Sauer, District Chief, and Robert L. Dingman, Regional Hydrologist, Southeastern Region. It was done in cooperation with the State of Tennessee and with other agencies.

This report is one of a series issued by State. General direction for the series is by J. S. Cragwall, Jr., Chief Hydrologist, U.S. Geological Survey, and Philip Cohen, Assistant Chief Hydrologist for Scientific Publications and Data Management.

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(Letter after station name designates type of data: (d) discharge, (c) chemical, (b) biological, (t) water temperature, (s) sediment, (e) elevation or contents, (p) pesticides)

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CANNON COUNTY

Well 354823086104400 Local number Cn:D-1..... 465

CARTER COUNTY

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CUMBERLAND COUNTY

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WATER RESOURCES DATA FOR TENNESSEE, 1979

INTRODUCTION

Water resources data for the 1979 water year for Tennessee consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground-water wells. This volume contains records for water discharge at 110 gaging stations; stage only at one gaging station; stage and contents at 27 lakes and reservoirs; water quality at 67 stations, 32 of these at gaging stations; and 27 wells; and water levels at 27 observation wells. Also included are data for 105 crest-stage partial-record stations, 48 low-flow partial-record stations, and 80 coal-hydrology partial-record stations. Locations of these sites are shown on figures 5 and 6. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous stream and spring measurements and analyses. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Tennessee.

Records of discharge and stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from the Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202.

For water years 1961 through 1974, streamflow data were released by the Geological Survey in annual reports on the State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published in official Survey reports on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report TN 79-1." For archiving and general distribution, the reports for water years 1971-74 are also identified as water-data reports. These water-data reports are for sale, in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Additional information, including current prices, for ordering specific reports may be obtained from the district chief at the address given on the back of the title page or by telephone (615) 251-5424.

COOPERATION

The U.S. Geological Survey and organizations of the State of Tennessee have had cooperative agreements for the systematic collection of stream flow records since 1918, for ground-water levels since 1946, and for water-quality records since 1960. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

Tennessee Department of Conservation, A. R. Tuck, commissioner, through Division of Water Resources, Robert A. Hunt, director.

Tennessee Department of Public Health, E. W. Fowinkle, commissioner, through Water Quality Control Division, Elmo Lunn, director.

Tennessee Department of Transportation, W. B. Sansom, commissioner, through Lewis Evans, director of Bureau of Highways and Clellon L. Loveall, engineer of structures and Richard L. Iddins, Jr., roadway design engineer.

City of Lawrenceburg, Ivan Johnson, mayor.

City of Memphis, Wyeth Chandler, mayor.

City of Murfreesboro, James Clark, superintendent, water and sewer department.

Lincoln County Utility Board, W. W. Newman, Jr., chairman.

Shelby County, Roy Nixon, mayor.

Metropolitan Government of Nashville and Davidson County, Richard H. Fulton, mayor, through Department of Public Works, W. D. Lamb, director.

WATER RESOURCES DATA FOR TENNESSEE, 1979

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, Nashville District, in collecting records for 19 gaging stations and 19 water-quality stations, by the Tennessee Valley Authority for 42 gaging stations, 9 thermograph stations, and water-quality analyses at 40 stations, and by the Federal Power Commission (licensee Aluminum Company of America) for one gaging station. Also the Tennessee Valley Authority assisted in collecting discharge and water-quality data at some miscellaneous and partial-record stations. All data are published in this report.

The following organizations also aided in collecting records for publication in this report:

Bowaters Southern Paper Corporation
Cities Service Company (Copperhill, Tennessee Operations)

Organizations that supplied data are acknowledged in station descriptions.

ACKNOWLEDGMENT

Tennessee district personnel who contributed significantly to the collection and preparation of data in this report were: V. J. May, chief, Hydrologic Data Section; Bernard J. Frederick, chief, Knoxville Subdistrict; Braxtel L. Neely, chief, Memphis Subdistrict; and Charles R. Burchett, chief, Nashville Subdistrict.

HYDROLOGIC CONDITIONS

Floods

Record or near record rainfall at many precipitation stations during the 1979 water year resulted in numerous floods and above average streamflow throughout most of Tennessee. Rainfall during the water year was 131 percent of normal at Chattanooga, 121 percent at Knoxville, 124 percent at Dyersburg, and 156 percent at Memphis. At Nashville rainfall was 163 percent of normal making this the wettest year at Nashville, and throughout a large part of middle Tennessee, since record began in 1880. Some monthly totals at several stations exceeded 300 percent of normal. In eastern Tennessee, at Chattanooga and Knoxville, rainfall was above normal for 7 months during the year. In central and western Tennessee, at Nashville and Memphis, respectively, rainfall was above normal for 9 months at Nashville and 10 months at Memphis.

An annual maximum discharge occurred every month from December to September at a gaging station somewhere in the statewide network. The most prevalent dates were April 1-5 and May 3 in the western part of Tennessee, December 8-9, May 4 and September 13 in the central part, and March 4 in the eastern part. At most gaging stations, the number of flood peaks above the base was well above average. Some stations recorded as many as 12 and the statewide average was about 7. In a normal year, 3 or 4 floods will exceed the pre-selected base discharge for flood peaks at most long-term gaging stations. Except at isolated stations, almost all floods statewide during the water year had a recurrence interval of less than 10 years and most were less than 2 years.

Following below normal runoff conditions in October and near normal conditions in November, a storm system moved across Tennessee on December 3-4 and produced more than 5 inches of rain in central and western Tennessee. On December 7-9, with many streams still near bankfull from the previous storm, another system moved across the State and brought an additional 8 inches of rain over much of the same area. At many gaging stations these two storms produced the maximum floods for the year.

The annual maximum recorded flood at several gages in western Tennessee occurred as a result of a statewide storm system April 1-4 which was preceded by 4 months of above normal rainfall. Floods from this storm were generally in the 10-year range except at a few small stream stations where the recurrence interval approached 100 years, the most notable of which was Yellow Creek near Shiloh in Montgomery County. Storms on April 9 and 11-14 caused floods, some of which were almost as large as the earlier floods, on most of the same streams.

Storm systems moved across Tennessee almost weekly from December through April culminating in rainfall ranging from 4 to 8 inches on May 3-4. This rainfall caused record-breaking floods on many small streams in central Tennessee. At Franklin, just south of Nashville, 4.7 inches fell during the 4-hour period prior to 3:00 a.m. on May 4. Six counties in central Tennessee, including Davidson County, were declared federal disaster areas. Uninsured flood damage was estimated at \$65 million. The flood on Mill Creek, which flows through the southeast section of Nashville, exceeded the maximum known flood of 1955 by as much as 5 feet and caused over \$30 million in damage. At the gaging station Mill Creek near Antioch, the peak stage was 4 feet higher than the previous maximum during the period of record (1953-79). Field investigations indicate that this was probably the highest flood in at least 60 or 70 years. The peak discharge in the upper part of the basin was about 1.5 times the 100-year flood discharge while in the lower part of the basin it was about equal to the 100-year flood discharge.

Remnants of Hurricane Frederic in combination with a passing cold front September 13-14 produced up to 8 inches of rain in a 24-hour period in central and parts of western Tennessee. Nashville reported 6.68 inches which was the largest 24-hour total ever recorded. Flooding along several of the same small streams hit in May in central Tennessee approached the 100-year recurrence level and caused several million dollars of damage, much of it to unharvested farm crops. Richland Creek at Charlotte Avenue, at Nashville, reached a new maximum for the period of record, which goes back to 1964. Additional rainfall on the 20th and 27th pushed the September total to 11.4 inches in Nashville, also an all-time record.

Mean flow

Mean annual streamflow for the 1979 water year was well above the long-term average discharge at most gaging stations. Flows in the Cumberland and Mississippi River basins were substantially greater than long-term averages while flows in the Tennessee River basin varied from normal to significantly greater than normal. Figure 2 compares monthly runoff for the base period 1941-70 to runoff for the 1979 water year at three representative gages.

In the upper Cumberland River basin, the Wolf River near Byrdstown gage had the greatest deviation from the long-term average, 153 percent. The annual mean flow of $293 \text{ ft}^3/\text{s}$ equalled the high of record (1943-79) which occurred in 1975. Flow on the South Fork Cumberland River at the Stearns, Kentucky gage was 122 percent above the annual long-term average. The mean flow at the Caney Fork near Rock Island gage was 107 percent of normal, the smallest deviation from normal in the upper Cumberland River basin in Tennessee.

In the lower reaches of the Cumberland River basin, deviations from long-term mean annual flows ranged from a low of 125 percent at the West Fork Stones River at Manson Pike at Murfreesboro gage, to a high of 211 percent at the gaging station Sulphur Fork Red River near Adams. The annual mean flow was $525 \text{ ft}^3/\text{s}$ at the Adams gage, which is the highest of record (1940-79). The previous high was $485 \text{ ft}^3/\text{s}$ in 1974. Flow at the Richland Creek at Charlotte Avenue at Nashville gage was 197 percent of the long-term average.

Mean annual flows on the main stem Cumberland River gages ranged from 137 percent of normal at Carthage to 145 percent at Old Hickory. All flows on the Cumberland River are highly regulated.

In the Tennessee River basin above Chattanooga, the greatest deviation from normal was 141 percent of normal at the Nolichucky River at Embreeville gage. The mean flow at the Embreeville gage, $1,932 \text{ ft}^3/\text{s}$, is the second highest of record (1921-79), surpassed only by the 1974 mean flow of $1,950 \text{ ft}^3/\text{s}$.

Mean annual flows in the Tennessee River basin below Chattanooga varied from normal flow by as little as 107 percent at the Elk River near Estill Springs gage to as much as 185 percent of normal at the Piney River at Vernon gage. The mean flow at Vernon was $581 \text{ ft}^3/\text{s}$ which is the second highest mean annual discharge for the period of record which started in 1925. The highest mean, $684 \text{ ft}^3/\text{s}$, occurred in 1927.

At the main stem Tennessee River gages, flows were slightly above normal ranging from 114 percent of normal at Watts Bar Dam and at Chattanooga to 130 percent at South Pittsburg.

In the Mississippi River basin in Tennessee, mean annual flows were above long-term averages. A record high of $215 \text{ ft}^3/\text{s}$ occurred at the Nonconnah Creek near Germantown gage. At the South Fork Obion River near Greenfield gage, the mean annual flow was $1,131 \text{ ft}^3/\text{s}$ which is the second highest of record (1930-79) and the highest annual mean since 1950. Also, the second highest mean flow of record (1930-79), $4,371 \text{ ft}^3/\text{s}$, occurred at the Hatchie River at Bolivar gage. The high was $5,000 \text{ ft}^3/\text{s}$ in 1973. Flow at the Obion River at Obion gage was 177 percent above normal, $4,774 \text{ ft}^3/\text{s}$.

Mean annual flow at the main stem gage, Mississippi River at Memphis, $576,900 \text{ ft}^3/\text{s}$, was 123 percent of normal. The record mean annual flow since the gage was established in 1933 was $788,000 \text{ ft}^3/\text{s}$ in 1973.

Low flow

Base flows during the drier months of 1979 were relatively high, due to excessive rainfall which began in December and continued through the spring months. The annual minimum flow at most unregulated gages occurred during October 1978. Average recurrence intervals for annual minimum flows ranged from about 2 years in western Tennessee, to 2 to 5 years in central and eastern Tennessee. A few isolated basins deviated from this pattern.

On October 13, 1978, the minimum flow of record (1963-79), $32 \text{ ft}^3/\text{s}$, was equalled at the gaging station at Little River above Townsend. This was the third time since 1963 that the flow has been that low.

No significant low flows occurred in western Tennessee.

Suspended sediment

Suspended-sediment transport data in Tennessee have been collected on a statewide basis for about a year. However, when the data are grouped together by region some apparent differences are indicated. In general the data show that for discharges less than about 1,000 ft³/s suspended-sediment concentrations are lowest in eastern Tennessee and progressively increase to their highest values in western Tennessee. This is a generalized statewide trend and may or may not hold true for comparisons of individual basins. For example, highly disturbed basins such as strip mined basins can be expected to yield unusually high concentrations when compared to other eastern Tennessee basins. At discharges greater than 1,000 ft³/s few sediment data are available and regional concentration differences become obscure.

One interesting comparison that can be made on a statewide basis is the percent of silt and clay being transported in suspension. Silt and clay-size material consistently accounts for more than 80 percent of the measured suspended-sediment discharge across the whole State. This high percentage of silt and clay in suspension appears to hold true even though the stream-bed material changes from bedrock in the east to bedrock and gravel in Middle Tennessee, to medium and fine sand in western Tennessee.

Surface-water quality

Because "water quality" is evaluated primarily according to the intended use, such as for public supply, industry, domestic, or agriculture, few meaningful generalizations of water quality can be made on a statewide basis. Water quality is affected by physical characteristics and concentrations of many parameters: for example, water temperature; pH; concentrations of dissolved oxygen, major chemical constituents, sediment, trace constituents, pesticides and other organics; and biological parameters. Obviously, only selected parameters can be determined at a particular site and the determination of the suitability of water at that site is, therefore, limited.

Many water-quality data-collection sites in the State are downstream from impoundments. These impoundments can have a significant effect on water quality in at least two ways. First, the detention time in storage moderates the extreme constituent concentrations that would otherwise occur. The resultant quality of released water is more an average than would be expected from a free-flowing stream. Some parameters such as suspended-sediment concentrations and turbidity values are drastically reduced as detention time increases. A second important factor involves the vertical position of the released water in the impoundment. Significant water-quality differences occur at the surface, mid depth and bottom of a lake or reservoir.

Effects of impoundments on downstream water quality which were noted during the 1979 water year in the State include:

- (1) Water temperature variations of 5° to 10°C within a day are common in reaches of streams downstream from several dams.
- (2) The dissolved-oxygen concentration in water in several streams sometimes was below 4.0 mg/L, a commonly accepted minimum for maintenance of a balanced aquatic environment.
- (3) Dissolved iron and dissolved manganese concentrations at several sites were significantly higher than usually would be expected in a stream. These high concentrations are probably the result of reducing conditions occurring at depth in the impoundments.
- (4) Suspended-sediment concentrations are low in water immediately downstream from dams.

At main stem gaging stations on the Tennessee and Cumberland Rivers, dissolved-solids concentrations did not exceed 140 mg/L. Both streams contain calcium bicarbonate type water with pH ranging from 6.1 to 8.0 units and 6.8 to 7.8 units, respectively. Trace constituent concentrations were low; none exceeded the public-supply limits established for water delivered to a consumer. When compared to data from previous years, no significant differences were observed.

Dissolved-oxygen concentrations are critical because of environmental considerations. Municipal and industrial development has caused concern regarding the proper treatment of wastes. A dissolved-oxygen monitor was installed on the Cumberland River at Old Hickory Dam in April. The minimum dissolved-oxygen value observed from April to September was 6.2 mg/L.

Water-quality data for other major streams do not indicate any severe, persistent problems which would render the water unsuitable for use following minimum treatment. Dissolved-solids concentrations are typically less than 200 mg/L and are less than 100 mg/L in some streams. Water in several streams contained traces of three common herbicides. Detectable amounts of PCB's (polychlorinated biphenyls) were found in bottom materials at about seven stations. Small amounts of several insecticides were also determined in bottom-material samples.

In smaller streams severely affected by coal-mining activities, pH values less than 3.0 units were measured. Large amounts of total recoverable iron and manganese were also determined. However, even in these areas the dissolved-solids concentrations in water were generally low. Dissolved-solids concentrations greater than 200 mg/L were uncommon.

Ground-water levels

Ground-water levels throughout the State were well below normal at the beginning of the 1979 water year, but heavy rains in December and January brought about a rapid recovery of water levels in most parts of the State. During the remainder of the water year, levels were either near or above normal. Thus, in most parts of the State, water levels were higher at the end of the water year than at the beginning indicating an overall increase in the relative volume of ground water in storage.

Minimum levels for the year were recorded in most observation wells in October or November while maximum levels occurred in either April or May. The pattern of natural water-level fluctuations in various parts of the State are shown in the hydrographs of four widely scattered observation wells (figures 3 and 4). The hydrographs for wells in Carter and Cumberland Counties (fig. 3) are indicative of conditions in the eastern half of the State, while those in Dickson and Lauderdale Counties (fig. 4) reflect the conditions in the western half.

Ground-water levels in the network of observation wells in Shelby County are strongly affected by heavy ground-water pumpage in Memphis and surrounding areas. Hence, the fluctuations throughout the year reflect changes in the rates and distribution of the principal pumping centers. As pumping rates increase and new pumping centers are developed to keep pace with growing water demands, water levels in both confined and unconfined aquifers are prone to decline. For example, the Memphis index well (Sh:Q-1) reached an all-time low in October 1978 and new monthly lows in November 1978 and June 1979. Such reports, however, are not indicative of any reduction in the supply available. Rather, they reflect the response of the aquifer system to the additional stress of increased pumpage.

Ground-water quality

Water samples were collected from 11 wells during the year. Eight wells tapping the sand and gravel aquifer in the Memphis area were sampled as part of a continuing program designed to monitor water quality. No significant water-quality changes from previous years were observed. Concentrations of all common constituents were low; dissolved-solids concentrations ranged from 60 to 175 mg/L. Trace constituents did not exceed public-supply limits in water from any well, but dissolved and/or total recoverable iron concentrations exceeded the 300 ug/L limit in 7 wells.

The remaining samples were collected during pumping tests of newly drilled wells in the Gatlinburg and Dandridge areas and in southern Lincoln County. Water from these test wells was considered to be representative of water in the major aquifer in each of these areas. The samples from Gatlinburg were obtained from ancient metasedimentary rocks, those from Dandridge were obtained from folded and faulted carbonate rocks, and those from southern Lincoln County were obtained from flat-lying carbonate rocks. No determined constituent exceeded established limits for public supply use.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System of units (SI) on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as the organisms which produce colonies within 24 hours when incubated at 35°C + 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C + 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in intestines of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C + 1.0°C on M-enterococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which a streambed, lake, pond, reservoir or estuary bottom is composed.

Benthic Invertebrates: animals without backbones that inhabit the bottoms of streams, lakes, ponds, reservoirs, and estuaries. The organisms are frequently used as biological indicators of environmental quality. Fauna retained on a U.S. Standard Sieve No. 70 (210-µm mesh opening) are identified, counted, and reported.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in g/m³ (grams per cubic meter), and periphyton and benthic organisms in g/m² (grams per square meter).

Dry mass refers to the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass, and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom Material: in tables of data, refers to the chemical analysis of unconsolidated matter described as Bed Material and specifically includes anthropogenic matter in addition to natural solid material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water, and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common pigments in plants.

Coal: the part of a bottom material sample that can be separated by floating it on a bromoform-acetone solution with a specific gravity of 1.65. The material containing coal is filtered, dried, weighed, and corrected for moisture.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (FT³/s, ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment), that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved.--That material in a representative water sample which passes through a 0.45 μ m membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = - \sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

Where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the river above the specified point. Figures of drainage area given herein include all closed basins, or noncontribution areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Land-surface datum (LSD) is a datum plane that is approximately at land surface at each well.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per gram ($\mu\text{g/g}$) is a unit expressing the concentration of a chemical element as the mass (micrograms) of the element sorbed per unit mass (gram) of sediment.

Micrograms per liter ($\mu\text{g/L}$, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (mg/L , mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represent the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L , and is based on the mass of sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Organism is any living entity, such as an insect, phytoplankter, or zooplankter.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meters (m^2), acres, or hectares. Periphyton benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliters (mL) or liters (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay.....	0.00024 - 0.004	Sedimentation.
Silt.....	.004 - .062	Sedimentation.
Sand.....	.062 - 2.0	Sedimentation or sieve.
Gravel	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, or volume.

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

Pesticides are chemical compounds used to control the undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides, which control insects and plants respectively, are the two categories reported.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment, and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells/mL of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells/mL of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column, and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Recoverable from bottom material.--The amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of only readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or volume, that passes a section in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry weight or volume, that passes a section during a given time.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height and volume of water per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Substrate is the physical surface upon which an organism lived.

Natural substrates refers to any naturally occurring emerged or submersed solid surface, such as a rock or tree, upon which an organism lived.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multi-plate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

Suspended, recoverable.--The amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 μ m membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total.--The total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 μ m membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata is the following:

Kingdom.....Animal
Phylum.....Arthropoda
Class.....Insecta
Order.....Ephemeroptera
Family.....Ephemeridae
Genus.....Hexagenia
Species.....Hexagenia limbata

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the presence of a thermograph or digital mechanism that automatically records water temperatures on paper tape.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of substance in solution or suspension that passes a stream section during a 24-hour day.

Total.--The total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended mixture and that the analytical method determines all of the constituent in the sample.)

Total in bottom material.--The total amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

Total load (tons) is the total quantity of any individual constituent, as measured by dry mass or volume, that is dissolved in a specific amount of water (discharge) during a given time. It is computed by multiplying the total discharge, times the mg/L of the constituent, times the factor 0.0027, times the number of days.

Total recoverable.--The amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WRD is used as an abbreviation for "Water-Resources Data" in the REVISED RECORDS paragraph to refer to State annual basic-data reports published before 1975.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is situated with respect to the stream to which it is immediately tributary is indicated by an indention in a list of stations in the front of the report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station such as 03540500, which appears just to the left of the station name, includes the 2-digit part number "03" plus the 6-digit downstream order number "540500".

NUMBERING SYSTEM FOR WELLS

The 8-digit downstream order station numbers are not assigned to wells.

The well numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the wells within a 1-second grid. See figure 1 below.

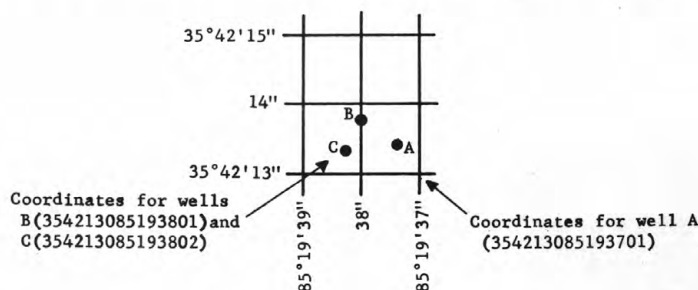


Figure 1.--System for numbering wells (latitude and longitude)

SPECIAL NETWORKS AND PROGRAMS

Coal Resources Area Monitoring Program is a data collection network implemented to fulfill the hydrologic data requirements of Public Law 95-87, the "Surface Mining Control and Reclamation Act of 1977." The data will be used to satisfy the requirement of the law that "an appropriate Federal or State agency" provide to each mining-permit applicant "hydrologic information on the general area prior to mining." The data will also establish a data base from which hydrologically significant changes can be monitored.

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

National stream-quality accounting network (NASQAN) is a data collection network designed by

the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated into the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and computation of data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharge are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

At some northern stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter discharge measurements. Consideration is being given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging stations gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge or contents. The location of the gaging station and the drainage area are obtained from most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Geological Survey, Tennessee Valley Authority, or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published streamflow records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are affected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The type of gage currently in use, the datum of the present gage referred to National Geodetic Vertical Datum, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 5.

Information pertaining to the accuracy of the discharge records and to conditions which affect the natural flow of the gaging station is given under "REMARKS." For reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. Under "EXTREMES" are given first the extremes for the period of record, second, information available outside the period of record, and last those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with EXTREMES FOR THE CURRENT YEAR; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030; 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years.

Footnotes to the table of daily discharge are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions.

Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are also given in special tables following the tables of partial-record stations.

Accuracy of field data and computed results

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretations of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good", within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft³/s; to tenths between 1.0 and 10 ft³/s; to whole number between 10 and 1,000 ft³/s; and 3 significant figures above 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Publications

In each water-supply paper entitled, "Surface Water Supply of the United States" there is a list of numbers of preceding water-supply papers containing streamflow information for the area covered by that report. In addition, there is a list of numbers of water-supply papers containing detailed information on major floods in the area. Records for stations in Tennessee for the period October 1960 to September 1965 are in Water-Supply Papers 1906, 1909, 1910, and 1920, and records for October 1965 to September 1970 are in Water-Supply Papers 2106, 2109, 2110, and 2120.

Two series of summary reports entitled, "Compilation of Records of Surface Waters of the United States" have been published; the first series covers the entire period of record through September 1950 and the second series covers the period October 1950 to September 1960. These reports contain summaries of monthly and annual discharge and monthend storage for all previously published records, as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical. The yearly summary table for each gaging station lists the numbers of the water-supply papers in which daily records were published for that station. Records for stations in Tennessee are compiled in Water-Supply Papers 1304, 1306, and 1311 through September 1950, and in 1726 and 1731 for October 1950 through September 1960.

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than water-supply papers. Information relative to these reports may be obtained from the district office.

Other data available

Information of a more detailed nature than that published for most of the gaging stations such as observations of water temperatures, discharge measurements, gage-height records, and rating tables is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

Records of discharge collected by agencies other than the Geological Survey

Records of discharge not published by the Geological Survey were collected during water year 1978 at 56 sites in Tennessee, 12 by the Tennessee Valley Authority, 14 by the Nashville District, Corps of Engineers, and 30 by the Memphis District, Corps of Engineers, U.S. Army. The Office of Water Data Coordination, Water Resources Division, U.S. Geological Survey, National Center, Reston, Va. 22092, maintains an index of such sites. Information on records available at specific sites can be obtained upon request.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and examination of data

Surface water samples for analyses usually are collected at or near gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, water temperature, sediment discharge, etc.); extremes for the period of daily record; extremes for the current year; and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, date of sampling and/or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diel temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

EXPLANATION OF GROUND-WATER LEVEL RECORDS

Collection of the data

Only ground-water level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is provided for local needs. See figure 1.

Measurements are made in many types of wells under varying conditions of access and at different temperatures, hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Water-level measurements in this report are given in feet with reference to either National Geodetic Vertical Datum of 1929 (NGVD) or land-surface datum (LSD). See "DEFINITION OF TERMS" on page 5. If known, the altitude of the land-surface datum (NGVD) is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

Thirty-four manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office).

NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations".

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
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- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P. E. Greason, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
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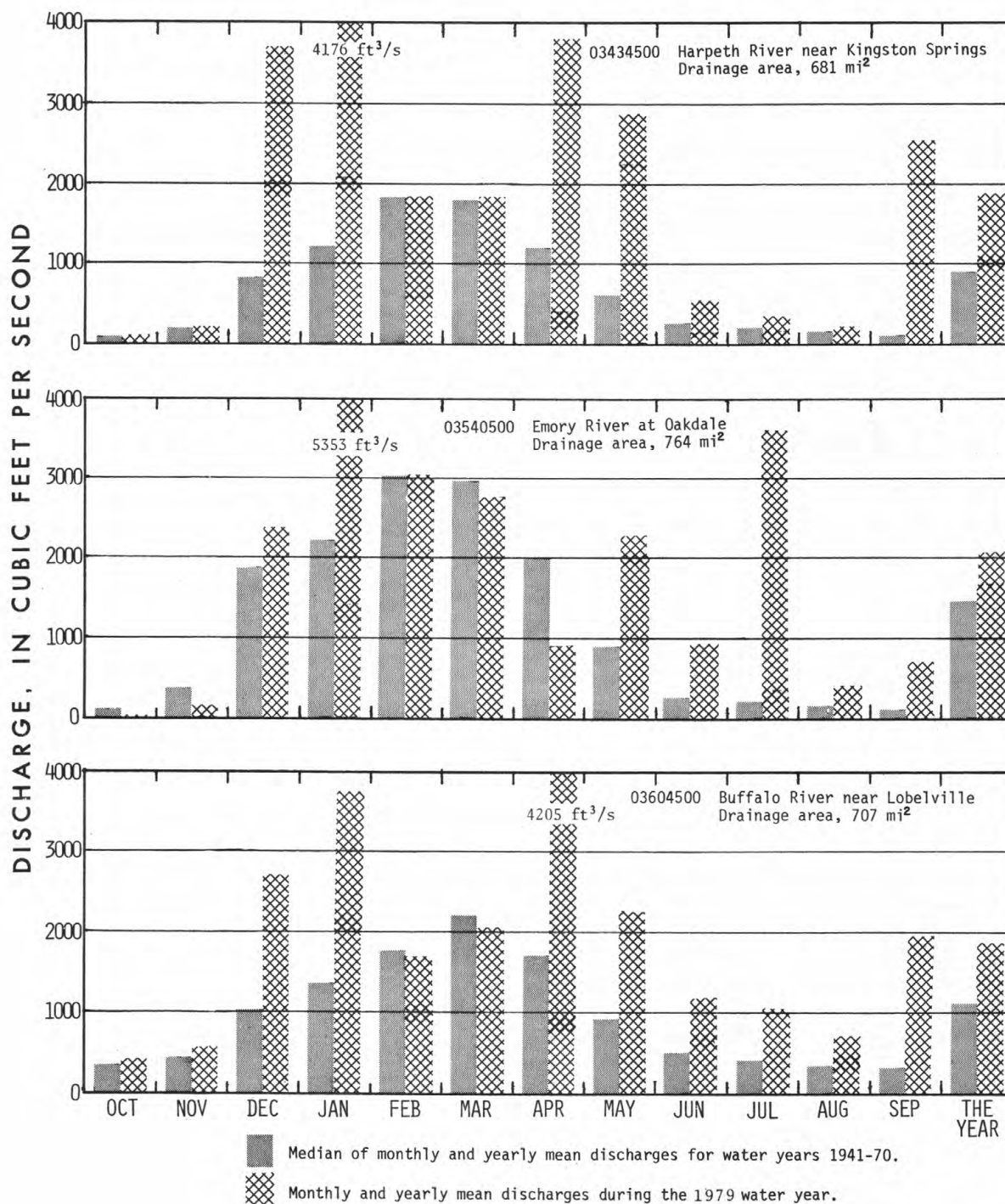
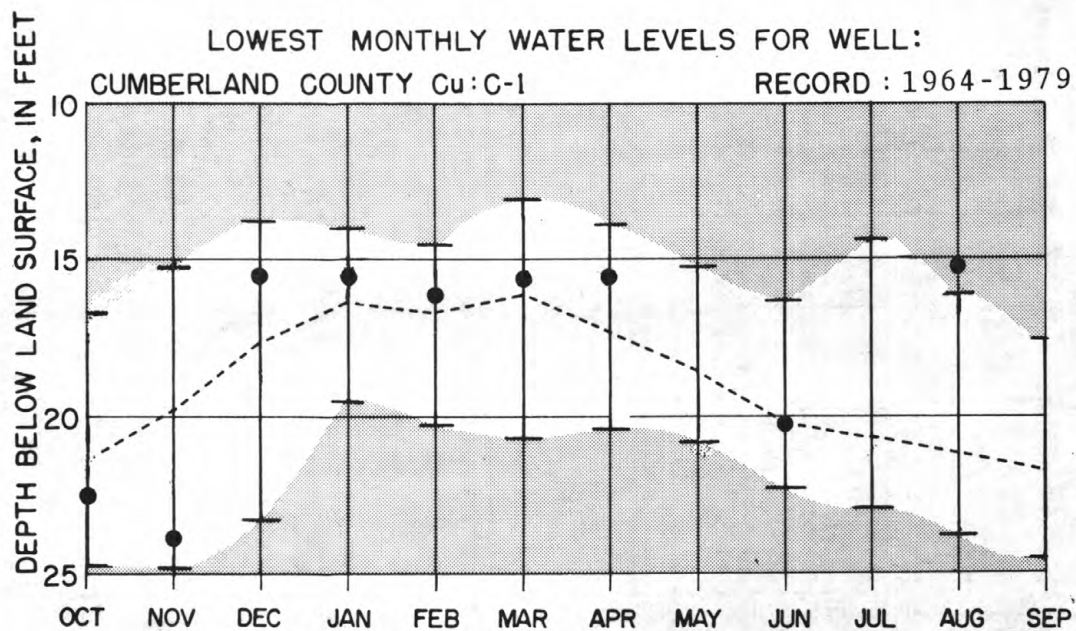
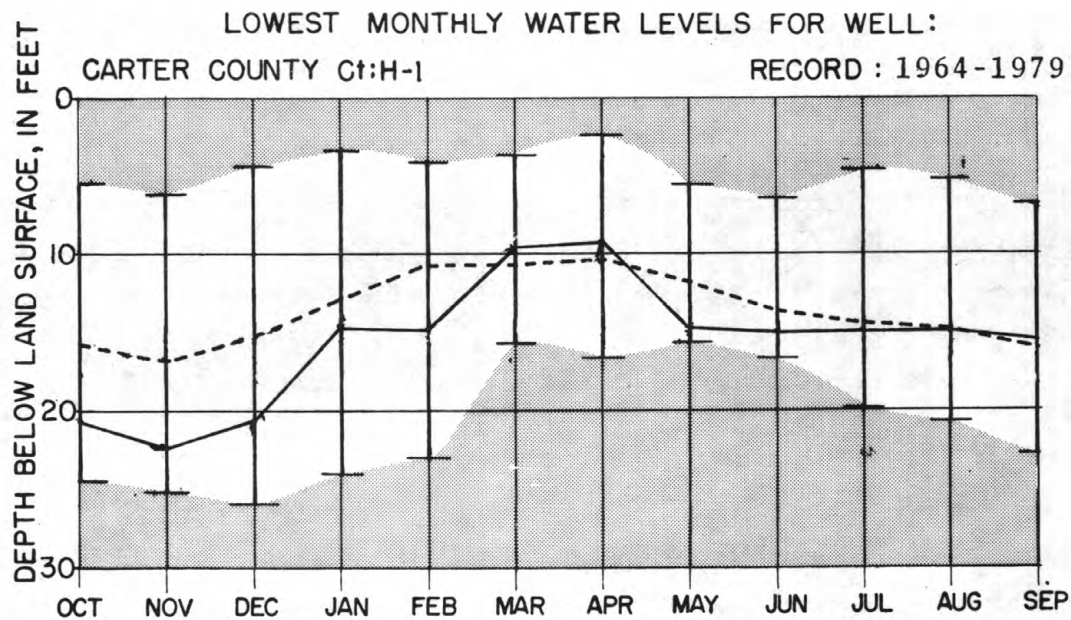


Figure 2.-- Runoff during 1979 water year compared with median runoff for period 1941-70 for three representative gaging stations.

WATER RESOURCES DATA FOR TENNESSEE, 1979



EXPLANATION

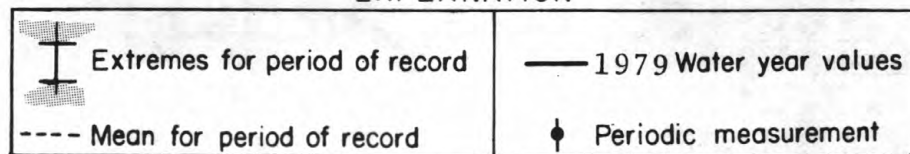
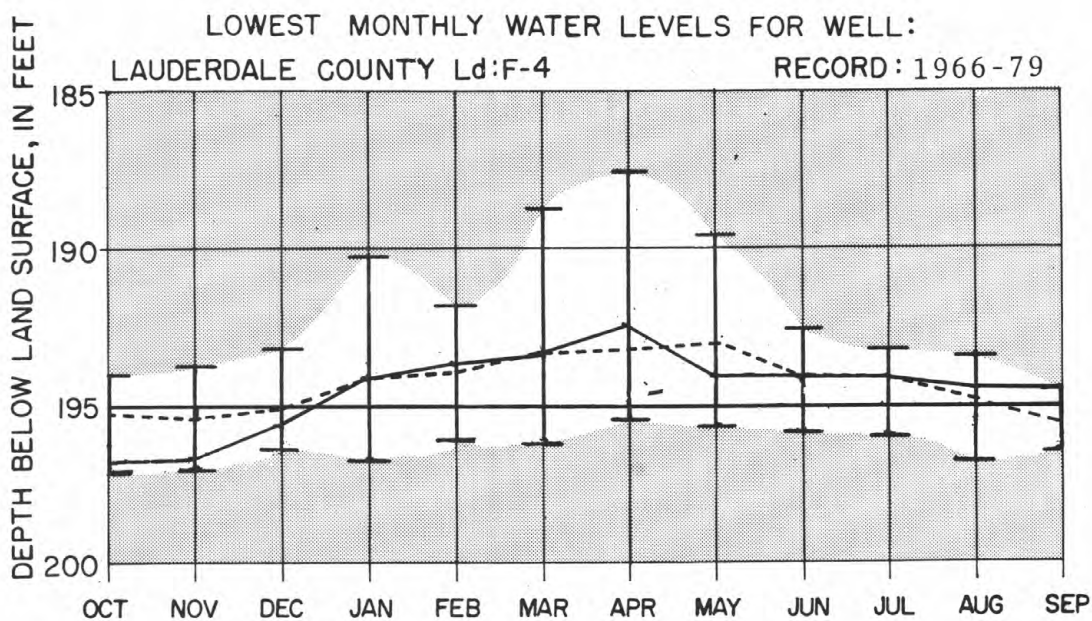
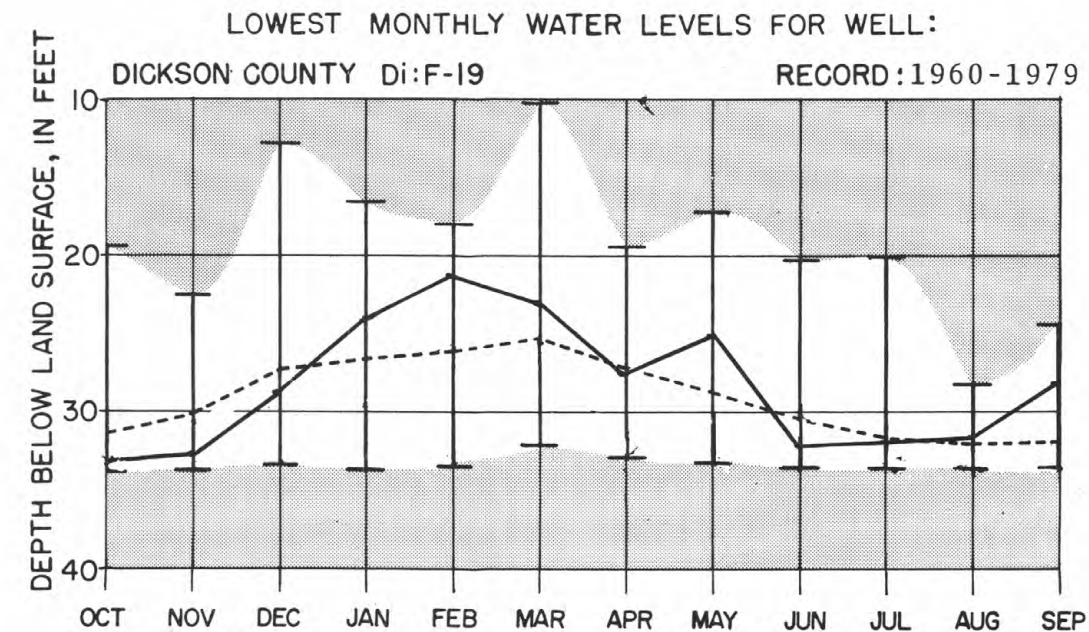


Figure 3.--Lowest monthly ground-water levels for the 1979 water year compared to the maximum, minimum, and average lowest monthly water levels for the previous years of record.



EXPLANATION

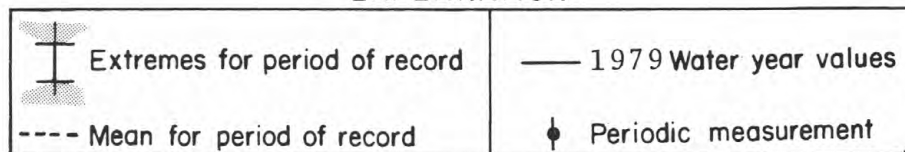


Figure 4.--Lowest monthly ground-water levels for the 1979 water year compared to the maximum, minimum, and average lowest monthly water levels for the previous years of record.

HYDROLOGIC-DATA STATION RECORDS

CUMBERLAND RIVER BASIN

03407804 INDIAN FORK ABOVE BRAYTOWN, TN

LOCATION.--Lat 36°09'37", long 84°23'15", Anderson County, Hydrologic Unit 05130104, on left bank 0.7 mi (1.1 km) northwest of Braytown, 0.8 mi (1.3 km) north of Moores Camp, 2.4 mi (3.9 km) southwest of Rosedale, and at mile 0.9 (1.4 km).

DRAINAGE AREA.--4.32 mi² (11.19 km²).

PERIOD OF RECORD.--January 1975 to current year.

COOPERATION.--Samples collected and analyzed by the University of Tennessee at Knoxville.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	STREAM- FLOW- INSTAN- TANEOUS (CFS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LITY (MG/L AS CACO3)
OCT										
14...	1.1	6.4	12.0	--	390	93	90	40	41	23
30...	3.8	7.0	9.5	--	190	41	42	20	20	28
DEC										
19...	--	6.5	8.0	--	230	50	51	24	24	71
JAN										
13...	1.1	6.4	5.0	3.0	200	48	45	23	22	32
27...	1.1	6.2	3.0	6.0	200	42	45	20	20	29
FEB										
08...	2.9	6.5	3.0	14	230	51	49	26	25	39
24...	70	6.2	8.5	150	86	15	19	9.5	9.3	19
MAR										
08...	7.1	6.5	6.5	17	140	44	42	21	20	33
22...	7.1	7.2	13.0	11	160	38	36	19	17	32
APR										
07...	3.8	6.7	6.0	7.0	160	37	36	18	18	28
21...	2.6	7.1	11.0	13	230	58	52	27	25	29
MAY										
08...	2.2	7.2	18.0	14	140	42	40	21	20	29
22...	1.6	6.9	15.0	22	270	65	59	31	29	37
JUN										
06...	4.5	7.5	19.0	--	190	46	43	21	19	30
21...	1.8	7.6	19.0	9.0	450	120	118	39	38	60
JUL										
05...	--	7.3	19.0	14	470	110	123	37	39	45
19...	--	7.8	21.0	15	320	82	81	29	29	42
26...	--	7.4	17.0	25	100	25	25	11	10	27
AUG										
09...	--	7.8	20.0	36	370	122	92	34	34	42
23...	--	8.0	19.0	29	330	83	84	30	30	53
SEP										
06...	--	7.8	20.0	17	300	78	77	28	27	40
22...	--	7.3	17.0	9.0	--	--	--	--	--	43

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

CUMBERLAND RIVER BASIN

03407874 GREEN BRANCH NEAR HEMBREE, TN

LOCATION.--Lat 36°12'09", long 84°24'59", Scott County, Hydrologic Unit 05130104, on left bank 1.9 mi (3.1 km) south of Hembree, 4.0 mi (6.4 km) northwest of Braytown, 4.7 mi (7.6 km) west of Charleys Branch, and at mile 0.2 (0.3 km).

DRAINAGE AREA.--1.38 mi² (3.57 km²).

PERIOD OF RECORD.--December 1975 to current year.

COOPERATION.--Samples collected and analyzed by the University of Tennessee at Knoxville.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LITY (MG/L AS CACO3)
OCT									
14...	6.6	13.0	--	190	31	30	27	27	27
30...	7.0	9.0	--	220	45	45	25	26	28
DEC									
19...	6.5	7.0	--	220	45	44	25	26	43
JAN									
13...	--	7.0	2.0	160	34	32	22	20	32
27...	7.0	5.0	2.0	190	31	43	20	20	37
FEB									
08...	6.7	3.0	1.0	180	35	35	23	23	31
24...	6.4	9.0	950	88	--	17	11	11	19
MAR									
08...	6.5	6.5	8.0	150	30	30	19	18	37
22...	6.9	13.5	2.0	160	33	32	21	20	61
APR									
07...	6.8	7.0	2.0	140	26	29	17	16	38
21...	6.9	12.0	2.0	160	30	31	20	20	37
MAY									
08...	6.9	19.0	12	130	27	28	16	15	34
22...	7.1	16.0	8.0	170	34	34	20	20	37
JUN									
06...	7.0	18.0	1.0	140	29	29	17	17	32
21...	7.1	20.0	.00	220	51	48	24	23	35
JUL									
05...	6.5	18.0	2.0	240	52	53	26	26	38
19...	7.5	21.0	.00	--	--	--	--	--	34
26...	7.5	18.0	1600	150	35	33	18	16	38
AUG									
09...	7.8	20.0	.00	220	50	50	23	23	32
23...	7.5	19.0	2.0	230	53	52	25	25	40
SEP									
06...	7.5	19.0	.00	200	45	45	20	21	35
22...	6.8	18.0	1.0	--	--	--	--	--	44

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

CUMBERLAND RIVER BASIN

03407875 BILLS BRANCH NEAR HEMBREE, TN

LOCATION.--Lat 36°12'39", long 84°24'19", Scott County, Hydrologic Unit 05130104, on right bank 1.5 mi (2.4 km) southeast of Hembree, 5.1 mi (8.2 km) west of Stainville, 4.1 mi (6.6 km) northwest of Braytown, and at mile 0.7 (1.1 km).

DRAINAGE AREA.--0.67 mi² (1.74 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1975 to current year.

GAGE.--Water-stage recorder and broad-crested weir. Altitude of gage is 1,530 ft (466 m), from topographic map. Prior to Oct. 18, 1976, control was a 90° V-notch weir 20 ft (6 m) upstream at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 630 ft³/s (17.8 m³/s) Apr. 4, 1977, gage height, 5.12 ft (corrected) (1.561 m); minimum, no flow Oct. 17, 18, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 138 ft³/s (3.91 m³/s) May 31, gage height, 2.73 ft (0.832 m); minimum, no flow October 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.05	.02	.43	15	1.1	3.1	1.5	.66	8.5	.07	.66	1.4
2	.05	.02	.31	15	1.0	2.2	2.0	.61	4.8	.05	.61	.95
3	.05	.01	1.2	6.5	.84	2.5	10	1.1	6.4	.05	.58	.64
4	.04	.01	14	3.4	.84	26	6.9	12	3.8	.07	.54	.48
5	.04	.01	3.4	2.3	.68	6.4	4.8	5.5	2.2	.08	.50	.42
6	.04	.01	1.8	3.0	.73	3.1	3.1	3.3	1.4	.06	.47	.37
7	.02	.04	1.4	25	.84	2.2	2.2	2.0	.90	.27	.46	.33
8	.02	.04	6.0	8.9	.71	1.5	1.8	1.4	.60	.29	.43	.30
9	.02	.02	22	3.3	.62	1.2	7.2	1.1	.40	1.1	.42	.29
10	.02	.02	6.4	2.3	.67	1.5	3.8	.88	.36	.37	.40	.28
11	.02	.02	1.7	2.2	.61	1.3	2.7	.71	.36	.22	.58	.26
12	.02	.02	1.1	1.7	.61	1.2	4.9	.66	.29	.51	.49	.24
13	.01	.02	.78	1.6	.61	1.1	5.4	.76	.29	.37	.42	.24
14	.01	.05	.56	1.5	.78	2.0	3.7	.66	.22	2.8	.39	.48
15	.01	.06	.51	1.2	7.0	1.6	2.8	.56	.19	9.5	.34	.29
16	.01	.56	.61	1.0	5.7	1.5	2.0	.47	.16	2.6	.34	.24
17	.01	.66	.56	.93	3.1	1.4	1.5	.38	.16	1.0	.29	.23
18	.00	.34	.51	.93	2.0	1.2	1.2	.31	.16	.66	.29	.23
19	.01	.14	.56	.84	1.6	1.0	.93	.31	.12	.61	.29	.22
20	.02	.10	.80	17	1.5	1.0	.76	.66	.10	16	.59	.21
21	.02	.08	8.9	19	5.1	.92	.72	1.4	.10	24	.48	1.9
22	.02	.08	4.1	5.3	4.1	.85	.66	.72	.12	9.2	.39	.58
23	.02	1.1	2.7	3.4	3.9	8.5	.66	2.3	.19	2.8	.43	.38
24	.05	.53	2.2	3.6	24	7.6	.61	6.0	.14	1.5	.34	.33
25	.05	.24	2.0	3.0	27	4.1	.66	4.1	.11	1.7	.72	.30
26	.05	.22	1.5	2.2	6.4	2.6	1.4	3.3	.09	1.9	5.4	.28
27	.06	.80	1.2	2.0	4.1	3.2	.96	2.2	.07	3.5	3.5	4.0
28	.06	.43	1.0	2.0	3.7	3.1	.82	1.6	.05	4.6	5.2	9.1
29	.05	.71	.93	1.6	---	2.4	.73	1.1	.05	2.3	3.7	3.3
30	.04	.65	.93	1.5	---	1.9	.72	1.3	.10	1.5	8.6	1.4
31	.02	---	1.7	1.4	---	1.5	---	14	---	.72	3.4	---
TOTAL	.91	7.01	91.79	158.60	109.84	99.67	77.13	72.05	32.43	90.40	41.25	29.67
MEAN	.029	.23	2.96	5.12	3.92	3.22	2.57	2.32	1.08	2.92	1.33	.99
MAX	.06	1.1	22	25	27	26	10	14	8.5	24	8.6	9.1
MIN	.00	.01	.31	.84	.61	.85	.61	.31	.05	.05	.29	.21
CFSM	.04	.34	4.42	7.64	5.85	4.81	3.84	3.46	1.61	4.36	1.99	1.48
IN.	.05	.39	5.09	8.79	6.09	5.53	4.28	3.99	1.80	5.01	2.29	1.64

CAL YR 1978 TOTAL 555.52 MEAN 1.52 MAX 43 MIN .00 CFSM 2.27 IN 30.80
WTR YR 1979 TOTAL 810.75 MEAN 2.22 MAX 27 MIN .00 CFSM 3.31 IN 44.95

NOTE.--No gage-height record Jan. 10 to Feb. 12.

CUMBERLAND RIVER BASIN

27

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1975 to current year.

COOPERATION.--Samples collected and analyzed by the University of Tennessee at Knoxville,

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	HARD- NESS (MG/L AS CAC03)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LITY (MG/L AS CAC03)
OCT										
14...	.10	6.8	13.0	--	80	15	14	9.8	10	27
30...	.61	7.0	8.0	--	85	16	16	10	10	11
JAN										
13...	2.6	--	5.0	8.0	79	14	15	11	10	9
27...	1.6	6.8	4.0	4.0	88	15	17	10	11	37
FEB										
08...	23	6.3	3.0	1.0	76	15	14	11	10	14
24...	22	--	9.0	--	40	3.6	6.8	5.8	5.6	6
MAR										
08...	1.5	6.0	6.0	4.0	67	12	12	9.0	9.0	11
22...	.79	6.6	12.5	.00	60	10	11	8.0	8.0	16
APR										
07...	2.1	6.2	7.0	2.0	56	8.9	9.7	7.6	7.6	12
21...	.73	6.9	12.0	3.0	63	10	12	8.0	8.0	14
MAY										
08...	1.4	6.8	15.0	4.0	48	8.0	8.0	7.0	6.8	12
22...	.79	6.8	15.0	9.0	70	12	13	9.0	9.0	17
JUN										
06...	--	6.8	19.0	2.0	48	8.0	8.0	7.0	6.8	13
21...	.18	7.0	20.0	30	72	15	15	8.7	8.4	15
JUL										
05...	.18	6.8	20.0	1.0	74	16	15	9.2	8.9	20
19...	.37	7.5	20.0	2.0	63	13	13	7.7	7.5	16
26...	1.8	6.8	19.0	6.0	69	--	14	8.2	8.2	16
AUG										
09...	.43	7.6	20.0	.00	73	15	15	8.7	8.7	19
23...	.43	7.4	--	.00	90	17	18	10	11	21
SEP										
06...	.37	7.3	20.0	1.0	69	14	14	8.0	8.2	16
22...	.61	6.2	17.0	3.0	--	--	--	--	--	24

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

CUMBERLAND RIVER BASIN

29

03407876 SMOKY CREEK AT HEMBREE, TN

LOCATION.--Lat 36°14'23", long 84°24'48", Scott County, Hydrologic Unit 05130104, on left bank 0.9 mi (1.4 km) northeast of Hembree, 12.4 mi (20.0 km) southeast of Huntsville, and at mile 5.7 (9.2 km).

DRAINAGE AREA.--17.2 mi² (44.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,310 ft (399 km), from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,800 ft³/s (249 m³/s) Apr. 4, 1977, gage height, 14.6 ft (4.45 m), from floodmarks; minimum, 0.38 ft³/s (0.011 m³/s) Aug. 20, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,320 ft³/s (65.7 m³/s) May 31, gage height, 7.67 ft (2.338 m); minimum, 0.38 ft³/s (0.011 m³/s) Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	1.5	22	738	21	45	31	6.6	167	3.1	15	38
2	.44	1.5	14	344	18	26	51	4.8	76	2.4	11	25
3	.44	1.4	58	132	19	25	287	13	122	1.9	7.5	17
4	.42	1.4	365	79	18	428	218	419	100	1.5	5.9	13
5	.80	1.4	142	58	14	152	147	179	57	2.4	4.8	9.8
6	1.1	1.4	89	131	13	86	81	107	32	.78	3.9	7.5
7	.89	1.7	70	845	18	57	49	67	20	4.5	2.9	5.9
8	.69	2.7	199	231	13	42	36	30	13	8.8	2.4	4.8
9	.60	2.2	678	94	11	30	305	27	8.4	31	2.0	3.6
10	.60	1.9	140	51	11	52	118	22	14	7.0	1.9	3.1
11	.52	1.7	60	29	13	63	67	16	9.8	2.9	5.5	2.9
12	.52	1.5	37	21	16	47	158	12	4.8	7.5	4.2	2.4
13	.69	1.5	25	17	21	38	236	19	3.6	3.4	2.0	2.4
14	2.2	1.5	16	11	23	48	131	14	2.9	38	1.5	9.3
15	1.4	1.7	12	4.2	169	36	75	8.8	2.2	99	1.2	3.9
16	1.1	29	15	3.4	185	30	44	7.0	1.9	34	1.0	2.6
17	1.0	21	15	3.4	109	26	30	5.1	2.6	7.9	.79	2.0
18	.89	13	11	2.4	79	23	21	4.5	2.2	2.7	.69	1.9
19	.79	5.5	12	2.0	56	20	17	3.6	2.0	10	.52	1.9
20	.89	3.6	17	455	54	20	13	11	1.9	330	2.7	1.5
21	.89	2.7	249	480	150	20	10	64	1.7	328	4.8	31
22	.89	2.4	99	203	136	16	8.8	25	1.9	181	34	41
23	1.0	58	58	134	142	177	9.3	102	6.2	73	4.8	30
24	1.1	36	42	161	541	229	7.0	245	8.4	35	2.0	21
25	1.2	12	30	113	670	122	6.6	167	4.8	68	2.2	14
26	1.5	8.4	19	78	229	68	21	132	3.1	106	99	8.8
27	2.7	60	13	76	109	83	14	102	2.4	181	104	51
28	2.2	28	9.3	73	78	84	11	84	2.4	167	81	195
29	1.7	37	8.4	49	---	63	8.8	68	2.2	73	99	79
30	1.7	42	18	38	---	46	7.9	63	4.2	38	129	36
31	1.5	---	156	32	---	35	---	634	---	22	79	---
TOTAL	32.82	383.6	2698.7	4688.4	2936	2237	2219.4	2662.4	680.6	1870.78	716.20	665.3
MEAN	1.06	12.8	87.1	151	105	72.2	74.0	85.9	22.7	60.3	23.1	22.2
MAX	2.7	60	678	845	670	428	305	634	167	330	129	195
MIN	.42	1.4	8.4	2.0	11	16	6.6	3.6	1.7	.78	.52	1.5
CFSM	.06	.74	5.06	8.78	6.11	4.20	4.30	4.99	1.32	3.51	1.34	1.29
IN.	.07	.83	5.84	10.14	6.35	4.84	4.80	5.76	1.47	4.05	1.55	1.44
CAL YR 1978	TOTAL	15523.85	MEAN	42.5	MAX	853	MIN	.27	CFSM	2.47	IN	33.57
WTR YR 1979	TOTAL	21791.20	MEAN	59.7	MAX	845	MIN	.42	CFSM	3.47	IN	47.13

CUMBERLAND RIVER BASIN

03407876 SMOKY CREEK AT HEMBREE, TN--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--October 1978 to September 1979.

PERIOD OF DAILY RECORD.--

SUSPENDED SEDIMENT DISCHARGE: October 1978 to September 1979.

INSTRUMENTATION.--Sediment pumping sampler.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,800 mg/L Mar. 4; minimum daily mean, 1 mg/L Nov. 20, 22.

SEDIMENT LOADS: Maximum daily, 9,190 tons (8,360 tonnes) May 31; minimum daily, 0.00 tons (0.00 tonnes) Oct. 9-12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
MAY 22...	1530	27	195	7.6	18.0	30	57	141	.19
SEP 04...	1330	12	235	7.5	23.0	41	61	--	--

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	10.3	1500	20	40	20	32	2.3	98
SEP 04...	--	690	50	30	40	19	.62	--

DATE	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
SEP 04...	0	<10	20	10	20	49000	10	920	.00	0	10

CUMBERLAND RIVER BASIN

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03407876 SMOKY CREEK AT HEMBREE, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER				NOVEMBER			DECEMBER		
1	.46	10	.01	1.5	11	.04	22	38	2.3
2	.44	15	.02	1.5	6	.02	14	5	.19
3	.44	20	.02	1.4	6	.02	58	434	166
4	.42	32	.04	1.4	5	.02	365	1340	1960
5	.80	9	.02	1.4	5	.02	142	50	19
6	1.1	5	.01	1.4	4	.02	89	43	10
7	.89	5	.01	1.7	4	.02	70	43	8.1
8	.69	3	.01	2.7	4	.03	199	425	315
9	.60	3	.00	2.2	4	.02	678	1470	4350
10	.60	2	.00	1.9	4	.02	140	110	42
11	.52	2	.00	1.7	4	.02	60	80	13
12	.52	3	.00	1.5	5	.02	37	55	5.5
13	.69	3	.01	1.5	5	.02	25	41	2.8
14	2.2	7	.04	1.5	5	.02	16	36	1.6
15	1.4	7	.03	1.7	5	.02	12	20	.65
16	1.1	2	.01	29	225	18	15	49	2.0
17	1.0	2	.01	21	138	7.8	15	20	.81
18	.89	3	.01	13	25	.88	11	12	.36
19	.79	3	.01	5.5	2	.03	12	28	.91
20	.89	5	.01	3.6	1	.01	17	29	1.3
21	.89	5	.01	2.7	7	.05	249	270	220
22	.89	6	.01	2.4	1	.01	99	65	17
23	1.0	6	.02	58	439	130	58	60	9.4
24	1.1	7	.02	36	40	3.9	42	50	5.7
25	1.2	7	.02	12	15	.49	30	40	3.2
26	1.5	5	.02	8.4	16	.36	19	35	1.8
27	2.7	5	.04	60	124	25	13	30	1.1
28	2.2	7	.04	28	35	2.6	9.3	35	.88
29	1.7	7	.03	37	79	7.9	8.4	40	.91
30	1.7	6	.03	42	42	4.8	18	45	2.2
31	1.5	6	.02	---	---	---	156	630	300
TOTAL	32.82	---	0.53	383.6	---	202.16	2698.7	---	7463.71
JANUARY				FEBRUARY			MARCH		
1	738	2340	6570	21	24	1.4	45	36	4.4
2	344	460	540	18	5	.24	26	31	2.2
3	132	32	11	19	10	.51	25	80	5.4
4	79	30	6.4	18	10	.49	428	3800	4200
5	58	25	3.9	14	10	.38	152	120	49
6	131	222	141	13	10	.35	86	40	9.3
7	845	2200	5730	18	10	.49	57	30	4.6
8	231	260	170	13	11	.39	42	30	3.4
9	94	44	11	11	6	.18	30	20	1.6
10	51	17	2.3	11	10	.30	52	100	14
11	29	17	1.3	13	10	.35	63	60	10
12	21	12	.68	16	8	.35	47	30	3.8
13	17	15	.69	21	8	.45	38	26	2.7
14	11	12	.36	23	10	.62	48	100	13
15	4.2	11	.12	169	360	164	36	23	2.2
16	3.4	11	.10	185	102	51	30	20	1.6
17	3.4	10	.09	109	23	6.8	26	15	1.1
18	2.4	10	.06	79	8	1.7	23	10	.62
19	2.0	15	.08	56	35	5.3	20	10	.54
20	455	845	1480	54	32	4.7	20	20	1.1
21	480	425	635	150	170	69	20	15	.81
22	203	140	77	136	48	18	16	10	.43
23	134	111	40	142	200	77	177	475	400
24	161	75	33	541	1960	3910	229	150	93
25	113	21	6.4	670	2600	8450	122	40	13
26	78	21	4.4	229	148	92	68	30	5.5
27	76	49	10	109	100	29	83	105	24
28	73	5	.99	78	51	11	84	32	7.3
29	49	15	2.0	---	---	---	63	33	5.6
30	38	16	1.6	---	---	---	46	22	2.7
31	32	80	6.9	---	---	---	35	13	1.2
TOTAL	4688.4	---	15486.37	2936	---	12896.00	2237	---	4884.10

CUMBERLAND RIVER BASIN

03407876 SMOKY CREEK AT HEMBREE, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL				MAY				JUNE	
1	31	19	1.6	6.6	11	.20	167	92	41
2	51	185	25	4.8	12	.16	76	40	8.2
3	287	326	314	13	268	17	122	541	197
4	218	252	175	419	2240	4670	100	45	12
5	147	42	17	179	65	31	57	40	6.2
6	81	25	5.5	107	29	8.4	32	20	1.7
7	49	27	3.6	67	20	3.6	20	10	.54
8	36	12	1.2	30	15	1.2	13	8	.28
9	305	470	478	27	10	.73	8.4	5	.11
10	118	34	11	22	10	.59	14	175	6.6
11	67	21	3.8	16	10	.43	9.8	30	.79
12	158	262	167	12	10	.32	4.8	11	.14
13	236	185	118	19	250	13	3.6	11	.11
14	131	41	15	14	20	.76	2.9	6	.05
15	75	22	4.5	8.8	15	.36	2.2	5	.03
16	44	24	2.9	7.0	6	.11	1.9	4	.02
17	30	20	1.6	5.1	5	.07	2.6	5	.04
18	21	14	.79	4.5	5	.06	2.2	4	.02
19	17	10	.46	3.6	9	.09	2.0	5	.03
20	13	18	.63	11	417	133	1.9	5	.03
21	10	9	.24	64	1320	332	1.7	5	.02
22	8.8	5	.12	25	40	2.7	1.9	5	.03
23	9.3	8	.20	102	543	333	6.2	175	22
24	7.0	6	.11	245	240	159	8.4	35	.79
25	6.6	10	.18	167	83	37	4.8	12	.16
26	21	59	3.3	132	102	36	3.1	10	.08
27	14	13	.49	102	52	14	2.4	6	.04
28	11	18	.53	84	34	7.7	2.4	35	.23
29	8.8	10	.24	68	24	4.4	2.2	20	.12
30	7.9	8	.17	63	320	54	4.2	12	.10
31	---	---	---	634	3070	9190	---	---	---
TOTAL	2219.4	---	1352.16	2662.4	---	15050.88	680.6	---	298.46
JULY				AUGUST				SEPTEMBER	
1	3.1	6	.05	15	63	2.6	38	32	3.3
2	2.4	6	.04	11	25	.74	25	55	3.7
3	1.9	3	.02	7.5	20	.41	17	30	1.4
4	1.5	5	.02	5.9	15	.24	13	51	1.8
5	2.4	37	.24	4.8	10	.13	9.8	21	.56
6	.78	11	.02	3.9	10	.11	7.5	19	.38
7	4.5	112	1.4	2.9	10	.08	5.9	17	.27
8	8.8	68	1.6	2.4	7	.05	4.8	14	.18
9	31	458	73	2.0	7	.04	3.6	11	.11
10	7.0	30	.57	1.9	7	.04	3.1	8	.07
11	2.9	14	.12	5.5	135	2.0	2.9	5	.04
12	7.5	60	1.2	4.2	95	1.1	2.4	3	.02
13	3.4	15	.14	2.0	20	.11	2.4	4	.03
14	38	590	160	1.5	15	.06	9.3	50	1.3
15	99	1160	770	1.2	10	.03	3.9	20	.21
16	34	210	19	1.0	5	.01	2.6	17	.12
17	7.9	70	1.5	.79	5	.01	2.0	14	.08
18	2.7	60	.44	.69	5	.01	1.9	11	.06
19	10	350	9.5	.52	5	.01	1.9	8	.04
20	330	2200	3800	2.7	112	19	1.5	5	.02
21	328	2600	2800	4.8	938	2.8	31	665	268
22	181	500	244	34	30	.22	41	32	3.5
23	73	100	20	4.8	55	.71	30	6	.49
24	35	90	8.5	2.0	18	.10	21	8	.45
25	68	220	40	2.2	45	.27	14	3	.11
26	106	350	100	99	1520	998	8.8	3	.07
27	181	2320	1990	104	620	200	51	474	262
28	167	218	98	81	775	650	195	300	158
29	73	60	12	99	220	59	79	42	9.0
30	38	49	5.0	129	813	347	36	54	5.2
31	22	20	1.2	79	90	19	---	---	---
TOTAL	1870.78	---	10157.56	716.20	---	2303.88	665.3	---	720.51
YEAR	21791.20		70816.32						

CUMBERLAND RIVER BASIN

33

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN

LOCATION.--Lat 36°16'14", long 84°24'17", Scott County, Hydrologic Unit 05130104, on left bank 2.5 mi (4.0 km) southwest of Smoky Junction, 3.0 mi (4.8 km) northeast of Hembree, 4.3 mi (6.9 km) southwest of Montgomery, and at mile 0.8 (1.3 km).

DRAINAGE AREA.--2.19 mi² (5.67 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1975 to current year.

GAGE.--Water-stage recorder and 170-degree V-notch weir. Altitude of gage is 1,350 ft (411 m), from topographic map.

REMARKS.--Records fair except those for August and September which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 254 ft³/s (7.19 m³/s), Apr. 4, 1977, gage height, 3.96 ft (1.207 m); minimum discharge 0.01 ft³/s (0.0003 m³/s) Aug. 24, 25, 1976, Aug. 5-8, 1977, Oct. 17-26, 1978; minimum gage height, 1.60 ft (0.488 m) Aug. 5-8, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 89 ft³/s (2.52 m³/s) Feb. 25, gage height, 3.19 ft (0.972 m); minimum, 0.01 ft³/s (0.0003 m³/s) Oct. 17-26, gage height, 1.69 ft (0.515 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	.02	1.1	27	3.5	8.0	7.4	2.4	16	.25	1.2	.65
2	.14	.02	.84	29	3.2	6.2	7.1	2.1	11	.18	.91	.40
3	.10	.02	2.1	11	2.8	5.1	23	2.6	12	.18	.66	.26
4	.15	.02	26	6.2	2.5	29	16	29	13	.18	.52	.26
5	.12	.02	12	4.4	2.3	15	9.0	17	6.8	.18	.46	1.7
6	.09	.02	5.0	6.2	2.4	8.3	6.2	11	4.0	.12	.34	1.3
7	.07	.02	3.5	45	3.2	5.9	4.6	6.8	2.6	.40	.30	.93
8	.07	.06	15	20	2.8	4.8	3.7	4.4	1.8	.40	.30	.70
9	.05	.05	38	9.0	2.5	3.7	20	3.3	1.6	1.4	.25	.52
10	.04	.04	11	6.2	3.0	8.6	17	2.7	1.2	.66	.21	.40
11	.04	.03	5.6	4.6	2.7	14	14	2.1	1.0	.40	.25	.40
12	.03	.02	4.0	3.7	2.7	9.3	15	1.7	.73	.59	.40	.40
13	.04	.02	3.1	3.1	2.9	6.2	20	2.4	.59	.46	.30	.40
14	.08	.02	2.2	2.4	3.1	5.4	18	2.0	.52	12	.21	.60
15	.09	.03	1.8	2.1	13	4.2	16	1.4	.40	18	.18	.50
16	.09	1.8	1.6	1.8	15	3.3	14	1.1	.34	18	.18	.50
17	.02	1.4	1.4	1.6	8.3	3.1	12	.91	.34	16	.14	.50
18	.01	1.1	1.3	1.4	5.9	2.7	10	.73	.30	14	.14	.35
19	.01	.63	1.2	1.3	4.8	2.4	8.3	.66	.25	11	.14	.23
20	.01	.43	1.7	32	4.4	2.1	7.1	.82	.21	21	.14	.23
21	.01	.25	19	35	8.6	2.0	5.9	3.7	.21	19	.18	.60
22	.01	.13	9.0	15	9.0	1.7	4.8	2.0	.34	16	.18	.52
23	.01	.88	5.4	9.3	8.0	11	4.4	7.1	1.2	6.8	.18	.52
24	.01	1.3	4.2	11	27	20	4.0	18	.91	3.7	.18	.52
25	.01	.73	3.3	8.0	37	18	3.5	12	.59	2.7	.45	.52
26	.01	.52	2.6	6.2	23	16	3.3	8.6	.30	2.4	1.2	.46
27	.06	1.8	2.1	5.6	13	13	3.1	5.9	.25	3.3	1.0	.73
28	.04	1.5	1.8	5.4	11	12	2.9	4.2	.18	5.4	1.0	4.3
29	.02	1.1	1.7	4.6	---	10	2.7	2.7	.14	3.3	1.0	5.4
30	.02	1.4	1.7	4.2	---	9.3	2.6	2.7	.82	2.2	1.0	4.2
31	.02	---	5.4	4.0	---	8.3	---	21	---	1.6	1.0	---
TOTAL	1.92	15.38	194.64	326.3	227.6	268.6	285.6	183.02	79.62	181.80	14.60	29.00
MEAN	.062	.51	6.28	10.5	8.13	8.66	9.52	5.90	2.65	5.86	.47	.97
MAX	.45	1.8	38	45	37	29	23	29	16	21	1.2	5.4
MIN	.01	.02	.84	1.3	2.3	1.7	2.6	.66	.14	.12	.14	.23
CFSM	.03	.23	2.87	4.80	3.71	3.95	4.35	2.69	1.21	2.68	.22	.44
IN.	.03	.26	3.30	5.54	3.86	4.56	4.85	3.11	1.35	3.09	.25	.49

CAL YR 1978 TOTAL 1240.49 MEAN 3.40 MAX 55 MIN .01 CFSM 1.55 IN 21.06
WTR YR 1979 TOTAL 1808.08 MEAN 4.95 MAX 45 MIN .01 CFSM 2.26 IN 30.70

NOTE.--Missing record Aug. 23 to Sept. 26.

CUMBERLAND RIVER BASIN

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1975 to current year.

COOPERATION.--Samples collected and analyzed by the University of Tennessee at Knoxville.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LITY (MG/L AS CACO3)
OCT										
14...	.51	6.7	12.5	--	24	3.3	3.4	3.4	3.8	25
30...	1.6	6.9	9.0	--	13	2.0	2.1	1.5	2.0	9
DEC										
19...	.99	6.9	6.0	--	10	1.6	1.5	1.5	1.5	14
JAN										
13...	2.9	--	7.0	23	9	1.6	.8	1.7	1.8	6
27...	5.3	6.7	.0	9.0	13	1.1	2.4	1.7	1.8	33
FEB										
08...	62	6.0	2.0	9.0	11	1.1	1.6	1.8	1.7	7
24...	42	--	10.0	180	8	.5	1.1	2.0	1.3	0
MAR										
08...	5.0	4.8	6.0	1000	11	.3	1.5	3.6	1.8	3
22...	1.8	6.0	12.0	14	11	.9	1.8	1.7	1.6	9
APR										
07...	4.8	5.9	10.0	42	9	.8	1.4	1.5	1.4	5
21...	1.8	6.7	15.0	14	9	.9	1.4	1.5	1.4	6
MAY										
08...	3.2	6.1	13.0	15	7	.8	1.0	1.3	1.2	6
22...	1.6	5.9	19.0	65	12	1.2	2.0	1.9	1.7	8
JUN										
06...	3.0	6.6	19.0	18	9	1.2	1.2	1.4	1.4	6
21...	.14	7.2	21.0	21	18	3.6	3.5	2.6	2.3	14
JUL										
05...	.09	6.7	20.0	21	22	4.1	4.1	3.2	2.8	18
19...	.73	7.3	21.0	124	17	3.1	2.5	2.3	2.5	10
26...	2.1	6.5	19.0	100	14	3.1	2.8	2.4	1.8	9
AUG										
09...	.21	7.3	20.0	17	18	2.9	3.4	2.1	2.3	15
23...	.25	7.1	20.0	52	22	3.9	4.2	3.0	2.7	20
SEP										
06...	.46	6.9	21.0	11	23	4.7	4.5	3.2	2.9	16

CUMBERLAND RIVER BASIN

35

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
OCT									
14...	14	4	88	700	2	7	470	100	0
30...	13	14	62	980	0	0	560	120	0
DEC									
19...	9.0	10	46	700	0	2	430	40	0
JAN									
13...	13	0	108	2800	0	--	1200	0	2
27...	13	12	68	920	0	--	370	180	0
FEB									
08...	21	24	28	1200	0	0	320	0	0
24...	6.0	500	92	11300	0	--	2800	0	3
MAR									
08...	16	0	0	51000	0	0	6900	160	5
22...	18	32	36	2400	0	0	440	0	0
APR									
07...	2.0	94	70	3900	0	--	1700	0	0
21...	6.0	42	42	1400	0	0	920	0	0
MAY									
08...	8.0	34	18	1900	0	0	1000	0	0
22...	5.0	134	38	3800	0	0	1800	0	0
JUN									
06...	12	88	92	2200	0	--	1100	170	0
21...	29	76	76	3600	0	--	2200	500	0
JUL									
05...	19	46	130	2900	0	--	1200	0	0
19...	10	102	214	4900	0	0	4700	200	--
26...	3.0	156	132	6500	0	0	3600	0	--
AUG									
09...	4.0	44	84	1700	--	--	1400	150	--
23...	2.0	94	102	--	--	--	3400	200	--
SEP									
06...	14	32	80	--	--	--	1000	250	--

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
OCT									
14...	0	52	52	1	1	--	--	0	--
30...	0	--	--	2	3	--	--	0	0
DEC									
19...	0	--	--	1	2	--	--	1	0
JAN									
13...	0	0	0	2	10	0	20	1	0
27...	0	0	0	4	2	0	20	0	0
FEB									
08...	0	0	0	0	0	--	100	0	0
24...	0	160	0	16	2	0	0	6	1
MAR									
08...	3	270	150	42	5	40	0	20	5
22...	0	0	0	3	0	150	20	1	0
APR									
07...	0	0	0	1	0	0	0	--	--
21...	0	0	0	1	1	0	20	0	0
MAY									
08...	0	0	0	1	0	20	0	0	0
22...	0	0	0	2	1	0	0	1	0
JUN									
06...	0	0	0	2	1	20	0	--	--
21...	0	0	0	1	1	0	0	--	--
JUL									
05...	0	0	0	1	1	0	20	--	--
19...	--	140	60	40	0	--	--	--	--
26...	--	60	0	20	0	--	--	--	--
AUG									
09...	--	0	0	0	0	--	--	--	--
23...	--	80	50	--	--	--	--	--	--
SEP									
06...	--	60	50	--	--	--	--	--	--

CUMBERLAND RIVER BASIN

03407881 ANDERSON BRANCH NEAR MONTGOMERY, TN

LOCATION.--Lat 36°18'34", long 84°23'14", Scott County, Hydrologic Unit 05130104, on left bank 1.3 mi (2.1 km) southwest of Montgomery, 1.9 mi (3.1 km) south of Norma, 2.0 mi (3.2 km) northwest of Smoky Junction, and at mile 0.3 (0.5 km).

DRAINAGE AREA.--0.69 mi² (1.79 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1975 to current year.

GAGE.--Water-stage recorder and 170-degree V-notch weir. Altitude of gage is 1,240 ft (378 m), from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 267 ft³/s (7.56 m³/s) Apr. 4, 1977, gage height 4.53 ft (1.381 m); no flow July 16, 1977, Nov. 1, 2, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 239 ft³/s (6.77 m³/s) May 4, gage height, 4.47 ft (1.362 m); no flow Nov. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.00	.15	15	1.1	3.4	1.4	.40	3.0	.18	.22	.20
2	.02	.01	.12	15	1.0	2.5	2.5	.35	2.0	.15	.22	.12
3	.02	.01	.46	6.5	.84	2.0	10	.68	2.0	.15	.22	.08
4	.02	.01	6.9	3.4	.84	13	4.8	17	1.6	.22	.22	.08
5	.02	.01	3.2	2.3	.68	4.8	2.7	7.2	1.1	.26	.22	.35
6	.01	.01	1.6	3.0	.75	2.8	1.7	3.6	1.0	.15	.15	.25
7	.01	.01	.84	25	1.0	2.2	1.2	2.0	.84	.26	.15	.17
8	.01	.02	4.1	8.9	.84	1.9	1.1	1.5	.68	.22	.15	.12
9	.01	.02	26	5.0	.75	1.3	9.8	1.4	.52	.68	.10	.08
10	.01	.02	4.5	2.3	.84	3.2	3.6	1.2	.46	.30	.10	.05
11	.01	.02	2.5	2.2	.75	4.3	2.2	1.1	.46	.22	.15	.05
12	.01	.02	1.7	1.7	.75	2.8	3.2	.93	.40	.22	.15	.05
13	.01	.02	1.5	1.6	.75	1.9	5.6	1.2	.35	.22	.12	.05
14	.03	.02	1.1	1.5	1.1	1.9	4.1	.93	.30	2.7	.10	.15
15	.02	.02	.93	1.2	4.8	1.5	2.8	.75	.26	1.2	.10	.12
16	.02	.60	.84	1.0	4.8	1.1	1.9	.60	.26	.75	.10	.12
17	.02	.40	.84	.93	2.8	1.1	1.4	.52	.26	.46	.07	.12
18	.02	.18	.68	.93	2.0	1.0	1.0	.46	.26	.35	.07	.07
19	.02	.07	.60	.84	1.6	1.0	.84	.46	.22	.75	.07	.04
20	.02	.05	.93	17	1.5	.84	.75	.60	.22	6.9	.07	.04
21	.02	.04	8.9	19	3.0	.68	.68	2.0	.18	5.0	.05	.26
22	.02	.03	4.1	5.3	2.8	.60	.60	1.0	.22	3.4	.05	.22
23	.02	.30	2.7	3.4	2.7	3.6	.52	3.0	.35	1.6	.05	.22
24	.02	.22	2.2	3.6	12	5.6	.46	6.9	.30	.84	.05	.22
25	.02	.10	2.0	3.0	39	3.6	.46	4.8	.22	.68	.10	.22
26	.02	.07	1.5	2.2	8.9	2.3	.75	3.4	.18	.75	.35	.18
27	.04	.30	1.2	2.0	4.5	2.2	.60	2.5	.10	.52	.30	.52
28	.03	.15	1.0	2.0	4.1	2.3	.52	1.7	.10	.46	.30	1.4
29	.01	.22	.93	1.6	---	2.2	.46	1.2	.10	.40	.30	.75
30	.01	.26	.93	1.5	---	1.7	.46	1.2	.26	.30	.30	.68
31	.01	---	1.7	1.4	---	1.5	---	5.0	---	.35	.30	---
TOTAL	.55	3.21	86.65	160.30	106.49	80.82	68.10	75.58	18.20	30.64	4.90	6.98
MEAN	.018	.11	2.80	5.17	3.80	2.61	2.27	2.44	.61	.99	.16	.23
MAX	.04	.60	26	25	39	13	10	17	3.0	6.9	.35	1.4
MIN	.01	.00	.12	.84	.68	.60	.46	.35	.10	.15	.05	.04
CFSM	.03	.16	4.06	7.49	5.51	3.78	3.29	3.54	.88	1.44	.23	.33
IN.	.03	.17	4.66	8.63	5.73	4.35	3.67	4.07	.98	1.65	.26	.38
CAL YR 1978	TOTAL 515.56	MEAN 1.41	MAX 26	MIN .00	CFSM 2.04	IN 27.76						
WTR YR 1979	TOTAL 642.42	MEAN 1.76	MAX 39	MIN .00	CFSM 2.55	IN 34.58						

CUMBERLAND RIVER BASIN

03407881 ANDERSON BRANCH NEAR MONTGOMERY, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1975 to current year.

COOPERATION.--Samples collected and analyzed by the University of Tennessee at Knoxville.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	HARD- NESS (MG/L AS CAC03)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LITY (MG/L AS CAC03)
OCT										
14...	.08	6.8	12.5	--	89	23	22	8.2	7.8	82
30...	.41	7.5	8.0	--	84	22	24	5.3	5.2	72
DEC										
19...	.47	6.7	6.0	--	43	10	10	4.2	4.3	74
JAN										
13...	1.2	5.8	6.0	3.0	28	5.2	5.7	3.5	3.4	19
27...	1.8	7.2	5.0	11	31	4.8	6.3	3.6	3.7	19
FEB										
08...	.54	6.0	2.0	2.0	23	5.0	4.6	2.7	2.7	18
MAR										
08...	.54	6.0	12.0	900	49	28	14	5.6	3.3	65
22...	--	6.4	--	6.0	29	5.6	6.6	3.1	3.1	31
APR										
07...	1.4	6.9	11.0	8.0	24	4.3	4.8	2.9	2.8	19
21...	.68	6.6	16.0	6.0	29	6.1	6.4	3.3	3.2	24
MAY										
08...	1.2	6.5	15.0	12	29	6.2	6.8	3.0	3.0	24
22...	.67	6.4	15.0	83	54	27	15	5.1	4.0	64
JUN										
06...	.84	7.2	22.0	--	23	8.7	8.8	3.5	.3	30
21...	.07	7.4	22.0	1.0	80	23	22	6.7	6.2	67
JUL										
05...	.05	8.0	20.0	125	110	34	30	8.9	7.3	86
19...	.15	8.0	21.0	18	86	25	25	6.2	5.7	75
26...	.41	7.1	21.0	8.0	35	6.2	6.6	4.2	4.4	46
AUG										
09...	.07	7.9	22.0	5.0	100	27	28	7.3	7.3	83
23...	.05	7.1	20.0	17	96	27	26	7.7	7.5	86
SEP										
06...	.07	7.5	22.0	8.0	110	30	30	7.7	7.7	86

CUMBERLAND RIVER BASIN

03407881 ANDERSON BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
OCT									
14...	22	10	222	1170	2	0	650	100	0
30...	17	68	232	6590	0	0	3600	90	1
DEC									
19...	18	20	104	1400	0	1	490	80	0
JAN									
13...	15	82	--	0	0	--	440	0	0
27...	22	32	64	0	0	--	550	190	0
FEB									
08...	21	16	36	0	0	--	210	0	0
MAR									
08...	12	628	112	18600	0	--	4700	550	4
22...	33	6	66	0	0	0	670	0	0
APR									
07...	9.0	14	58	920	0	--	720	0	0
21...	11	8	72	920	0	0	880	0	0
MAY									
08...	13	28	36	1300	0	--	1000	0	0
22...	7.0	148	140	7600	0	--	4600	0	2
JUN									
06...	21	64	132	2200	0	0	1600	0	1
21...	20	20	208	1100	0	--	1400	250	0
JUL									
05...	29	166	374	9700	0	--	3900	0	1
19...	16	74	270	1400	0	0	1900	300	1
26...	12	26	206	0	1	0	150	1500	0
AUG									
09...	24	36	284	0	--	--	750	100	0
23...	28	118	442	--	--	--	1000	300	0
SEP									
06...	25	35	293	--	--	--	1100	0	0

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
OCT									
14...	1	--	--	2	1	--	--	0	0
30...	0	160	110	4	1	--	0	1	--
DEC									
19...	0	160	150	1	3	--	--	1	1
JAN									
13...	0	100	90	1	2	0	20	0	0
27...	1	110	110	1	6	--	90	0	0
FEB									
08...	0	100	90	0	1	0	0	0	0
MAR									
08...	1	250	50	14	4	50	70	6	1
22...	0	80	60	1	0	0	0	1	0
APR									
07...	0	100	80	0	0	0	0	--	--
21...	0	100	70	0	0	0	0	0	0
MAY									
08...	0	70	30	0	0	0	30	0	0
22...	1	140	60	7	0	20	20	2	0
JUN									
06...	0	100	70	1	1	0	0	--	--
21...	0	120	50	5	4	0	20	--	--
JUL									
05...	0	150	50	20	1	30	20	--	--
19...	0	120	150	--	--	10	0	--	--
26...	0	80	100	0	--	0	0	--	--
AUG									
09...	0	60	0	--	--	0	0	--	--
23...	0	120	0	--	--	--	--	--	--
SEP									
06...	--	120	50	--	--	--	--	--	--

CUMBERLAND RIVER BASIN

39

03407882 LOWE BRANCH NEAR MONTGOMERY, TN

LOCATION.--Lat 36°19'04", long 84°23'07", Scott County, Hydrologic Unit 05130104, on right bank 1.0 mi (1.6 km) southwest of Montgomery, 1.3 mi (2.1 km) south of Norma, 2.4 mi (3.9 km) northwest of Smoky Junction, and at mile 0.3 (0.5 km).

DRAINAGE AREA.--0.92 mi² (2.38 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1975 to current year.

GAGE.--Water-stage recorder and 120-degree V-notch weir. Altitude of gage is 1,250 ft (381 m), from topographic map.

REMARKS.--Records fair except those above 5 cfs, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 589 ft³/s (16.7 m³/s) May 4, 1979, gage height, 2.95 ft (0.899 m); minimum, no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 589 ft³/s (16.7 m³/s) May 4, gage height, 2.95 ft (0.899 m); minimum, no flow many days in October, November, and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.06	13	1.6	4.7	1.9	.46	7.7	.05	.13	.10
2	.00	.00	.04	14	1.5	3.3	5.0	.40	4.3	.04	.13	.09
3	.00	.00	.18	5.0	1.3	2.6	19	.79	3.0	.03	.13	.07
4	.00	.00	5.3	3.5	.79	15	9.2	.52	2.1	.03	.13	.07
5	.00	.00	2.7	2.4	.73	7.2	5.0	15	1.5	.07	.13	.11
6	.00	.00	1.2	3.0	.58	4.3	3.3	6.4	.92	.03	.13	.09
7	.00	.00	.44	2.6	.79	3.0	2.4	3.3	.63	.05	.12	.07
8	.00	.00	2.3	10	.63	2.2	2.0	2.0	.43	.07	.12	.06
9	.00	.00	19	5.0	.54	1.6	14	1.2	.31	.22	.12	.04
10	.00	.00	8.7	2.4	.54	4.3	6.8	.92	.24	.14	.12	.02
11	.00	.00	6.0	2.1	.58	6.8	4.0	.63	.21	.08	.12	.00
12	.00	.00	4.0	1.6	.68	4.7	5.7	.43	.17	.07	.12	.00
13	.00	.00	3.0	1.2	.99	3.0	9.2	.50	.15	.05	.11	.00
14	.00	.00	2.0	.85	1.1	2.4	7.7	.34	.12	1.9	.09	.00
15	.00	.00	1.5	.58	7.2	1.9	5.0	.24	.10	.37	.07	.00
16	.00	.09	1.3	.46	8.2	1.5	3.3	.19	.08	.17	.07	.00
17	.00	.05	1.1	.37	5.0	1.3	2.2	.15	.09	.10	.06	.00
18	.00	.04	1.0	.37	3.3	1.1	1.8	.12	.08	.07	.06	.00
19	.00	.03	.90	.34	2.1	.99	1.2	.11	.07	.07	.06	.00
20	.00	.02	1.5	18	1.9	.79	.85	.14	.06	3.8	.06	.00
21	.00	.01	6.2	25	4.7	.68	.68	1.1	.05	10	.06	.20
22	.00	.01	4.2	8.7	5.0	.54	.54	.46	.05	3.5	.06	.30
23	.00	.03	2.5	5.7	4.0	4.3	.50	2.2	.09	1.8	.06	.28
24	.00	.05	1.8	5.0	15	9.7	.43	9.2	.08	.63	.06	.26
25	.00	.04	1.0	4.3	39	6.0	.40	7.2	.07	.50	.06	.24
26	.00	.03	.63	3.0	15	3.5	.79	5.3	.06	.37	.12	.22
27	.00	.04	.50	2.4	7.7	3.3	.68	3.3	.04	.37	.12	.48
28	.00	.04	.40	2.4	5.7	4.0	.63	2.1	.03	.31	.12	1.5
29	.00	.04	.34	2.2	---	3.5	.54	1.4	.03	.21	.12	.80
30	.00	.06	.31	2.0	---	2.4	.50	1.2	.10	.15	.12	.60
31	.00	---	1.4	1.8	---	2.1	---	8.7	---	.14	.12	---
TOTAL	.00	.58	81.50	149.27	136.15	112.70	115.24	127.48	22.86	25.39	3.10	5.60
MEAN	.000	.019	2.63	4.82	4.86	3.64	3.84	4.11	.76	.82	.10	.19
MAX	.00	.09	19	25	39	15	19	52	7.7	10	.13	1.5
MIN	.00	.00	.04	.34	.54	.54	.40	.11	.03	.03	.06	.00
CFSM	.000	.02	2.86	5.24	5.28	3.96	4.17	4.47	.83	.89	.11	.21
IN.	.00	.02	3.29	6.03	5.50	4.55	4.65	5.15	.92	1.03	.13	.23

CAL YR 1978 TOTAL 343.99 MEAN .94 MAX 21 MIN .00 CFSM 1.02 IN 13.89
WTR YR 1979 TOTAL 779.87 MEAN 2.14 MAX 52 MIN .00 CFSM 2.33 IN 31.50

CUMBERLAND RIVER BASIN

03407882 LOWE BRANCH NEAR MONTGOMERY, TN.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1975 to current year.

COOPERATION.--Samples collected and analyzed by the University of Tennessee at Knoxville.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	STREAM- FLOW, INSTAN- TANEOUS (CFS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LITY (MG/L AS CACO3)
OCT										
30...	.27	6.6	8.0	--	12	2.1	1.8	1.6	1.7	7
DEC										
19...	.43	6.3	8.0	--	9	1.8	1.3	1.3	1.4	11
JAN										
13...	1.1	--	6.0	.00	8	1.1	.9	1.3	1.3	3
27...	2.0	6.4	5.0	2.0	10	1.1	1.7	1.2	1.3	5
FEB										
08...	.55	5.6	.0	.00	8	.9	.9	1.3	1.3	4
MAR										
08...	1.9	5.6	6.5	2.0	8	.9	1.2	1.4	1.3	2
22...	.62	5.7	12.0	.00	8	.9	1.0	1.4	1.4	0
APR										
07...	1.6	6.4	11.0	.00	8	.9	.9	1.3	1.3	4
21...	.62	5.7	16.0	1.0	8	.9	1.1	1.5	1.3	3
MAY										
08...	1.2	5.8	12.0	2.0	9	1.0	1.2	1.4	1.4	4
22...	.59	5.8	14.0	1.0	10	1.1	1.2	1.5	1.6	5
JUN										
06...	.49	6.1	18.0	1.0	9	1.1	1.1	1.6	1.6	5
21...	--	6.5	21.0	.00	12	2.2	2.2	1.8	1.6	9
JUL										
05...	.01	6.0	20.0	4.0	13	2.1	2.2	1.7	1.7	11
19...	.01	6.7	26.0	1.0	13	2.3	2.3	1.8	1.7	9
26...	.33	5.8	19.0	1.0	12	2.2	2.2	1.7	1.6	8
AUG										
09...	--	6.4	22.0	.00	14	2.6	2.5	1.9	1.9	9

CUMBERLAND RIVER BASIN

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03407882 LOWE BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
OCT 30...	13	6	62	--	0	0	140	51	--
DEC 19...	--	6	94	610	1	0	140	51	0
JAN 13...	8.0	10	74	0	0	0	0	0	0
27...	13	4	32	0	0	--	0	0	0
FEB 08...	16	8	12	0	0	0	0	0	0
MAR 08...	12	0	20	0	0	0	0	0	0
22...	9.0	2	14	0	0	0	0	0	0
APR 07...	8.0	4	36	0	0	--	150	0	0
21...	7.0	4	28	0	--	0	240	0	0
MAY 08...	5.0	6	10	0	0	0	200	0	0
22...	7.0	4	80	0	--	0	200	0	0
JUN 06...	11	8	92	0	0	--	180	0	0
21...	11	18	98	0	0	--	230	0	0
JUL 05...	11	36	116	0	0	--	160	0	0
19...	10	10	82	0	0	0	150	0	1
26...	6.0	2	134	0	0	0	250	0	0
AUG 09...	7.0	8	72	0	--	--	150	0	0

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)
OCT 30...	--	--	--	1	0	--	--	--	--
DEC 19...	0	--	--	15	2	--	--	1	--
JAN 13...	0	0	0	1	0	0	0	0	0
27...	0	0	0	1	2	--	70	0	0
FEB 08...	0	0	0	0	1	0	0	0	0
MAR 08...	0	0	0	0	0	0	0	0	0
22...	0	0	0	0	0	0	0	0	0
APR 07...	0	0	0	0	0	0	0	--	--
21...	1	0	0	0	0	10	0	0	0
MAY 08...	0	0	0	0	0	0	0	0	0
22...	0	0	0	0	0	0	0	0	0
JUN 06...	0	0	0	0	0	0	0	--	--
21...	0	0	0	0	0	0	0	--	--
JUL 05...	0	0	0	0	0	0	0	--	--
19...	0	0	0	--	--	0	0	--	--
26...	0	0	0	0	--	0	0	--	--
AUG 09...	0	0	0	--	--	0	0	--	--

CUMBERLAND RIVER BASIN

03407908 NEW RIVER AT CORDELL, TN

LOCATION.--Lat 36°20'10", long 84°27'06", Scott County, Hydrologic Unit 05130104, on right bank at Cordell Bridge, 3.4 mi (5.5 km) south of Winona, and at mile 24.9 (40.1 km).

DRAINAGE AREA.--198 mi² (513 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,180 ft (360 m), from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 13,500 ft³/s (382 m³/s) Oct. 9, 1977, gage height, 17.48 ft (corrected) (5.328 m); minimum, 3.0 ft³/s (corrected) (0.08 m³/s) July 23, 1977, gage height, 2.15 ft (corrected) (0.655 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft³/s (227 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	1045	10500 297	14.62 4.456	Feb. 25	1515	*13400 379	17.53 5.343
Dec. 9	0845	12500 354	16.65 5.075	Mar. 4	1100	9740 276	13.79 4.203
Jan. 1	2230	10100 286	14.12 4.304	May 4	1215	8510 241	12.50 3.810
Jan. 21	0030	9770 277	13.82 4.212	May 31	1600	13200 374	17.27 5.264

Minimum discharge, 4.5 ft³/s (0.13 m³/s) Oct. 22, 23, 24, 25, gage height, 1.92 ft (0.585 m).

REVISIONS.--Revised figures of discharge for period May to September, 1977, superseding those published in the report for 1978 are given herein.

EXTREMES FOR MAY TO SEPTEMBER 1977: Maximum discharge, 3,460 ft³/s (98.0 m³/s) June 26, gage height, 8.11 ft (2.472 m); minimum, 3.0 cfs (0.08 m³/s) July 23, gage height, 2.15 ft (0.655 m).

DISCHARGE, IN CUBIC FEET PER SECOND, MAY TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								462	42	130	20	20
2								361	34	234	19	60
3								335	26	144	18	50
4								358	21	100	17	40
5								310	18	82	40	38
6								259	18	73	60	34
7								216	96	46	65	100
8								201	45	39	30	300
9								157	26	43	80	200
10								134	20	29	200	90
11								118	17	36	300	50
12								102	13	34	100	40
13								90	9.5	31	80	30
14								82	76	30	120	200
15								73	98	22	150	346
16								66	49	17	130	773
17								59	125	13	60	505
18								52	82	10	120	269
19								49	132	8.7	90	165
20								48	272	8.0	70	116
21								46	201	6.7	50	78
22								48	111	4.9	30	54
23								78	253	5.4	28	40
24								100	234	10	80	32
25								82	573	39	200	26
26								59	1490	170	90	720
27								56	685	90	50	1040
28								49	324	50	40	746
29								62	184	30	28	335
30								107	127	26	24	213
31								59	---	22	22	---
TOTAL	---	---	---	---	---	---	---	4278	5401.5	1583.7	2411	6710
MEAN	---	---	---	---	---	---	---	138	180	51.1	77.8	224
MAX	---	---	---	---	---	---	---	462	1490	234	300	1040
MIN	---	---	---	---	---	---	---	46	9.5	4.9	17	20
CFSM	---	---	---	---	---	---	---	.70	.91	.26	.39	1.13
IN.	---	---	---	---	---	---	---	.80	1.01	.30	.45	1.26

CUMBERLAND RIVER BASIN

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03407908 NEW RIVER AT CORDELL, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	8.2	253	4360	352	1110	453	210	2590	57	209	516
2	43	7.6	165	5540	263	818	623	185	1230	39	154	299
3	30	7.6	172	1350	322	631	2540	218	2200	38	117	248
4	25	7.5	4730	750	278	4940	2210	4300	1750	31	97	169
5	23	7.7	1690	560	235	2180	1690	2330	967	55	82	129
6	27	7.8	755	500	205	1230	1110	1290	562	51	68	97
7	15	8.6	450	5200	235	828	743	772	391	32	60	80
8	10	10	963	3400	205	622	574	526	294	86	54	67
9	8.2	12	6750	1450	192	465	2150	389	217	120	51	58
10	6.6	15	1750	800	151	571	1570	441	172	184	46	52
11	5.6	13	846	607	180	967	1040	376	217	93	47	46
12	5.1	11	516	496	180	685	1230	263	144	78	141	40
13	4.8	10	384	423	209	529	2420	239	120	180	76	38
14	6.7	9.0	304	368	213	574	1950	245	104	624	54	47
15	8.1	9.3	239	300	879	530	1290	178	90	859	43	74
16	11	39	213	202	1740	448	859	144	78	618	39	47
17	9.9	230	244	187	1020	401	604	119	76	235	38	38
18	7.7	201	192	191	671	356	477	104	78	129	32	34
19	6.6	84	188	168	500	320	378	93	70	97	31	32
20	5.8	51	235	3130	421	286	316	90	63	2610	26	32
21	5.4	38	1610	6010	928	457	267	359	57	5090	43	135
22	4.8	29	1110	2050	1260	338	233	219	55	2780	51	988
23	4.7	102	622	1270	1160	1030	224	423	60	1070	52	304
24	4.8	516	457	1320	3840	2460	209	2140	93	533	57	154
25	5.0	180	398	1130	7620	1550	182	1460	95	412	50	107
26	5.0	107	302	670	3310	991	379	1170	72	1280	1110	84
27	5.6	222	237	631	1660	852	387	710	57	1270	960	196
28	6.6	316	190	650	1370	962	313	585	51	2630	299	2240
29	8.4	184	174	522	---	801	265	435	46	1080	1240	1300
30	11	405	180	464	---	636	235	319	50	539	840	574
31	9.2	---	1050	449	---	521	---	5840	---	322	1220	---
TOTAL	345.6	2848.3	27369	45148	29599	29089	26921	26172	12049	23222	7387	8225
MEAN	11.1	94.9	883	1456	1057	938	897	844	402	749	238	274
MAX	43	516	6750	6010	7620	4940	2540	5840	2590	5090	1240	2240
MIN	4.7	7.5	165	168	151	286	182	90	46	31	26	32
CFSM	.06	.48	4.46	7.35	5.34	4.74	4.53	4.26	2.03	3.78	1.20	1.38
IN.	.06	.54	5.14	8.48	5.56	5.47	5.06	4.92	2.26	4.36	1.39	1.55
CAL YR 1978	TOTAL	135548.3	MEAN 371	MAX 7800	MIN 4.7	CFSM 1.87	IN 25.47					
WTR YR 1979	TOTAL	238374.9	MEAN 653	MAX 7620	MIN 4.7	CFSM 3.30	IN 44.79					

CUMBERLAND RIVER BASIN

03407908 NEW RIVER AT CORDELL, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976-77, current year.

REMARKS.--Miscellaneous samples prior to 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY 22...	1000	214	270	7.4	19.5	--	--	--	--	--
JUL 17...	1300	238	222	7.8	22.0	--	--	--	--	--
SEP 04...	1600	160	265	7.7	24.0	110	69	28	9.2	7.1

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
MAY 22...	--	--	--	36	87	--	--	--	167	--
JUL 17...	--	--	--	36	69	--	--	--	171	--
SEP 04...	12	.3	1.8	40	73	.6	.1	4.8	167	148

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	.23	96.5	10000	50	220	80	259	150	100
JUL 17...	.23	110	2000	50	110	50	85	55	97
SEP 04...	.23	72.1	3700	10	110	50	101	44	--

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/L AS CU)
SEP 04...	.26	.040	3	0	0	2	<10	10	10	20	6	20

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CYANIDE TOTAL (MG/L AS CN)
SEP 04...	22000	8	20	420	<.5	.00	0	0	1	40	40	.00

03408500 NEW RIVER AT NEW RIVER, TN

LOCATION.--Lat 36°23'08", long 84°33'17", Scott County, Hydrologic Unit 05130104, on left bank at town of New River, 700 ft (210 m) downstream from Phillips Creek, 1,000 ft (300 m) downstream from bridge on U. S. Highway 27, 1.7 mi (2.7 km) downstream from Brimstone Creek, and at mile 8.6 (13.8 km).

DRAINAGE AREA.--382 mi² (989 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1934 to current year. Gage-height records collected in this vicinity 1908-52 are contained in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 1436: Drainage area. WRD TN-73: 1939(M), 1951(M), 1970(M).

GAGE.--Water-stage recorder. Datum of gage is 1,092.43 ft (332.973 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--45 years, 746 ft³/s (21.13 m³/s), 26.52 in/yr (674 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,700 ft³/s (1,810 m³/s) May 27, 1973, gage height, 37.91 ft (11.555 m), from high water mark in gage well, from rating curve extended above 27,000 ft³/s (765 m³/s) on basis of slope-area and contracted-opening measurements of peak flow; minimum, no flow part of each day Aug. 12-15, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 23, 1929, reached a stage of 41.2 ft (12.56 m), discharge, 74,700 ft³/s (2,120 m³/s), estimated, based on field survey at old U. S. Weather Bureau gage, 1,200 ft (400 m) upstream at datum 3.41 ft (1.039 m) higher.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,000 ft³/s (340 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1330	16700 473	18.63 5.678	Feb. 25	1930	*19800 561	20.40 6.218
Jan. 2	0400	14600 413	17.28 5.267	May 4	1600	13400 379	16.46 5.017
Jan. 7	1730	16100 456	18.26 5.566	May 31	2100	12700 360	15.96 4.865
Jan. 21	0500	14500 411	17.20 5.243				

Minimum discharge, 13 ft³/s (0.37 m³/s) Oct. 25, gage height, 1.70 ft (0.518 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	22	415	4830	620	1660	702	339	3970	65	314	556
2	46	21	297	10100	451	1300	992	308	1440	64	245	332
3	59	20	289	2640	508	1060	4170	329	1840	51	197	300
4	44	19	5450	1440	479	5190	3470	7080	1910	46	165	216
5	36	18	2820	1070	427	3470	2370	4420	1100	77	144	191
6	32	19	1290	962	363	1740	1500	2010	730	100	124	146
7	31	21	824	9910	396	1240	1080	1220	511	66	110	117
8	27	29	1000	6300	398	999	880	859	401	75	98	101
9	23	32	10600	2250	350	790	2530	650	327	162	88	87
10	20	30	3320	1420	261	913	2150	616	264	304	80	74
11	19	28	1480	1080	309	1550	1400	570	264	182	75	66
12	17	28	974	860	323	1230	1440	433	226	135	126	61
13	27	25	713	760	397	998	3050	360	170	200	160	55
14	51	23	555	680	438	922	2760	392	157	323	98	55
15	37	24	457	510	1230	848	1790	299	141	812	77	85
16	34	75	404	420	2900	708	1240	248	117	762	66	84
17	30	392	421	410	1670	646	931	207	106	361	59	61
18	27	264	354	410	1170	583	744	177	105	219	54	51
19	24	182	337	380	915	538	609	161	100	152	50	48
20	21	117	381	3250	757	499	520	151	85	1820	47	46
21	19	80	2370	11800	1130	556	455	444	77	6390	58	65
22	18	65	1900	3800	1740	497	404	411	69	4750	137	795
23	15	92	1150	2000	1450	704	390	1200	77	1370	91	425
24	14	593	866	1900	4460	3300	368	5030	123	755	103	229
25	14	361	762	1640	11700	2170	325	2560	133	554	89	160
26	15	240	566	1240	7590	1370	449	1810	110	1010	753	127
27	17	223	462	1080	2740	1110	559	1180	80	1000	964	176
28	18	435	379	1160	2100	1260	465	926	65	2410	438	2040
29	19	312	341	960	---	1110	411	693	56	1070	1000	1570
30	20	474	358	840	---	937	370	518	56	625	621	720
31	21	---	1520	760	---	793	---	4630	---	432	1130	---
TOTAL	836	4264	43055	76862	47272	40691	38524	40231	14810	26342	7761	9039
MEAN	27.0	142	1389	2479	1688	1313	1284	1298	494	850	250	301
MAX	59	593	10600	11800	11700	5190	4170	7080	3970	6390	1130	2040
MIN	14	18	289	380	261	497	325	151	56	46	47	46
CFSM	.07	.37	3.64	6.49	4.42	3.44	3.36	3.40	1.29	2.23	.65	.79
IN.	.08	.42	4.19	7.48	4.60	3.96	3.75	3.92	1.44	2.57	.76	.88

CAL YR 1978 TOTAL 244705 MEAN 670 MAX 15000 MIN 14 CFSM 1.75 IN 23.83
WTR YR 1979 TOTAL 349687 MEAN 958 MAX 11800 MIN 14 CFSM 2.51 IN 34.05

CUMBERLAND RIVER BASIN
03408500 NEW RIVER AT NEW RIVER, TN--Continued

WATER-QUALITY RECORDS

LOCATION.--Samples collected at bridge on U. S. Highway 27, 1,000 ft (300 m) upstream from discharge station.

PERIOD OF RECORD.--Water years 1964-67, 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1976 to current year.
pH: October 1976 to current year.
WATER TEMPERATURE: October 1976 to current year.
DISSOLVED OXYGEN: October 1976 to current year.
TURBIDITY: December 1976 to current year.
OXIDATION-REDUCTION POTENTIAL: December 1976 to September 1977.
SUSPENDED SEDIMENT DISCHARGE: October 1976 to current year.

INSTRUMENTATION.--Five parameter water quality monitor and sediment pumping sampler since Oct. 21, 1976.

REMARKS.--Interruptions in the record on many days were due to malfunctions of the instruments.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 694 micromhos/cm June 30, 1978; minimum daily, 44 micromhos/cm Apr. 4, 1977.
pH: 8.0 units May 28, 1977; minimum, 5.3 units Nov. 17, 1978.
WATER TEMPERATURE: Maximum daily, 31.5°C July 17, 1977; minimum daily, 0.0 Jan. 1, 2, 13, 17, 19, Feb. 6, 1977.
DISSOLVED OXYGEN: Maximum daily, 14.4 mg/L Dec. 6, 1976; minimum daily, 5.6 mg/L July 26, 1977.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,790 mg/L Oct. 9, 1977; minimum daily mean, 1 mg/L on many days in 1976.
SEDIMENT LOADS: Maximum daily, 262,000 tons (238,000 tonnes) Apr. 5, 1977; minimum daily, 0.19 tons (0.17 tonnes) on many days.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum daily, 584 micromhos/cm Oct. 15; minimum daily, 90 micromhos/cm Mar. 25.
pH: Maximum, 7.6 units Feb. 24, several days in August, Sept. 12, 13; minimum, 5.3 units Nov. 17.
WATER TEMPERATURE: Maximum daily, 29.0°C Aug. 9, 10; minimum daily, 0.5°C several days in February.
DISSOLVED OXYGEN: Maximum daily, 14.0 mg/L Feb. 10, 11; minimum daily, 6.6 mg/L Aug. 24.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,270 mg/L Dec. 4; minimum daily mean, 4 mg/L Feb. 5, 6, Apr. 21.
SEDIMENT LOADS: Maximum daily, 61,100 tons (55,400 tonnes) Feb. 25; minimum daily, 0.24 tons (0.22 tonnes) Nov 5.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY 24...	1030	6340	130	7.1	15.5	--	--	--	--	--
JUN 15...	1215	145	280	7.6	22.0	--	--	--	--	--
JUL 27...	1230	1020	200	7.7	21.5	--	--	--	--	--
SEP 06...	0830	173	258	7.0	22.5	110	63	28	10	7.6
DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)
MAY 24...	--	--	--	16	39	--	--	--	--	--
JUN 15...	--	--	--	36	--	--	--	--	--	--
JUL 27...	--	--	--	30	62	--	--	--	142	--
SEP 06...	19	.3	2.0	42	71	1.5	.1	5.3	167	155

CUMBERLAND RIVER BASIN

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03408500 NEW RIVER AT NEW RIVER, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	--	--	11000	120	630	190	557	9540	81
JUN 15...	--	--	--	--	--	--	10	3.6	47
JUL 27...	.19	391	3300	60	170	80	127	350	92
SEP 06...	.23	78.0	1200	50	--	140	24	11	--

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
SEP 06...	.20	.020	3	0	0	0	<10	10	20	10	0	20

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CYANIDE TOTAL (MG/L AS CN)
SEP 06...	28000	11	10	550	<.5	.00	0	0	1	20	60	.00

CUMBERLAND RIVER BASIN

03408500 NEW RIVER AT NEW RIVER, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	476	362	393	476	460	467	300	284	291	220	134	171
2	390	374	383	482	476	478	308	286	298	126	112	118
3	400	380	392	482	476	479	302	256	279	140	124	132
4	418	396	407	482	476	478	256	162	210	156	140	148
5	422	414	418	478	472	475	174	162	167	170	154	162
6	420	412	417	474	468	470	186	176	180	176	166	172
7	420	410	415	470	460	465	194	186	190	170	106	138
8	432	414	423	464	458	461	202	188	196	124	106	116
9	458	432	443	468	462	465	172	124	146	---	---	---
10	494	460	472	482	464	472	---	---	---	---	---	---
11	514	490	503	486	474	477	---	---	---	---	---	---
12	566	510	531	496	480	486	172	168	170	---	---	---
13	572	444	542	506	492	498	186	170	178	---	---	---
14	550	520	540	510	504	507	194	184	190	---	---	---
15	584	516	545	514	506	509	204	194	199	---	---	---
16	518	490	506	510	422	475	212	206	208	---	---	---
17	494	480	487	516	424	468	220	212	215	---	---	---
18	474	462	470	490	438	459	230	220	224	224	220	223
19	462	458	461	478	464	471	234	228	231	236	222	229
20	464	458	461	512	478	497	246	234	240	236	142	198
21	464	456	462	510	502	506	236	184	207	132	100	109
22	462	454	459	502	476	484	184	142	152	130	108	120
23	454	446	451	480	388	430	152	144	148	148	130	139
24	446	432	439	384	318	362	162	152	156	162	148	154
25	434	430	432	424	364	397	174	162	166	166	158	162
26	432	426	431	354	278	307	184	172	178	160	156	158
27	432	426	428	280	266	271	192	182	187	170	160	164
28	434	422	429	306	268	284	198	190	194	176	168	172
29	440	430	435	330	318	322	202	196	200	174	170	172
30	450	438	443	330	294	314	206	202	204	174	170	172
31	460	450	454	---	---	---	210	180	199	180	172	176
MONTH	584	362	454	516	266	441	308	124	200	236	100	159
	FEBRUARY			MARCH			APRIL			MAY		
1	188	180	184	158	152	156	---	---	---	224	218	221
2	192	186	189	166	156	161	---	---	---	224	220	222
3	198	188	194	170	162	167	---	---	---	226	218	223
4	206	194	201	186	116	152	122	116	119	220	110	148
5	210	198	205	132	116	123	146	122	136	118	106	110
6	220	210	214	146	132	140	146	136	139	130	114	123
7	220	212	215	158	148	153	172	142	148	142	126	134
8	216	212	214	172	158	165	162	150	157	158	140	149
9	222	212	217	182	170	176	---	---	---	---	---	---
10	228	222	225	184	176	180	---	---	---	---	---	---
11	238	226	232	176	154	164	142	136	138	---	---	---
12	234	224	229	154	148	151	144	140	142	---	---	---
13	236	228	233	156	168	152	146	138	142	---	---	---
14	236	224	233	166	166	161	138	130	134	---	---	---
15	234	182	212	180	156	173	138	134	135	234	230	231
16	180	150	163	194	178	188	150	134	142	240	224	233
17	150	144	146	192	184	188	156	146	152	240	224	233
18	148	142	146	194	186	191	168	158	163	248	238	244
19	160	150	154	196	190	192	180	124	174	256	248	252
20	168	160	164	198	192	196	190	148	183	262	252	257
21	180	168	173	212	196	202	196	190	192	278	248	259
22	206	166	190	240	212	224	204	194	200	298	268	278
23	164	156	160	244	202	223	210	204	206	274	128	230
24	192	132	161	218	132	165	218	208	214	150	110	128
25	132	98	115	134	90	130	234	220	224	132	116	125
26	122	98	110	138	132	136	316	238	283	144	130	139
27	136	124	129	---	---	---	294	244	265	150	144	148
28	156	148	157	---	---	---	252	242	246	164	150	156
29	---	---	---	---	---	---	242	218	229	184	162	172
30	---	---	---	---	---	---	222	214	218	194	182	189
31	---	---	---	---	---	---	---	---	---	218	124	178
MONTH	238	98	184	244	90	170	316	116	179	298	106	191

CUMBERLAND RIVER BASIN

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03408500 NEW RIVER AT NEW RIVER, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	138	122	130	390	382	385	234	218	226	220	202	207
2	152	142	148	398	384	392	248	232	239	216	204	211
3	184	154	166	422	396	410	256	246	250	236	216	224
4	164	152	158	444	420	432	270	254	262	252	232	242
5	166	156	159	466	434	451	280	268	274	272	248	261
6	176	162	169	448	426	434	290	278	283	276	268	272
7	190	176	183	428	396	415	296	286	292	314	268	284
8	204	190	197	394	378	386	310	296	302	332	316	326
9	220	202	211	430	400	417	316	306	311	324	314	317
10	230	216	222	432	404	418	324	314	320	318	312	315
11	240	226	232	442	418	432	332	322	327	320	314	316
12	258	242	248	446	434	440	342	322	332	326	318	321
13	266	256	262	432	366	400	362	338	353	334	324	328
14	276	264	269	374	340	360	428	362	395	338	328	333
15	300	274	288	330	258	295	428	418	423	348	334	341
16	308	298	303	262	224	245	420	412	416	362	348	355
17	302	284	291	260	220	242	420	410	415	372	360	120
18	290	282	286	260	240	249	428	416	422	384	368	120
19	304	288	295	252	242	247	444	424	433	394	382	120
20	316	302	308	260	182	238	464	440	451	404	390	120
21	324	316	319	184	126	147	468	456	462	408	372	135
22	334	322	329	144	124	133	454	376	420	---	---	---
23	336	322	330	166	146	160	372	338	350	---	---	---
24	336	306	322	182	164	174	376	344	361	---	---	---
25	360	330	330	200	184	192	368	342	352	---	---	---
26	376	358	390	272	198	220	472	346	402	266	258	262
27	382	372	450	268	214	223	398	212	254	276	266	271
28	374	366	660	222	156	186	226	202	213	---	---	---
29	380	368	780	184	160	172	250	194	227	---	---	---
30	390	378	990	204	186	195	220	196	2100	---	---	---
31	---	---	---	220	200	210	230	204	1650	---	---	---
MONTH	390	122	314	466	124	300	472	194	436	408	202	252

PH (STANDARD UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.2	7.1	7.0	6.9	7.0	6.9	6.9	6.7	6.9	6.9	6.7	6.5
2	7.2	7.1	6.9	6.9	7.2	7.0	6.6	6.4	6.9	6.9	6.7	6.6
3	7.3	7.1	6.9	6.8	7.2	7.0	6.4	6.4	7.0	6.9	6.7	6.7
4	7.3	7.1	6.9	6.8	7.0	6.7	6.5	6.3	7.0	6.9	7.0	6.7
5	7.3	7.1	6.9	6.8	6.6	6.5	6.6	6.5	7.0	7.0	6.7	6.6
6	7.2	7.1	6.9	6.8	6.6	6.5	6.7	6.6	7.0	7.0	6.7	6.6
7	7.2	7.2	6.9	6.9	6.7	6.6	6.7	6.4	7.0	7.0	6.7	6.6
8	7.2	7.1	6.9	6.9	7.0	6.7	6.4	6.4	7.0	7.0	6.8	6.7
9	7.2	7.1	7.0	6.9	6.9	6.5	---	---	7.0	7.0	6.9	6.8
10	7.2	7.1	7.0	7.0	---	---	---	---	7.0	6.9	6.9	6.8
11	7.1	7.0	7.1	7.0	---	---	---	---	7.0	7.0	6.9	6.7
12	7.0	7.0	7.1	7.0	6.6	6.5	---	---	7.0	6.9	6.8	6.7
13	7.0	7.0	7.1	7.0	6.7	6.6	---	---	7.0	6.9	6.8	6.7
14	7.0	6.9	7.1	7.0	6.7	6.7	---	---	7.0	7.0	6.8	6.7
15	7.0	7.0	7.1	7.0	6.7	6.7	---	---	7.0	6.6	6.9	6.8
16	7.0	7.0	7.0	6.9	6.8	6.7	---	---	6.8	6.6	6.9	6.9
17	7.0	7.0	6.9	5.3	6.8	6.8	---	---	6.7	6.7	6.9	6.9
18	7.1	7.0	7.0	5.5	6.8	6.8	6.9	6.8	6.7	6.7	6.9	6.9
19	7.1	7.0	7.1	7.0	6.9	6.8	6.9	6.9	6.7	6.7	6.9	6.9
20	7.1	7.1	7.1	7.1	7.0	6.9	7.0	6.7	6.8	6.7	6.9	6.9
21	7.1	7.0	7.1	7.1	7.1	6.7	6.6	6.5	6.9	6.7	7.0	6.9
22	7.2	7.1	7.1	7.0	6.9	6.6	6.7	6.5	7.2	6.8	7.1	7.0
23	7.2	7.1	7.1	7.0	6.7	6.6	6.6	6.6	6.9	6.8	7.2	7.1
24	7.2	7.1	7.0	6.7	6.7	6.7	6.8	6.7	7.6	6.9	7.2	6.9
25	7.1	7.1	7.2	7.0	6.7	6.7	6.9	6.8	6.9	6.6	6.9	6.8
26	7.1	7.1	7.1	7.0	6.8	6.7	6.8	6.8	6.6	6.5	6.8	6.8
27	7.1	7.0	7.0	6.9	6.8	6.8	6.9	6.8	6.6	6.5	---	---
28	7.0	7.0	7.0	6.9	6.8	6.8	6.9	6.9	6.8	6.7	---	---
29	7.0	7.0	7.1	7.0	6.8	6.8	6.9	6.9	---	---	---	---
30	7.0	7.0	7.1	6.9	6.8	6.8	6.9	6.9	---	---	---	---
31	7.0	7.0	---	---	6.9	6.7	6.9	6.9	---	---	---	---
MONTH	7.3	6.9	7.2	5.3	7.2	6.5	7.0	6.3	7.6	6.5	7.2	6.5

CUMBERLAND RIVER BASIN

03408500 NEW RIVER AT NEW RIVER, TN--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1978 to SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.2	7.1	6.8	6.7	7.3	7.2	7.2	7.2	7.3	7.2
2	---	---	7.2	6.9	6.8	6.8	7.4	7.3	7.3	7.2	7.2	7.2
3	---	---	7.2	7.1	7.1	6.8	7.5	7.2	7.3	7.2	7.2	7.2
4	6.7	6.5	7.1	6.3	7.0	6.9	7.5	7.3	7.3	7.2	7.3	7.2
5	6.9	6.5	6.9	6.4	7.0	6.9	7.5	7.3	7.5	7.3	7.3	7.3
6	6.8	6.5	6.7	6.4	7.0	7.0	7.4	7.2	7.4	7.3	7.3	7.3
7	6.8	6.5	6.8	6.4	7.1	7.0	7.4	7.2	7.5	7.3	7.3	7.2
8	6.9	6.8	6.9	6.5	7.1	6.9	7.3	7.2	7.5	7.3	7.2	7.1
9	---	---	---	---	7.1	7.1	7.2	6.9	7.5	7.3	7.4	7.2
10	---	---	---	---	7.1	7.1	7.4	7.3	7.5	7.3	7.4	7.3
11	7.0	6.9	---	---	7.2	7.1	7.4	7.2	7.5	7.3	7.5	7.3
12	6.9	6.9	---	---	7.2	7.1	7.5	7.4	7.4	7.3	7.6	7.4
13	7.1	6.9	---	---	7.3	7.2	7.4	7.3	7.4	7.3	7.6	7.4
14	6.9	6.3	---	---	7.3	7.2	7.4	7.3	7.4	7.2	7.5	7.3
15	6.8	6.0	7.2	7.2	7.3	7.2	7.3	7.1	7.3	7.1	7.4	7.2
16	6.2	6.1	7.2	7.1	7.4	7.3	7.3	7.2	7.6	7.3	7.5	7.3
17	6.3	6.1	7.1	7.1	7.4	7.2	7.2	7.1	7.5	7.3	7.5	7.3
18	7.0	6.2	7.2	7.1	7.4	7.3	7.3	7.3	7.6	7.4	7.5	7.4
19	7.0	6.3	7.2	7.1	7.4	7.3	7.3	7.2	7.6	7.4	7.5	7.4
20	7.0	6.4	7.2	7.0	7.5	7.3	7.2	6.6	7.6	7.5	7.5	7.3
21	7.1	6.4	7.2	6.9	7.5	7.3	7.0	6.6	7.6	7.5	7.4	7.3
22	7.1	6.5	7.1	6.8	7.4	7.3	6.7	6.5	7.5	7.3	---	---
23	7.1	6.5	7.1	6.7	7.4	7.3	6.8	6.6	7.4	7.3	---	---
24	7.1	6.5	6.8	6.6	7.2	7.0	7.0	6.8	7.4	7.2	---	---
25	7.1	6.5	6.7	6.6	7.4	7.2	7.0	6.9	7.4	7.2	---	---
26	7.2	6.8	6.7	6.6	7.4	7.3	7.3	6.9	7.4	7.0	7.3	7.1
27	7.2	6.5	6.8	6.7	7.4	7.3	7.4	7.3	7.5	7.1	7.2	7.2
28	7.2	6.5	6.9	6.8	7.4	7.3	7.2	7.1	7.1	6.9	---	---
29	6.5	6.4	6.9	6.9	7.4	7.3	7.2	7.0	7.2	6.8	---	---
30	7.2	6.4	7.0	6.9	7.4	7.3	7.2	7.1	7.2	7.2	---	---
31	---	---	7.0	6.8	---	---	7.2	7.2	7.3	7.2	---	---
MONTH	7.2	6.0	7.2	6.3	7.5	6.7	7.5	6.5	7.6	6.8	7.6	7.1

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	21.0	19.5	20.5	14.5	13.0	13.5	9.0	8.5	8.5	10.5	8.5	10.0
2	21.5	20.0	20.5	14.5	13.0	13.5	8.5	8.0	8.5	10.5	5.5	8.0
3	21.0	19.5	20.0	14.0	12.5	13.0	10.5	8.5	9.5	5.5	2.5	4.0
4	20.5	19.5	20.0	13.5	12.0	13.0	13.5	10.5	12.5	2.5	2.0	2.5
5	20.0	19.0	19.5	14.0	12.0	13.0	12.5	9.5	10.5	3.0	2.5	3.0
6	19.0	18.0	18.5	14.0	12.0	13.0	9.5	8.5	8.5	4.0	3.0	3.5
7	18.0	17.0	17.5	13.0	12.0	12.5	9.5	8.0	8.5	8.0	4.5	6.5
8	17.5	16.0	16.5	12.0	11.5	12.0	12.5	9.5	11.0	8.0	5.5	6.5
9	17.0	15.5	16.0	12.5	11.0	11.5	12.5	10.0	11.5	---	---	---
10	17.5	15.0	16.0	13.0	11.5	12.0	---	---	---	---	---	---
11	17.0	15.5	16.0	12.5	11.0	12.0	---	---	---	---	---	---
12	18.0	15.5	16.5	14.0	11.5	12.5	4.0	4.0	4.0	---	---	---
13	17.5	16.5	17.0	13.5	12.0	13.0	4.0	4.0	4.0	---	---	---
14	16.5	15.0	16.0	14.0	12.5	13.0	4.5	4.0	4.0	---	---	---
15	15.0	14.5	15.0	15.0	13.5	14.0	3.5	3.0	3.5	---	---	---
16	15.0	14.0	14.5	14.5	14.0	14.5	4.5	3.5	4.0	---	---	---
17	15.0	13.0	14.0	15.5	14.0	15.0	4.5	4.0	4.0	---	---	---
18	15.0	13.0	14.0	15.0	13.5	14.5	4.0	3.5	3.5	4.0	3.5	3.5
19	14.5	13.0	13.5	13.5	12.5	13.0	5.0	4.0	4.0	4.0	3.5	3.5
20	15.0	13.0	14.0	13.0	12.0	12.5	7.5	5.0	6.5	7.5	4.0	5.0
21	15.0	12.5	13.5	12.5	12.0	12.0	9.0	7.5	8.5	7.5	6.0	7.0
22	15.5	12.5	14.0	12.0	11.5	12.0	8.0	5.5	6.5	6.0	4.5	5.0
23	14.5	13.0	14.0	12.5	12.0	12.0	5.5	4.5	5.0	5.0	4.0	4.5
24	15.5	13.5	14.0	12.5	12.0	12.0	5.0	4.5	4.5	5.0	4.0	4.5
25	15.0	13.5	14.5	11.5	10.5	11.0	5.5	5.0	5.0	4.0	2.5	3.0
26	15.5	14.5	15.0	10.5	10.5	10.5	5.0	4.5	5.0	2.5	2.0	2.0
27	15.5	14.0	14.5	11.0	10.5	11.0	4.5	3.5	4.0	3.0	2.5	2.5
28	15.0	13.5	14.0	11.5	10.5	11.0	3.5	2.5	3.0	3.0	3.0	3.0
29	15.0	12.5	13.5	10.0	9.0	9.5	2.5	2.0	2.0	3.0	2.5	2.5
30	14.5	12.5	13.5	9.5	9.0	9.0	4.0	2.5	3.0	3.0	2.0	2.5
31	14.5	13.0	13.5	---	---	---	8.5	4.0	6.0	3.0	2.5	2.5
MONTH	21.5	12.5	16.0	15.5	9.0	12.5	13.5	2.0	6.0	10.5	2.0	4.5

CUMBERLAND RIVER BASIN

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03408500 NEW RIVER AT NEW RIVER, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	2.0	1.5	2.0	8.0	7.0	7.5	---	---	---	16.0	14.5	15.5
2	1.5	.5	1.0	9.0	7.5	8.5	---	---	---	17.0	15.5	16.5
3	1.0	1.0	1.0	9.5	8.5	9.0	---	---	---	17.5	17.0	17.5
4	2.0	1.0	1.5	11.0	9.5	10.5	13.0	12.5	12.5	17.5	15.0	16.0
5	2.0	1.5	2.0	11.0	9.5	10.5	13.0	12.0	12.5	14.5	13.5	14.0
6	1.5	1.0	1.0	9.5	8.5	8.5	12.0	11.0	11.5	15.5	13.0	14.0
7	1.0	.5	.5	8.5	7.0	7.5	11.5	10.0	11.0	17.0	14.5	16.0
8	1.0	.5	1.0	8.0	7.5	7.5	12.5	11.0	11.5	18.5	17.0	17.5
9	1.0	.5	1.0	9.0	7.5	8.0	---	---	---	---	---	---
10	1.0	.5	1.0	9.0	8.5	9.0	---	---	---	---	---	---
11	1.5	.5	1.0	8.0	6.5	7.5	12.0	11.5	12.0	---	---	---
12	1.0	.5	1.0	7.0	5.5	6.5	13.0	12.5	12.5	---	---	---
13	1.0	1.0	1.0	8.5	6.5	7.5	13.5	13.0	13.5	---	---	---
14	1.5	1.0	1.0	9.5	8.5	9.0	13.5	12.5	13.0	---	---	---
15	5.0	1.5	3.0	9.0	8.5	8.5	14.0	12.0	13.0	19.5	18.5	19.0
16	6.0	5.0	5.5	8.0	7.0	7.5	13.5	12.5	13.0	19.0	18.0	18.5
17	5.0	3.5	4.0	8.5	7.0	8.0	14.0	12.5	13.5	19.5	17.5	18.5
18	3.5	2.5	2.5	9.5	8.0	9.0	14.0	13.0	13.5	19.5	17.5	18.5
19	2.5	2.0	2.5	11.0	9.5	10.0	14.5	13.0	14.0	20.5	18.5	19.5
20	3.0	2.0	2.5	12.5	11.0	11.5	16.0	13.5	15.0	21.0	19.0	20.0
21	6.0	3.0	4.5	14.0	12.5	13.5	16.5	15.0	16.0	20.5	19.5	20.0
22	7.5	6.0	6.5	14.0	13.5	14.0	16.5	16.0	16.5	20.5	19.5	20.0
23	9.5	7.5	8.5	14.0	13.5	13.5	17.0	16.0	16.5	19.5	17.0	18.5
24	10.0	9.5	9.5	13.5	9.5	11.5	17.5	16.5	17.0	16.5	14.5	15.5
25	10.0	9.5	10.0	9.5	7.0	8.0	17.5	17.0	17.0	14.5	12.5	13.5
26	9.0	5.5	7.0	7.0	6.0	6.5	17.5	17.0	17.0	13.0	11.5	12.5
27	6.0	5.5	5.5	---	---	---	17.5	16.5	17.0	13.5	12.5	13.0
28	7.0	6.5	6.5	---	---	---	17.0	16.0	16.5	15.5	13.5	14.5
29	---	---	---	---	---	---	16.0	14.5	15.5	17.0	15.5	16.0
30	---	---	---	---	---	---	16.0	14.5	15.5	18.0	17.0	17.5
31	---	---	---	---	---	---	---	---	---	18.5	16.0	17.5
MONTH	10.0	.5	3.5	14.0	5.5	9.0	17.5	10.0	14.5	21.0	11.5	17.0
JUNE			JULY			AUGUST			SEPTEMBER			
1	17.0	16.0	16.5	25.0	22.5	23.5	25.5	24.5	25.0	22.5	21.5	22.0
2	19.0	17.0	18.0	24.0	23.0	23.5	26.0	25.0	25.5	23.0	22.0	22.5
3	19.0	18.0	19.0	25.5	23.0	24.0	25.5	25.0	25.5	23.5	23.0	23.0
4	18.0	17.0	17.5	26.0	23.5	24.5	26.0	24.5	25.5	24.5	23.5	24.0
5	19.5	17.0	18.0	25.0	23.5	24.5	26.5	24.5	25.5	25.5	24.0	24.5
6	20.0	19.0	19.5	24.5	23.5	24.0	27.0	25.0	26.0	25.5	24.5	25.0
7	21.0	19.5	20.5	24.5	23.5	23.5	28.0	25.5	26.5	25.5	24.0	24.5
8	22.0	20.5	21.5	23.5	23.0	23.0	28.5	26.5	27.5	25.0	23.5	24.0
9	23.5	22.0	22.5	22.5	22.0	22.0	29.0	27.0	27.5	24.0	22.5	23.0
10	24.0	23.0	23.5	22.0	21.5	21.5	29.0	27.0	28.0	24.0	22.0	23.0
11	23.5	22.5	23.0	22.5	21.5	22.0	28.5	27.0	27.5	24.0	22.0	23.0
12	23.0	22.0	22.5	23.5	22.0	22.5	27.0	25.5	26.0	24.5	22.5	23.0
13	23.0	21.5	22.0	24.0	22.5	23.5	25.5	24.5	25.0	24.0	22.5	23.5
14	23.0	21.5	22.5	24.0	23.5	24.0	25.5	23.5	24.5	23.5	22.5	23.0
15	24.0	22.0	23.0	23.5	22.5	22.5	24.5	23.5	24.0	22.5	21.5	22.0
16	23.0	22.0	22.5	22.5	21.5	22.5	24.0	22.5	23.5	22.0	20.5	21.0
17	23.0	21.5	22.5	24.0	22.5	23.0	24.0	22.5	23.0	22.0	20.5	21.5
18	24.5	21.5	23.0	24.5	23.5	24.0	24.5	22.5	23.5	21.5	20.5	21.0
19	25.5	23.0	24.0	25.0	23.5	24.0	26.0	23.0	24.0	22.5	21.0	21.5
20	25.5	23.5	25.0	24.0	20.5	23.0	26.5	24.0	25.0	22.0	21.0	21.5
21	25.5	24.5	25.0	20.0	19.0	19.0	25.5	24.5	25.0	21.5	21.0	21.0
22	26.5	24.5	25.0	19.0	18.5	19.0	25.5	24.5	25.0	---	---	---
23	25.5	24.0	24.5	21.0	19.0	20.0	26.0	24.5	25.0	---	---	---
24	24.5	22.5	23.5	22.5	21.0	21.5	25.5	24.5	25.0	---	---	---
25	23.5	21.5	22.5	23.0	22.0	22.5	25.5	24.5	25.0	---	---	---
26	23.5	21.0	22.5	22.5	21.5	22.0	25.0	23.5	24.5	20.0	19.0	20.0
27	24.5	22.0	23.0	21.5	20.5	21.0	23.0	21.5	22.0	19.5	19.0	19.5
28	24.5	22.5	23.5	21.0	20.5	20.5	22.5	22.0	22.5	---	---	---
29	24.0	22.5	23.0	22.5	20.0	21.0	23.0	22.0	22.5	---	---	---
30	24.5	23.0	23.5	23.0	22.0	22.5	22.5	21.5	22.0	---	---	---
31	---	---	---	24.5	23.0	24.0	22.0	21.5	22.0	---	---	---
MONTH	26.5	16.0	22.0	26.0	18.5	22.5	29.0	21.5	25.0	25.5	19.0	22.5

CUMBERLAND RIVER BASIN

03408500 NEW RIVER AT NEW RIVER, TN--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.7	8.1	8.5	7.7	7.3	7.5	7.8	7.5	7.7	8.0	7.9	8.0
2	8.6	8.0	8.2	7.9	7.5	7.7	7.8	7.5	7.6	8.0	7.8	7.9
3	8.2	7.3	7.8	7.9	7.5	7.7	7.7	7.4	7.6	7.8	7.7	7.8
4	8.5	7.7	8.4	7.9	7.6	7.7	7.9	7.4	7.7	7.8	7.6	7.7
5	8.7	8.3	8.6	7.9	7.5	7.8	8.0	7.8	7.9	7.6	7.5	7.6
6	8.5	8.2	8.4	7.8	7.4	7.6	7.9	7.5	7.7	7.6	7.3	7.5
7	8.6	8.4	8.4	7.9	7.2	7.6	7.8	7.4	7.6	7.6	7.3	7.5
8	8.4	8.0	8.3	7.7	7.3	7.5	7.9	7.3	7.6	7.8	7.5	7.7
9	8.1	7.9	8.0	8.0	7.5	7.7	7.8	7.3	7.6	8.1	7.7	7.9
10	8.0	7.8	7.9	8.0	7.8	7.9	7.8	7.3	7.6	8.4	7.9	8.2
11	8.0	7.9	7.9	8.2	7.9	8.0	7.6	7.2	7.4	8.4	8.1	8.3
12	8.1	8.0	8.1	8.2	7.9	8.0	7.6	7.2	7.4	8.3	7.9	8.1
13	8.2	8.1	8.1	8.0	7.7	7.8	7.8	7.3	7.6	8.0	7.6	7.8
14	8.3	8.0	8.2	7.7	7.1	7.5	8.0	7.6	7.8	7.9	7.2	7.5
15	8.4	8.0	8.2	7.6	7.1	7.3	8.0	7.5	7.8	7.2	7.0	7.1
16	8.4	8.0	8.2	7.7	7.4	7.5	8.0	7.8	7.9	7.5	7.1	7.3
17	8.4	8.0	8.2	7.5	7.0	7.2	8.0	7.7	7.9	7.3	6.9	7.1
18	8.4	7.9	8.2	7.9	6.9	7.4	8.0	7.7	7.8	7.1	6.8	6.9
19	8.3	7.9	8.1	7.9	7.7	7.8	7.9	7.5	7.6	7.3	7.2	7.3
20	8.2	7.7	7.9	8.0	7.7	7.8	8.5	7.2	7.5	7.9	7.3	7.6
21	8.1	7.6	7.8	8.7	7.9	8.5	8.5	8.0	8.2	8.0	7.6	7.8
22	7.9	7.5	7.7	8.6	8.4	8.5	8.0	6.9	7.4	---	---	---
23	7.7	7.4	7.5	8.6	8.0	8.3	7.2	6.7	6.9	---	---	---
24	7.5	7.1	7.2	8.1	7.9	8.0	7.4	6.6	7.1	---	---	---
25	7.8	7.3	7.6	8.1	7.5	7.7	7.6	6.9	7.3	---	---	---
26	8.2	7.7	8.0	8.2	7.5	7.9	7.4	6.9	7.1	8.6	8.2	8.4
27	8.2	7.8	8.0	8.5	8.2	8.4	8.0	7.2	7.7	8.3	8.2	8.3
28	8.1	7.8	7.9	8.6	8.2	8.4	7.8	7.7	7.7	---	---	---
29	8.0	7.6	7.8	8.6	8.0	8.3	7.7	7.4	7.6	---	---	---
30	7.8	7.6	7.7	8.3	7.9	8.1	7.9	7.5	7.7	---	---	---
31	---	---	---	8.1	7.7	7.9	7.9	7.8	7.9	---	---	---
MONTH	8.7	7.1	8.0	8.7	6.9	7.8	8.5	6.6	7.6	8.6	6.8	7.7

CUMBERLAND RIVER BASIN

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03408500 NEW RIVER AT NEW RIVER, TN--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	8.0	7.8	7.8	8.0	7.6	7.8	11.0	10.8	10.9	11.9	10.6	11.4
2	7.8	7.4	7.6	7.8	7.6	7.7	11.1	10.9	11.0	11.1	10.6	10.8
3	8.1	7.3	7.7	7.7	7.6	7.7	11.0	10.4	10.8	12.3	11.1	11.7
4	8.4	7.5	8.0	7.9	7.8	7.9	10.5	7.0	9.0	12.3	12.1	12.2
5	8.4	7.9	8.2	8.0	7.9	8.0	10.3	9.2	9.9	12.1	11.8	12.0
6	8.4	8.1	8.3	8.1	8.0	8.0	10.9	10.4	10.7	11.7	11.4	11.6
7	8.5	8.2	8.4	8.2	7.9	8.1	11.0	10.8	10.9	12.7	11.4	11.9
8	8.8	8.4	8.6	8.4	8.2	8.3	10.7	9.6	10.2	12.7	11.8	12.2
9	9.0	8.7	8.8	8.5	8.2	8.4	10.0	8.9	9.4	---	---	---
10	9.0	8.8	8.9	8.5	8.4	8.5	---	---	---	---	---	---
11	9.1	8.8	8.9	8.6	8.5	8.6	---	---	---	---	---	---
12	8.9	8.7	8.8	8.8	8.6	8.7	12.6	12.6	12.6	---	---	---
13	8.8	8.5	8.6	8.8	8.7	8.7	12.6	12.5	12.6	---	---	---
14	8.6	8.3	8.5	8.9	8.8	8.8	12.6	12.5	12.5	---	---	---
15	8.6	8.4	8.5	8.9	8.8	8.8	12.7	12.6	12.7	---	---	---
16	8.4	8.0	8.2	8.9	8.3	8.7	12.7	12.4	12.6	---	---	---
17	8.3	8.1	8.2	8.6	8.2	8.5	12.5	12.4	12.4	---	---	---
18	8.8	8.6	8.7	8.9	8.6	8.7	12.6	12.5	12.6	13.2	13.1	13.2
19	9.2	8.8	9.0	9.2	8.9	9.1	12.5	12.2	12.4	13.1	12.9	13.0
20	9.5	9.2	9.3	9.4	9.2	9.3	12.3	11.5	12.0	12.9	11.1	12.2
21	9.5	9.3	9.4	9.4	9.3	9.4	11.6	10.8	11.1	11.7	10.8	11.4
22	9.6	9.3	9.4	9.5	9.4	9.5	12.0	11.2	11.7	12.2	10.9	11.6
23	9.6	9.3	9.4	9.6	9.4	9.5	12.5	12.1	12.3	12.0	11.6	11.8
24	9.4	9.1	9.2	9.9	9.4	9.7	12.5	12.3	12.5	12.3	11.9	12.1
25	9.3	8.9	9.1	10.2	9.9	10.1	12.4	12.3	12.4	13.0	12.3	12.7
26	8.9	8.5	8.7	10.3	10.2	10.2	12.7	12.5	12.6	13.0	12.5	12.7
27	8.6	8.3	8.4	10.3	10.1	10.2	13.1	12.8	12.9	13.2	12.2	12.9
28	8.4	8.1	8.3	10.5	10.1	10.3	13.5	13.1	13.3	12.8	12.5	12.6
29	8.3	8.1	8.2	10.7	10.5	10.6	13.8	13.6	13.7	12.9	12.5	12.7
30	8.2	7.9	8.1	10.8	10.7	10.7	13.8	13.4	13.7	12.9	12.5	12.8
31	8.0	7.7	7.9	---	---	---	13.5	11.9	12.8	12.7	12.5	12.6
MONTH	9.6	7.3	8.6	10.8	7.6	9.0	13.8	7.0	11.9	13.2	10.6	12.2
FEBRUARY			MARCH			APRIL			MAY			
1	13.1	12.6	12.8	11.9	11.5	11.7	---	---	---	9.6	9.5	9.6
2	13.2	13.1	13.2	11.6	11.4	11.5	---	---	---	9.5	9.3	9.4
3	13.7	13.1	13.3	11.4	11.1	11.3	---	---	---	9.4	8.8	9.1
4	13.5	13.2	13.4	11.1	10.5	10.8	9.9	9.4	9.6	8.9	8.7	8.9
5	13.2	13.1	13.1	11.0	10.5	10.7	9.6	9.3	9.5	9.3	8.9	9.2
6	13.6	13.1	13.3	11.3	11.0	11.2	9.6	9.4	9.5	9.3	8.5	9.1
7	13.6	13.5	13.5	11.7	11.3	11.5	10.3	9.6	10.0	8.5	8.0	8.3
8	13.8	13.5	13.7	11.6	11.4	11.5	10.2	9.9	10.0	7.9	7.6	7.8
9	13.7	13.6	13.7	11.6	11.3	11.5	---	---	---	---	---	---
10	14.0	13.8	13.9	11.3	11.2	11.2	---	---	---	---	---	---
11	14.0	13.8	13.9	11.9	11.3	11.6	10.5	10.2	10.3	---	---	---
12	13.8	13.7	13.7	12.1	11.9	12.0	10.2	9.8	10.0	---	---	---
13	13.7	13.5	13.6	11.9	11.5	11.8	9.7	9.5	9.6	---	---	---
14	13.6	13.5	13.6	11.5	11.1	11.2	10.0	9.6	9.8	---	---	---
15	13.5	12.4	13.1	11.4	11.1	11.3	10.0	9.4	9.8	8.8	8.5	8.7
16	12.4	12.1	12.2	11.8	11.5	11.7	9.7	9.4	9.6	8.7	8.6	8.6
17	13.0	12.4	12.8	11.8	11.7	11.8	9.7	9.5	9.6	8.7	8.6	8.7
18	13.3	13.0	13.1	11.7	11.3	11.5	9.6	9.4	9.5	8.8	8.7	8.8
19	13.4	13.2	13.3	11.3	10.8	11.0	9.6	9.3	9.4	8.9	8.6	8.7
20	13.4	13.3	13.3	11.3	10.8	11.0	9.3	9.1	9.2	8.8	8.5	8.7
21	13.2	12.2	12.6	11.2	10.6	11.0	9.2	8.7	8.9	8.5	8.3	8.4
22	12.2	11.7	11.9	11.0	10.8	10.9	8.9	8.5	8.7	8.5	8.4	8.5
23	11.7	11.1	11.4	11.3	10.5	11.1	8.7	8.4	8.5	9.1	8.5	8.7
24	11.0	10.4	10.8	11.1	10.6	10.9	8.6	8.3	8.4	9.5	9.2	9.4
25	10.2	8.8	9.2	11.1	10.4	10.8	8.8	8.6	8.6	10.1	9.6	9.9
26	11.5	9.1	10.0	11.3	10.7	11.0	8.7	8.5	8.7	10.4	10.2	10.3
27	10.9	10.7	10.8	---	---	---	8.8	8.4	8.5	10.2	9.9	10.0
28	12.1	11.9	12.0	---	---	---	8.8	8.5	8.6	9.9	9.5	9.8
29	---	---	---	---	---	---	9.0	8.8	8.9	9.6	9.1	9.4
30	---	---	---	---	---	---	9.5	8.9	9.2	9.1	8.8	9.0
31	---	---	---	---	---	---	---	---	---	8.9	7.9	8.5
MONTH	14.0	8.8	12.7	12.1	10.4	11.3	10.5	8.3	9.3	10.4	7.6	9.0

CUMBERLAND RIVER BASIN

03408500 NEW RIVER AT NEW RIVER, TN--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	---	---	20	10	45	35	---	180	45	35	60	30
2	---	---	20	15	95	45	1000	200	55	35	30	15
3	---	---	20	15	85	40	200	70	40	35	---	---
4	---	---	20	15	---	---	80	40	40	35	---	---
5	---	---	20	15	800	170	65	25	50	35	---	---
6	---	---	20	10	160	80	85	25	50	25	---	---
7	---	---	20	15	80	50	---	40	30	25	45	45
8	---	---	25	20	400	40	700	170	25	20	45	20
9	---	---	25	15	---	---	---	---	25	20	30	20
10	---	---	20	15	---	---	---	---	75	15	110	20
11	---	---	20	15	---	---	---	---	20	15	150	90
12	---	---	20	15	50	35	---	---	180	10	75	30
13	---	---	20	15	50	30	---	---	15	15	---	---
14	---	---	20	15	40	25	---	---	20	20	30	15
15	---	---	15	7	30	20	---	---	200	15	25	15
16	---	---	90	8	25	20	---	---	300	150	30	5
17	---	---	90	15	25	20	---	---	140	60	20	5
18	40	30	40	20	20	15	---	---	45	25	---	---
19	35	20	60	40	20	15	---	---	45	10	20	10
20	25	20	65	55	55	15	---	---	90	10	---	---
21	25	15	55	45	460	40	---	---	90	15	20	15
22	25	15	50	35	370	65	---	---	1100	90	20	5
23	20	15	45	30	75	40	---	---	75	30	550	10
24	65	15	100	30	40	30	45	40	2000	60	750	110
25	90	45	130	50	30	30	45	40	---	270	150	25
26	100	10	150	120	30	25	75	40	950	140	30	20
27	20	15	110	60	25	20	40	40	140	75	---	---
28	20	15	60	25	20	15	45	40	140	75	---	---
29	20	15	60	20	15	15	60	35	---	---	---	---
30	20	10	80	45	20	15	55	35	---	---	---	---
31	20	15	---	---	320	15	50	35	---	---	---	---
MONTH	100	10	150	7	800	15	1000	25	2000	10	750	5
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	---	---	20	5	1500	180	---	---	---	---	1000	210
2	---	---	25	20	240	120	---	---	---	---	210	180
3	---	---	140	15	1800	75	1500	25	---	---	200	150
4	---	---	2600	45	550	120	2800	110	---	---	150	120
5	---	---	1000	140	110	45	---	950	---	---	140	110
6	---	---	140	60	45	30	2900	110	---	---	180	110
7	---	---	75	30	30	25	---	2300	30	25	200	120
8	---	---	45	20	45	20	---	---	30	25	140	120
9	---	---	---	---	75	15	---	---	30	25	140	120
10	---	---	---	---	60	15	---	---	30	25	140	120
11	---	---	---	---	60	25	---	---	30	25	140	110
12	---	---	---	---	60	10	---	---	25	25	120	110
13	---	---	---	---	20	15	---	---	25	25	140	120
14	210	140	---	---	30	15	---	---	25	25	140	120
15	---	---	5	5	270	15	---	---	25	25	140	120
16	---	---	25	10	270	15	---	---	25	25	150	120
17	15	5	35	20	300	20	---	---	25	25	140	120
18	25	5	25	15	700	20	---	---	25	25	140	120
19	5	5	20	10	1700	20	---	---	30	25	140	120
20	15	5	15	10	25	20	---	---	30	25	140	120
21	25	5	75	10	25	20	---	---	30	25	230	120
22	25	5	60	25	25	20	---	---	120	25	---	---
23	---	---	600	75	75	25	---	---	110	75	---	---
24	20	5	850	270	480	30	---	---	90	75	---	---
25	20	5	260	90	330	60	---	---	90	75	---	---
26	15	5	120	90	390	25	---	---	1100	75	210	180
27	10	5	110	45	450	25	---	---	1700	390	180	170
28	5	5	30	20	650	25	---	---	1400	390	---	---
29	10	5	25	20	800	25	---	---	2100	330	---	---
30	20	5	400	20	1000	45	---	---	2100	360	---	---
31	---	---	---	550	---	---	---	---	1700	290	---	---
MONTH	210	5	2600	5	1800	10	2900	25	2100	25	1000	110
YEAR	2900	5										

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR.

CUMBERLAND RIVER BASIN

03408500 NEW RIVER AT NEW RIVER, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER				NOVEMBER			DECEMBER		
1	41	16	1.8	22	8	.48	415	33	37
2	46	18	2.2	21	6	.34	297	45	36
3	59	17	2.7	20	6	.32	289	38	30
4	44	18	2.1	19	5	.26	5450	2270	54000
5	36	16	1.6	18	5	.24	2820	430	3270
6	32	24	2.1	19	5	.26	1290	90	313
7	31	25	2.1	21	6	.34	824	57	127
8	27	19	1.4	29	6	.47	1000	152	724
9	23	19	1.2	32	7	.60	10600	1240	39600
10	20	26	1.4	30	5	.41	3320	700	6270
11	19	22	1.1	28	5	.38	1480	300	1200
12	17	29	1.3	28	20	1.5	974	52	137
13	27	60	4.4	25	20	1.4	713	18	35
14	51	26	3.6	23	19	1.2	555	16	24
15	37	30	3.0	24	20	1.3	457	8	9.9
16	34	36	3.3	75	16	3.2	404	8	8.7
17	30	26	2.1	392	29	31	421	12	14
18	27	17	1.2	264	12	8.6	354	5	4.8
19	24	17	1.1	182	17	8.4	337	18	16
20	21	12	.68	117	21	6.6	381	35	36
21	19	12	.62	80	18	3.9	2370	288	2300
22	18	11	.53	65	11	1.9	1900	164	841
23	15	10	.41	92	12	3.0	1150	65	202
24	14	10	.38	593	60	96	866	21	49
25	14	12	.45	361	54	53	762	21	43
26	15	12	.49	240	65	42	566	18	28
27	17	14	.64	223	38	23	462	13	16
28	18	16	.78	435	24	28	379	5	5.1
29	19	16	.82	312	20	17	341	9	8.3
30	20	10	.54	474	36	46	358	13	13
31	21	10	.57	---	---	---	1520	320	1850
TOTAL	836	---	46.61	4264	---	381.10	43055	---	111247.8
JANUARY				FEBRUARY			MARCH		
1	4830	965	20100	620	9	15	1660	54	242
2	10100	922	30100	451	7	8.5	1300	35	123
3	2640	182	1300	508	6	8.2	1060	30	86
4	1440	50	194	479	5	6.5	5190	1090	25000
5	1070	20	58	427	4	4.6	3470	360	3370
6	962	54	140	363	4	3.9	1740	280	1320
7	9910	1480	43900	396	8	8.6	1240	55	184
8	6300	408	8740	398	17	18	999	25	67
9	2250	84	510	350	9	8.5	790	25	53
10	1420	30	115	261	14	9.9	913	38	94
11	1080	16	47	309	6	5.0	1550	80	335
12	860	12	28	323	22	19	1230	48	159
13	760	11	23	397	6	6.4	998	24	65
14	680	22	40	438	13	15	922	23	57
15	510	11	15	1230	118	392	848	29	66
16	420	6	6.8	2900	138	1080	708	14	27
17	410	7	7.7	1670	52	234	646	14	24
18	410	10	11	1170	21	66	583	12	19
19	380	15	15	915	15	37	538	9	13
20	3250	400	7860	757	12	25	499	10	13
21	11800	617	20400	1130	39	119	556	10	15
22	3800	160	1640	1740	146	686	497	10	13
23	2000	46	248	1450	174	681	704	179	431
24	1900	61	313	4460	418	7160	3300	427	3910
25	1640	36	159	11700	1490	61100	2170	70	410
26	1240	18	60	7590	491	12400	1370	34	126
27	1080	17	50	2740	140	1040	1110	25	75
28	1160	28	88	2100	144	816	1260	41	139
29	960	23	60	---	---	---	1110	30	90
30	840	11	25	---	---	---	937	20	51
31	760	12	25	---	---	---	793	20	43
TOTAL	76862	---	136278.5	47272	---	85973.1	40691	---	36620

CUMBERLAND RIVER BASIN

03408500 NEW RIVER AT NEW RIVER, TN--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	702	20	38	339	6	5.5	3970	784	19400
2	992	25	67	308	8	6.7	1440	211	820
3	4170	340	5290	329	9	8.0	1840	670	3330
4	3470	140	1310	7080	1840	50500	1910	57	294
5	2370	60	384	4420	732	10800	1100	61	181
6	1500	60	243	2010	174	944	730	38	75
7	1080	20	58	1220	80	264	511	27	37
8	880	18	43	859	38	88	401	27	29
9	2530	266	2320	650	24	42	327	25	22
10	2150	150	871	616	20	33	264	42	30
11	1400	58	219	570	12	18	264	28	20
12	1440	115	447	433	10	12	226	37	23
13	3050	353	2910	360	10	9.7	170	15	6.9
14	2760	202	1510	392	17	18	157	12	5.1
15	1790	60	290	299	11	8.9	141	14	5.3
16	1240	21	70	248	13	8.7	117	17	5.4
17	931	18	45	207	13	7.3	106	12	3.4
18	744	12	24	177	24	11	105	10	2.8
19	609	7	12	161	13	5.7	100	12	3.2
20	520	6	8.4	151	10	4.1	85	16	3.7
21	455	4	4.9	444	35	42	77	17	3.5
22	404	8	8.7	411	12	13	69	11	2.0
23	390	7	7.4	1200	238	1430	77	15	3.1
24	368	8	7.9	5030	576	7810	123	22	7.3
25	325	9	7.9	2560	238	1730	133	26	9.3
26	449	24	29	1810	68	332	110	39	12
27	559	35	53	1180	42	134	80	12	2.6
28	465	12	15	926	22	55	65	15	2.6
29	411	10	11	693	20	37	56	17	2.6
30	370	11	11	518	15	21	56	15	2.3
31	---	---	---	4630	1240	39300	---	---	---
TOTAL	38524	---	16315.2	40231	---	113698.6	14810	---	24344.1
JULY			AUGUST			SEPTEMBER			
1	65	19	3.3	314	24	20	556	280	420
2	64	15	2.6	245	22	15	332	68	61
3	51	22	3.0	197	18	9.6	300	54	44
4	46	17	2.1	165	15	6.7	216	39	23
5	77	22	4.6	144	12	4.7	191	38	20
6	100	16	4.3	124	15	5.0	146	39	15
7	66	16	2.9	110	10	3.0	117	39	12
8	75	17	3.4	98	19	5.0	101	25	6.8
9	162	22	9.6	88	8	1.9	87	25	5.9
10	304	149	122	80	10	2.2	74	28	5.6
11	182	312	153	75	38	7.7	66	21	3.7
12	135	248	90	126	13	4.4	61	22	3.6
13	200	22	12	160	21	9.1	55	17	2.5
14	323	55	48	98	14	3.7	55	12	1.8
15	812	340	745	77	16	3.3	85	11	2.5
16	762	570	1170	66	30	5.3	84	9	2.0
17	361	380	370	59	11	1.8	61	7	1.2
18	219	230	136	54	22	3.2	51	6	.83
19	152	85	35	50	17	2.3	48	46	6.0
20	1820	581	8270	47	20	2.5	46	15	1.9
21	6390	1870	36800	58	17	2.7	65	57	10
22	4750	896	15000	137	14	5.2	795	280	601
23	1370	170	629	91	9	2.2	425	294	337
24	755	58	118	103	5	1.4	229	294	182
25	554	44	66	89	6	1.4	160	294	127
26	1010	84	229	753	374	1660	127	105	36
27	1000	107	289	964	435	1240	176	105	50
28	2410	1100	9120	438	270	319	2040	420	2310
29	1070	110	318	1000	663	2230	1570	250	1060
30	625	68	115	621	260	436	720	32	62
31	432	36	42	1130	410	1870	---	---	---
TOTAL	26342	---	73912.8	7761	---	7884.3	9039	---	5414.33

CUMBERLAND RIVER BASIN

57

03408600 LONG BRANCH NEAR GRIMSLEY, TN

LOCATION.--Lat 36°15'32", long 84°57'40", Fentress County, Hydrologic Unit 05130104, on right bank 1.4 mi (2.3 km) east of Grimsley, and at mile 4.8 (7.7 km).

DRAINAGE AREA.--1.11 mi² (2.87 km²).

PERIOD OF RECORD.--July 1976 to current year.

GAGE.--Water-stage recorder and concrete weir. Altitude of gage is 1,670 ft (509 m), from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 105 ft³/s (2.97 m³/s) Apr. 4, 1977, gage height, 2.87 ft (0.875 m); no flow many times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 55 ft³/s (1.56 m³/s) May 4, gage height, 2.26 ft (0.689 m); minimum, 0.005 ft³/s (0.0001 m³/s) Oct. 9, 10, Sept. 12, 13, gage height, 0.99 ft (0.302 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.01	.46	15	1.9	4.0	2.0	1.1	1.3	.23	1.2	.22
2	.05	.01	.40	12	1.7	3.2	4.4	1.9	1.1	.09	1.1	.18
3	.03	.01	1.1	6.6	1.5	3.0	11	2.0	1.5	.05	1.0	.18
4	.05	.01	3.3	4.6	1.5	10	8.1	30	1.4	.09	.82	.18
5	.06	.02	6.6	3.7	1.5	4.6	5.8	12	1.1	.10	.66	.18
6	.06	.03	4.6	4.1	1.4	3.4	4.3	6.7	.82	.05	.52	.18
7	.06	.04	2.9	19	1.4	3.2	3.5	4.6	.73	.14	.40	.18
8	.04	.06	3.3	11	1.3	3.0	3.1	3.8	.66	.35	.35	.12
9	.01	.06	7.3	6.6	1.3	2.6	8.9	3.1	.58	.93	.26	.10
10	.01	.04	35	4.6	1.2	4.0	5.7	2.9	.66	.44	.22	.10
11	.01	.03	11	3.7	1.2	3.2	4.4	2.5	.75	.26	.22	.10
12	.01	.03	6.0	3.2	1.2	2.6	7.7	2.0	.47	.22	.35	.08
13	.05	.03	4.1	2.9	1.3	2.4	8.6	1.7	.34	.17	.26	.66
14	.30	.02	3.1	2.5	1.4	2.2	6.1	1.6	.29	2.7	.22	.90
15	.20	.03	2.6	2.2	3.1	2.2	4.6	1.4	.21	1.8	.15	.40
16	.15	.35	2.1	2.1	3.9	2.2	3.8	1.2	.18	.95	.15	.26
17	.10	.35	2.2	1.9	3.1	2.0	3.2	.87	.18	.58	.10	.18
18	.09	.30	1.8	1.9	2.7	1.8	2.7	.71	.13	.39	.10	.15
19	.08	.15	1.8	2.0	2.4	1.7	2.4	.63	.08	.33	.08	.15
20	.06	.06	2.1	13	2.4	1.6	2.0	.59	.06	1.9	.08	.15
21	.04	.02	5.4	23	3.3	1.5	1.9	1.1	.04	6.0	.06	.40
22	.02	.01	3.9	10	3.1	1.3	1.7	.92	.05	5.3	.10	.46
23	.01	.58	3.1	6.9	2.9	2.2	1.7	3.6	.08	6.8	.15	.40
24	.01	.82	2.7	6.3	3.9	2.9	1.6	7.0	.10	5.6	.10	.30
25	.01	.52	2.6	5.1	11	2.5	1.4	4.6	.09	7.6	.22	.26
26	.02	.35	2.1	4.1	11	2.2	1.5	3.9	.04	2.7	.82	.22
27	.03	.58	1.9	3.7	7.3	2.6	1.4	2.9	.03	2.1	.66	3.1
28	.03	.40	1.7	3.3	5.7	2.7	1.2	2.4	.03	1.8	.35	7.3
29	.02	.46	1.5	2.9	---	2.3	1.1	1.8	.04	1.6	.35	3.3
30	.02	.66	2.2	2.6	---	2.1	1.1	1.4	.25	1.4	.30	1.9
31	.02	---	4.1	2.2	---	1.9	---	1.5	---	1.3	.35	---
TOTAL	1.73	6.04	132.96	192.7	85.6	87.1	116.9	112.42	13.29	53.97	11.70	22.29
MEAN	.056	.20	4.29	6.22	3.06	2.81	3.90	3.63	.44	1.74	.38	.74
MAX	.30	.82	35	23	11	10	11	30	1.5	7.6	1.2	7.3
MIN	.01	.01	.40	1.9	1.2	1.3	1.1	.59	.03	.05	.06	.08
CFSM	.05	.18	3.87	5.60	2.76	2.53	3.51	3.27	.40	1.57	.34	.67
IN.	.06	.20	4.45	6.45	2.87	2.92	3.91	3.76	.44	1.81	.39	.75

CAL YR 1978 TOTAL 533.32 MEAN 1.46 MAX 35 MIN .00 CFSM 1.32 IN 17.86
WTR YR 1979 TOTAL 836.70 MEAN 2.29 MAX 35 MIN .01 CFSM 2.06 IN 28.02

CUMBERLAND RIVER BASIN

03408810 CROOKED CREEK TRIBUTARY NEAR ALLARDT, TN

LOCATION.--Lat 36°23'30", long 84°54'43", Fentress County, Hydrologic Unit 05130104, on left bank 2.6 mi (4.2 km) southeast of Jamestown, 1.7 mi (2.7 km) northwest of Allardt, and at mile 0.2 mi (0.3 km).

DRAINAGE AREA.--0.25 mi² (0.65 km²).

PERIOD OF RECORD.--July 1976 to September 1979 (discontinued).

GAGE.--Water-stage recorder and concrete weir. Altitude of gage is 1,630 ft (497 m), from topographic map.

REMARKS.--Records poor. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 45.4 ft³/s (1.29 m³/s), revised, July 24, 1978, gage height 1.98 ft (0.604 m), but may have been higher during period of no gage-height record on Apr. 4, 1977; minimum, no flow many days during late summer and early fall.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 32.8 ft³/s (0.93 m³/s) July 21, gage height, 1.87 ft (0.570 m); minimum 0.06 ft³/s (0.002 m³/s) Nov. 1, gage height, 1.05 ft (0.320 m).

REVISIONS.--The maximum discharge for the period July to September 1976 has been revised to 6.8 ft³/s (0.19 m³/s) Aug. 28, gage height, 1.52 ft (0.463 m); for the water year 1977 to 44.2 ft³/s, recorded, (1.25 m³/s) Mar. 12, gage height, 1.97 ft (0.600 m), but may have been higher during period of no gage-height record on April 4; and for the water year 1978 to 45.4 ft³/s (1.29 m³/s) July 24, gage height, 1.98 ft (0.604 m); and revised daily discharges, in cubic feet per second, for certain days in July, August, and September 1976, are given below. These figures supersede those published in WRD-TN-78-1.

DAY	JUL	DAY	AUG	DAY	SEP
3.....	0.93	8.....	0.02	1.....	0.01
12.....	.69	9.....	.01	3.....	.70
27.....	.60	28.....	.93	4.....	.50
		30.....	.15	5.....	.40
		31.....	.05	6.....	.20
TOTAL	--		2.23		2.87
MEAN	--		.072		.096
MAX	--		.93		.70
MIN	--		.00		.00
CFSM	--		.29		.38
IN.	--		.33		.43

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.38	.10	.28	4.2	.51	.92	.74	.35	.50	.39	.33	.23
2	.22	.09	.23	2.7	.45	.66	1.7	.30	.40	.28	.31	.23
3	.18	.09	.83	.92	.39	.59	3.4	.74	2.2	.23	.28	.23
4	.21	.09	2.0	.74	.45	2.1	1.4	5.4	.92	.23	.24	.19
5	.17	.10	.74	.66	.33	.92	1.0	1.1	.59	.23	.22	.15
6	.15	.10	.52	1.6	.28	.66	.83	.74	.50	.19	.18	.15
7	.15	.15	1.1	5.4	.33	.52	.92	.66	.40	.33	.17	.15
8	.14	.24	2.9	2.4	.28	.45	.83	.60	.70	.45	.15	.15
9	.12	.24	11	.74	.23	.33	2.1	.55	.64	1.7	.15	.12
10	.12	.19	1.5	.52	.28	.74	1.0	.50	.60	.52	.15	.12
11	.12	.15	.83	.45	.23	.52	.83	.45	.65	.45	.26	.12
12	.12	.12	.74	.39	.45	.33	2.2	.35	.40	.39	.28	.12
13	.19	.12	.66	.52	.39	.39	2.2	.34	.35	.33	.21	.28
14	.28	.10	.59	.33	.39	.52	1.3	.34	.34	1.0	.18	.59
15	.19	.23	.52	.28	1.1	.45	.92	.32	.30	.66	.15	.23
16	.19	.66	.45	.33	1.6	.39	.83	.30	.25	.45	.15	.19
17	.15	.92	.39	.39	.83	.33	.83	.25	.25	.39	.14	.15
18	.12	.52	.39	.45	.66	.33	.74	.22	.22	.33	.12	.19
19	.12	.28	.45	.52	.59	.39	.74	.20	.19	.33	.15	.19
20	.10	.19	.74	5.4	.59	.59	.74	.20	.17	4.7	.15	.19
21	.10	.12	3.4	7.6	1.2	.66	.80	1.2	.15	6.4	.15	.45
22	.09	.09	.74	2.5	1.0	.52	.74	.66	.60	1.4	.15	.59
23	.08	.39	.62	1.8	1.1	1.0	.90	3.6	3.6	1.1	.19	.33
24	.08	.45	.59	2.1	1.4	.92	1.0	2.2	.92	1.0	.92	.23
25	.07	.19	.59	1.1	6.8	.74	.80	1.2	.59	.91	.83	.23
26	.08	.19	.52	.92	2.9	.59	1.1	.93	.40	.70	.83	.19
27	.19	.45	.48	.92	1.6	.83	1.0	.84	.30	.64	.45	1.3
28	.15	.33	.45	.83	1.2	.74	.70	.78	.23	.53	.28	2.4
29	.12	.39	.42	.74	---	.66	.50	.70	.23	.45	.23	.74
30	.12	.33	.71	.52	---	.66	.40	.65	.66	.43	.83	.52
31	.10	---	1.4	.59	---	.59	---	.80	---	.38	.28	---
TOTAL	4.60	7.61	36.78	48.56	27.56	20.04	33.19	27.47	18.25	27.52	9.11	10.95
MEAN	.15	.25	1.19	1.57	.98	.65	1.11	.89	.61	.89	.29	.37
MAX	.38	.92	11	7.6	6.8	2.1	3.4	5.4	3.6	6.4	.92	2.4
MIN	.07	.09	.23	.28	.23	.33	.40	.20	.15	.19	.12	.12
CFSM	.60	1.00	4.76	6.28	3.92	2.60	4.44	3.56	2.44	3.56	1.16	1.48
IN.	.68	1.13	5.45	7.20	4.08	2.97	4.92	4.07	2.70	4.08	1.35	1.62

WTR YR 1979 TOTAL 271.64 MEAN .74 MAX 11 MIN .07 CFSM 2.96 IN 40.26

CUMBERLAND RIVER BASIN

59

03408815 CROOKED CREEK NEAR ALLARDT, TN

LOCATION.--Lat 36°22'59", long 84°54'50", Fentress County, Hydrologic Unit 05130104, on right bank 3.3 mi (5.3 km) southeast of Jamestown, 1.6 mi (2.6 km) west of Allardt, and at mile 15.5 (24.9 km).

DRAINAGE AREA.--3.62 mi² (9.38 km²).

PERIOD OF RECORD.--June 1976 to current year.

GAGE.--Water-stage recorder and concrete weir. Altitude of gage is 1,600 ft (488 m), from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 383 ft³/s (10.8 m³/s) Apr. 4, 1977, gage height, 3.44 ft (1.049 m); minimum, no flow June 11, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 315 ft³/s (8.92 m³/s) Dec. 9, gage height, 3.32 ft (1.012 m); minimum discharge, 0.13 ft³/s (0.004 m³/s) Sept. 12; minimum gage height, 1.04 ft (0.317 m) Aug. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	.38	3.0	56	5.8	12	6.6	2.0	4.4	3.4	2.3	3.6
2	1.0	.32	2.3	33	5.2	9.8	27	1.9	3.6	2.1	1.9	2.8
3	.70	.30	9.7	13	4.7	9.5	54	4.4	19	1.7	1.6	2.1
4	.80	.29	46	8.8	5.2	28	19	61	8.8	1.4	1.4	1.5
5	.50	.30	19	8.0	4.5	13	9.2	24	5.1	1.3	1.2	.98
6	.50	.30	12	11	3.8	9.8	4.8	12	4.2	1.1	1.1	.89
7	.40	.73	22	71	4.3	9.1	3.4	7.9	3.8	1.7	.98	.72
8	.40	1.4	42	29	3.9	8.8	2.9	5.7	5.3	3.0	.81	.72
9	.30	1.0	131	12	3.2	6.3	20	4.6	4.9	14	.72	.58
10	.40	.63	22	8.9	3.4	11	6.6	4.0	4.4	6.1	.65	.30
11	.40	.48	12	7.0	3.2	8.8	4.6	3.1	4.9	3.8	.98	.26
12	.30	.46	9.3	6.9	4.3	7.2	23	2.6	3.0	3.2	3.2	.19
13	.90	.46	7.1	7.2	5.7	6.1	32	2.5	2.4	2.8	1.4	.61
14	1.5	.41	5.6	7.0	5.8	6.3	26	2.4	2.3	13	.89	6.2
15	.80	.56	4.7	4.6	25	5.1	12	1.8	1.9	7.8	.65	2.0
16	.60	5.6	5.6	4.5	27	4.4	9.5	1.5	1.7	4.9	.72	1.1
17	.44	15	5.7	5.4	11	4.0	10	1.2	1.7	3.6	.81	.64
18	.36	15	4.4	5.7	8.6	3.8	5.4	1.1	1.4	2.6	.46	.58
19	.35	12	4.8	5.9	7.3	3.8	3.4	1.0	1.2	2.3	.35	.56
20	.31	1.6	8.2	69	7.8	4.2	3.4	1.0	.98	39	.26	.46
21	.30	1.2	49	72	15	6.6	3.7	9.5	.89	80	.35	2.3
22	.30	1.0	16	30	11	4.4	3.4	4.6	2.8	26	.40	4.6
23	.30	5.3	8.6	21	13	14	4.7	21	28	15	.58	1.8
24	.30	8.5	7.7	26	18	16	4.0	45	15	9.4	3.0	1.2
25	.30	2.5	7.8	17	81	9.5	3.6	18	5.6	8.7	20	1.2
26	.34	2.3	5.8	14	37	8.1	4.9	14	3.6	8.1	18	.96
27	.92	5.3	4.5	14	20	11	4.4	8.1	2.4	7.5	11	11
28	.73	4.7	3.6	12	16	9.5	3.2	6.3	2.0	5.3	4.0	44
29	.48	4.1	3.5	9.0	---	7.5	2.6	4.9	2.0	4.2	2.6	16
30	.41	5.4	7.6	7.9	---	6.1	2.3	4.7	5.3	3.2	16	7.5
31	.40	---	23	8.0	---	5.3	---	6.1	---	2.8	5.1	---
TOTAL	17.74	97.52	513.5	604.8	360.7	269.0	319.6	287.9	152.57	289.0	103.41	117.35
MEAN	.57	3.25	16.6	19.5	12.9	8.68	10.7	9.29	5.09	9.32	3.34	3.91
MAX	2.0	15	131	72	81	28	54	61	28	80	20	44
MIN	.30	.29	2.3	4.5	3.2	3.8	2.3	1.0	.89	1.1	.26	.19
CFSM	.16	.90	4.59	5.39	3.56	2.40	2.96	2.57	1.41	2.58	.92	1.08
IN.	.18	1.00	5.28	6.21	3.71	2.76	3.28	2.96	1.57	2.97	1.06	1.21

WTR YR 1979 TOTAL 3133.09 MEAN 8.58 MAX 131 MIN .19 CFSM 2.37 IN 32.19

CUMBERLAND RIVER BASIN

03409500 CLEAR FORK NEAR ROBBINS, TN

LOCATION.--Lat 36°23'18", long 84°37'49", Scott County, Hydrologic Unit 05130104, on right bank 300 ft (90 m) downstream from Burnt Mill Bridge, 3.3 mi (5.3 km) northwest of Robbins, and at mile 3.7 (6.0 km).

DRAINAGE AREA.--272 mi² (704 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to September 1971, July 1975 to current year. Published as Clear Fork River near Robbins, October 1951 to September 1954.

REVISED RECORDS.--WSP 1306: 1931(M), 1936-37(M), 1943-44(M). WSP 1436: Drainage area. WSP 1910: 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 1,081.46 ft (329.629 m) Sandy Hook datum. Prior to Aug. 10, 1940, nonrecording gage at site 300 ft (90 m) upstream at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--45 years (water years 1930-71, 1975-79), 473 ft³/s (13.40 m³/s), 23.62 in/yr (600 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft³/s (963 m³/s) Feb. 3, 1939, gage height, 18.5 ft (5.64 m) from floodmarks, site and datum then in use, from rating curve extended above 14,000 ft³/s (396 m³/s) on basis of slope-area measurement of peak flow; minimum observed, 0.2 ft³/s (0.006 m³/s) Sept. 19-21, 1932; minimum gage height observed, 0.28 ft (0.085 m) Oct. 1-3, 1936, site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 23, 1929 reached a stage of 22.1 ft (6.74 m), former site and datum, from information by local residents, and flood of May 27, 1973, reached a stage of 18.92 ft (5.767 m), present site and datum, from floodmark; discharge, 35,700 ft³/s (1,010 m³/s), from rating curve extended above 14,000 ft³/s (396 m³/s) on basis of slope area measurement at gage height 18.5 ft (5.64 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,500 ft³/s (184 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1000	*11400 323	11.53 3.514	Feb. 25	1800	10600 300	11.16 3.402
Jan. 2	0030	8650 245	10.21 3.112	May 4	1530	9710 275	10.74 3.274
Jan. 7	1800	9060 257	10.42 3.176	July 14	2100	7130 202	9.37 2.856
Jan. 21	1500	8010 227	9.87 3.008				

Minimum discharge, 14 ft³/s (0.40 m³/s) Oct. 25, 26, Sept. 13, gage height, 1.25 ft (0.381 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	17	373	3770	450	1350	448	164	420	97	209	100
2	75	17	286	5930	314	1010	927	151	343	83	161	68
3	61	16	332	2310	413	815	3420	170	506	63	130	57
4	49	15	2870	1310	357	2280	3050	5500	818	50	109	47
5	41	15	2450	950	338	2170	1960	4240	522	43	94	40
6	35	15	1290	827	290	1360	1290	1950	347	37	80	35
7	29	17	857	5520	298	979	909	1160	250	37	68	32
8	24	25	1230	4590	334	777	711	777	220	76	58	27
9	20	38	8820	2020	274	612	2050	563	350	167	51	23
10	18	40	3280	1240	226	683	1960	486	337	414	45	20
11	16	33	1570	884	337	1270	1250	501	247	207	42	17
12	15	29	1000	700	225	1010	1110	363	187	144	41	16
13	16	26	722	607	268	782	2040	292	141	125	43	14
14	21	24	551	549	312	670	2090	254	113	2120	47	18
15	28	24	437	433	657	593	1440	216	95	3350	38	33
16	36	51	382	355	1750	467	995	178	80	1110	32	43
17	29	308	410	339	1210	408	733	148	71	553	27	32
18	24	236	348	355	885	367	566	128	66	326	25	28
19	21	161	324	330	691	337	455	114	58	225	22	24
20	19	116	349	2340	558	315	379	106	50	262	20	20
21	17	93	1390	7480	865	293	324	164	44	3020	18	26
22	17	79	1460	3770	1240	272	284	237	40	2870	16	32
23	16	113	956	1860	1060	294	265	792	59	1480	33	103
24	15	578	719	1630	1460	987	269	4480	390	1050	31	74
25	14	399	650	1370	5940	941	238	2150	191	827	30	52
26	14	266	511	1010	5500	698	254	1400	115	1280	113	42
27	14	256	408	849	2420	579	286	910	79	1020	212	50
28	14	310	338	869	1760	737	233	684	60	787	170	1640
29	15	273	300	695	---	670	196	504	50	572	94	1210
30	17	397	313	587	---	567	177	367	49	388	77	484
31	18	---	1470	537	---	484	---	325	---	280	90	---
TOTAL	791	3987	36396	56016	30432	24777	30309	29474	6298	23063	2226	4407
MEAN	25.5	133	1174	1807	1087	799	1010	951	210	744	71.8	147
MAX	75	578	8820	7480	5940	2280	3420	5500	818	3350	212	1640
MIN	14	15	286	330	225	272	177	106	40	37	16	14
CFSM	.09	.49	4.32	6.64	4.00	2.94	3.71	3.50	.77	2.74	.26	.54
IN.	.11	.55	4.98	7.66	4.16	3.39	4.15	4.03	.86	3.15	.30	.60

CAL YR 1978 TOTAL 181201 MEAN 496 MAX 9150 MIN 14 CFSM 1.82 IN 24.78
WTR YR 1979 TOTAL 248176 MEAN 680 MAX 8820 MIN 14 CFSM 2.50 IN 33.94

CUMBERLAND RIVER BASIN

61

03409500 CLEAR FORK NEAR ROBBINS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-64, 1976-77, current year.

REMARKS.--Miscellaneous samples prior to 1979

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY 24...	1430	4390	50	6.5	14.5	--	--	--	--	--
JUN 12...	1225	201	45	7.6	20.0	--	--	--	--	--
JUL 25...	1230	727	44	7.1	20.5	--	--	--	--	--
SEP 06...	1200	42	85	7.4	25.0	30	13	7.9	2.4	2.9

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
MAY 24...	--	--	--	8	7.6	--	--	--	--	--
JUN 12...	--	--	--	12	6.6	--	--	--	38	--
JUL 25...	--	--	--	8	6.7	--	--	--	34	--
SEP 06...	17	.2	1.8	20	13	2.8	.0	2.5	57	44

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	--	--	2000	120	160	50	82	972	66
JUN 12...	.05	20.6	400	120	30	10	10	5.4	62
JUL 25...	.05	66.7	800	100	50	10	21	41	--
SEP 06...	.08	6.46	240	40	40	20	1	.11	--

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
SEP 06...	.10	.010	3	0	100	0	<10	10	<10	<10	0	<10

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CYANIDE TOTAL (MG/L AS CN)
SEP 06...	2300	15	<10	50	<.5	.00	0	0	1	0	<10	.00

CUMBERLAND RIVER BASIN

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY

LOCATION.--Lat 36°37'37", long 84°32'00", McCreary County, Hydrologic Unit 05130104, on right bank at mouth of Bear Creek, 1,400 ft (427 m) upstream from Salt Branch, 5.5 mi (8.8 km) southwest of Stearns, and at mile 49.6 (79.8 km). Records include flow of Bear Creek.

DRAINAGE AREA.--954 mi² (2,471 km²), includes that of Bear Creek.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1942 to current year.

REVISED RECORDS.--WSP 1113: 1946(M). WSP 1436: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 764.81 ft (233.114 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--37 years, 1,805 ft³/s (51.12 m³/s), 25.69 in/yr (653 mm/yr).

EXTREMES FOR PERIOD RECORD.--Maximum discharge, 93,200 ft³/s (2,640 m³/s) May 28, 1973, gage height, 45.31 ft (13.81 m), from floodmarks; minimum, 11 ft³/s (0.31 m³/s) Oct. 4, 1948, Sept. 17, 18, 19, 20, 1954; minimum gage height, 1.53 ft (0.466 m) Sept. 17, 18, 19, 20, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1929, reached a stage of 52.9 ft (16.21 m) from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 22,000 ft³/s (623 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	0900	26900 762	23.21 7.074	Feb. 26	0100	*36000 1020	27.17 8.281
Jan. 7	2400	31200 884	25.17 7.672	May 4	2400	25500 722	22.56 6.876
Jan. 21	1300	29500 835	24.39 7.434				

Minimum discharge, 87 ft³/s (2.46 m³/s) Oct. 26, gage height, 1.82 ft (0.555 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	94	872	7930	1570	4490	1680	785	7920	236	874	1250
2	105	94	1040	22300	1220	3500	2790	723	2740	263	672	768
3	110	94	858	8300	1150	2790	8820	689	2850	250	527	559
4	105	94	1500	4180	1070	6240	11200	9270	4170	219	427	494
5	100	94	6000	2940	980	9250	6730	15800	2770	227	360	385
6	110	93	6400	2400	920	4680	4410	6560	1800	212	306	349
7	115	94	4000	14200	860	3310	3120	3820	1300	219	269	294
8	115	112	2900	19800	830	2590	2450	2580	1040	338	240	256
9	110	125	17000	7000	810	2090	3960	1900	1400	633	217	224
10	105	134	11000	4080	772	1830	6420	1570	1160	966	198	199
11	100	144	7400	2920	779	3160	4060	1710	999	898	186	184
12	97	136	4600	2290	840	3010	3450	1360	859	623	226	168
13	96	128	2700	1970	900	2410	6230	1100	657	512	233	160
14	116	125	2000	1790	1070	2050	7240	985	517	511	270	180
15	137	123	1400	1480	1540	1930	5160	896	436	5410	209	220
16	147	186	1000	1210	5890	1600	3550	728	387	2580	178	170
17	138	622	900	1150	4580	1430	2630	609	341	1570	158	150
18	128	962	800	1150	3100	1320	2040	515	312	985	144	130
19	118	671	760	1110	2410	1240	1670	452	289	695	137	120
20	110	456	700	4500	1900	1170	1420	421	269	861	129	120
21	105	338	1500	25700	2290	1100	1250	513	244	8790	123	190
22	99	280	2900	13900	4050	1150	1120	1020	227	12100	136	670
23	95	308	3200	5990	3660	1080	1030	1070	334	4590	413	2000
24	91	683	2300	4660	5350	4100	1010	12700	494	2650	265	1400
25	89	756	1600	4330	18600	4580	943	8160	763	1840	1450	780
26	88	700	1300	3250	23700	3130	919	4890	476	2220	1370	620
27	102	660	1100	2680	8500	2360	1190	3380	357	2790	2220	500
28	108	640	1000	2450	5720	2550	1110	2490	283	3410	1480	900
29	100	680	970	2200	---	2470	956	1910	245	2760	1060	2200
30	97	756	1030	1970	---	2120	855	1460	238	1670	1570	1000
31	94	---	2230	1780	---	1820	---	1720	---	1150	1440	---
TOTAL	3330	10382	92960	181610	105061	86550	99413	91786	35877	62178	17487	16640
MEAN	107	346	2999	5858	3752	2792	3314	2961	1196	2006	564	555
MAX	147	962	17000	25700	23700	9250	11200	15800	7920	12100	2220	2200
MIN	88	93	700	1110	772	1080	855	421	227	212	123	120
CFSM	.11	.36	3.14	6.14	3.93	2.93	3.47	3.10	1.25	2.10	.59	.58
IN.	.13	.40	3.62	7.08	4.10	3.37	3.88	3.58	1.40	2.42	.68	.65

CAL YR 1978	TOTAL	581226	MEAN	1592	MAX	32900	MIN 88	CFSM 1.67	IN 22.66
WTR YR 1979	TOTAL	803274	MEAN	2201	MAX	25700	MIN 88	CFSM 2.31	IN 31.32

CUMBERLAND RIVER BASIN

03410500 SOUTH FORK CUMBERLAND RIVER NEAR STEARNS, KY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-72, current year.

REMARKS.--Miscellaneous samples prior to 1979

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)			
DATE	TIME												
MAY													
22...	1200	1040	135	6.5	19.0	--	--	--	--	--			
31...	1405	1160	95	7.8	19.5	--	--	--	--	--			
JUN													
13...	1300	591	105	7.9	21.0	--	--	--	--	--			
15...	1215	429	110	8.0	22.0	--	--	--	--	--			
JUL													
26...	1215	2350	90	7.4	21.5	--	--	--	--	--			
AUG													
23...	1815	422	185	7.5	26.5	--	--	--	--	--			
SEP													
04...	1200	490	160	7.8	24.0	66	33	17	5.6	3.8			
		SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)			
DATE	SODIUM PERCENT												
MAY													
22...	--	--	--	19	33	--	--	--	--	--			
31...	--	--	--	12	27	--	--	--	55	--			
JUN													
13...	--	--	--	16	26	--	--	--	69	--			
15...	--	--	--	21	28	--	--	--	65	--			
JUL													
26...	--	--	--	9	22	--	--	--	60	--			
AUG													
23...	--	--	--	28	49	--	--	--	119	--			
SEP													
04...	16	.2	1.5	33	38	.9	.1	4.6	105	91			
		SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CYANIDE TOTAL (MG/L AS CN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM		
DATE													
MAY													
22...	--	--	480	100	190	80	--	6	17	33			
31...	.07	172	640	10	110	40	--	6	19	--			
JUN													
13...	.09	110	600	80	110	70	--	22	35	56			
15...	.09	75.3	1200	10	90	90	--	30	35	--			
JUL													
26...	.08	381	1300	70	120	70	--	43	273	70			
AUG													
23...	.16	136	280	90	80	60	--	5	5.7	--			
SEP													
04...	.14	139	6700	30	160	40	.00	152	201	--			
		NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
DATE													
SEP													
04...	.24	.030	4	0	1	20	9	17	<.5	0	1	50	

CUMBERLAND RIVER BASIN

03414500 EAST FORK OBEY RIVER NEAR JAMESTOWN, TN

LOCATION.--Lat 36°24'58", long 85°01'35", Fentress County, Hydrologic Unit 05130105, on right bank 200 ft (61 m) upstream from bridge on State Highway 52, 0.5 mi (0.8 km) upstream from Poplar Cove Creek, 5.3 mi (8.5 km) west of Jamestown, and at mile 12.7 (20.4 km).

DRAINAGE AREA.--202 mi² (523 km²), includes 6.0 mi² (16 km²) without surface drainage.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1942 to current year. Prior to February 1943 monthly discharge only, published in WSP 1506.

REVISED RECORDS.--WSP 1276: 1944, 1946(M). WSP 1506: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 680.30 ft (207.355 m) Sandy Hook datum. Feb. 24 to Apr. 7, 1943, nonrecording gage 200 ft (61 m) upstream at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--37 years, 424 ft³/s (12.01 m³/s), 28.51 in/yr (724 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,800 ft³/s (1,270 m³/s) May 27, 1973, gage height, 30.46 ft (9.284 m) from rating curve extended above 32,000 ft³/s (906 m³/s) on basis of slope-area measurement of peak flow; minimum, 3.6 ft³/s (0.10 m³/s) Sept. 26-28, 1948; minimum gage height, 0.55 ft (0.168 m) Sept. 12-17, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of about 30.7 ft (9.36 m) from flood profile by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,000 ft³/s (227 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	0415	*16300 462	18.66 5.688	May 4	1015	15900 450	18.45 5.624
Jan. 7	1230	8680 246	13.19 4.020				

Minimum discharge, 15 ft³/s (0.42 m³/s) Oct. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	16	285	3800	387	1000	459	189	259	174	227	151
2	45	16	240	3700	311	764	1400	173	212	136	177	105
3	38	16	278	1630	332	616	3760	188	291	83	142	83
4	31	16	2990	988	315	1700	2480	6880	387	61	116	67
5	26	16	1720	723	299	1640	1680	3090	299	68	98	54
6	23	16	889	635	281	1100	1120	1610	219	82	79	46
7	21	17	697	5170	286	764	799	993	168	699	65	39
8	18	19	1400	3020	279	611	630	676	151	1570	57	34
9	17	26	9040	1540	252	490	1960	503	182	1120	49	29
10	16	25	2330	989	204	533	1510	417	200	885	43	26
11	16	22	1170	706	224	749	1040	355	207	465	42	24
12	15	20	742	575	243	630	2000	289	162	307	65	22
13	16	20	548	465	300	536	2570	249	116	227	52	23
14	20	19	432	447	310	489	2060	222	88	769	42	73
15	25	19	362	380	816	460	1350	190	72	1210	36	79
16	22	36	315	331	2160	394	927	159	60	593	32	57
17	17	188	321	314	1330	354	683	133	52	377	29	40
18	16	240	299	333	885	324	527	114	46	258	26	32
19	16	175	277	342	644	302	440	99	40	192	24	28
20	16	112	295	3310	510	288	374	91	35	880	22	26
21	16	81	2260	5450	748	281	324	162	31	2980	21	31
22	16	64	1460	2540	1050	259	286	196	30	2690	21	74
23	16	106	873	1530	987	373	277	487	91	1410	90	92
24	16	753	642	1730	1210	1220	289	3410	107	964	71	71
25	16	440	591	1300	4150	1070	263	1630	167	664	158	52
26	16	300	473	943	2980	774	266	1280	95	1220	493	42
27	16	257	398	780	1680	693	281	798	58	896	621	124
28	20	268	343	758	1310	858	250	590	43	728	314	2550
29	20	245	302	593	---	713	222	453	36	531	186	1470
30	20	285	318	499	---	582	205	354	128	388	359	668
31	20	---	1380	452	---	486	---	296	---	296	215	---
TOTAL	636	3833	33670	45973	24483	21053	30432	26276	4032	22923	3972	6212
MEAN	20.5	128	1086	1483	874	679	1014	848	134	739	128	207
MAX	45	753	9040	5450	4150	1700	3760	6880	387	2980	621	2550
MIN	15	16	240	314	204	259	205	91	30	61	21	22
CFSM	.10	.63	5.38	7.34	4.33	3.36	5.02	4.20	.66	3.66	.63	1.03
IN.	.12	.71	6.20	8.47	4.51	3.88	5.60	4.84	.74	4.22	.73	1.14

CAL YR 1978	TOTAL	142890	MEAN 391	MAX 9040	MIN 13	CFSM 1.94	IN 26.31
WTR YR 1979	TOTAL	223495	MEAN 612	MAX 9040	MIN 15	CFSM 3.03	IN 41.16

CUMBERLAND RIVER BASIN

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03414500 EAST FORK OBEY RIVER NEAR JAMESTOWN, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May to September 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY 24...	1000	3140	80	6.6	15.0	--	--	--	--	--
JUN 13...	1115	114	198	7.1	18.0	--	--	--	--	--
JUL 12...	1610	294	128	7.3	19.0	--	--	--	--	--
AUG 15...	1015	36	260	7.7	20.0	--	--	--	--	--
SEP 06...	1030	46	260	8.0	20.5	110	75	34	6.8	4.1

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
MAY 24...	--	--	--	10	23	--	--	--	61	--
JUN 13...	--	--	--	20	59	--	--	--	129	--
JUL 12...	--	--	--	11	38	--	--	--	79	--
AUG 15...	--	--	--	32	90	--	--	--	136	--
SEP 06...	9	.2	1.1	40	67	4.2	.1	6.5	175	147

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	.08	517	8600	60	300	170	306	2590	26
JUN 13...	.18	39.7	600	0	330	320	10	3.1	73
JUL 12...	.11	62.7	1000	20	240	240	14	11	--
AUG 15...	.19	13.4	160	20	420	430	3	.30	--
SEP 06...	.24	21.7	150	0	350	340	3	.37	--

CUMBERLAND RIVER BASIN

03414500 EAST FORK OBEY RIVER NEAR JAMESTOWN, TN--Continued

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
SEP 06...	.32	.000	2	0	100	1	<10	10	20	40	2	20
DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CYANIDE TOTAL (MG/L AS CN)
SFP 06...	27000	2	20	80	<.5	.00	0	0	0	30	170	.00

CUMBERLAND RIVER BASIN

03416000 WOLF RIVER NEAR BYRDSTOWN, TN

LOCATION.--Lat 36°33'37", long 85°04'23", Pickett County, Hydrologic Unit 05130105; on right bank 0.3 mi (0.5 km) upstream from bridge on county road, 0.5 mi (0.8 km) upstream from Widow Creek, 3.2 mi (5.1 km) east of Byrdstown, 5.4 mi (8.7 km) upstream from Lick Creek, and at mile 26.2 (42.2 km).

DRAINAGE AREA.--106 mi² (275 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1942 to current year. Prior to June 1943 monthly discharge only, published in WSP 1306.

REVISED RECORD.--WSP 1276: 1943. WSP 1910: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 707.54 ft (215.658 m) Sandy Hook datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--37 years, 192 ft³/s (5.437 m³/s), 24.60 in/yr (625 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,600 ft³/s (640 m³/s) Jan. 29, 1957, gage height, 10.84 ft (3.304 m); from rating curve extended above 7,300 ft³/s (207 m³/s) on basis of velocity-area study; minimum, 2.0 ft³/s (0.057 m³/s) Sept. 17, 1954, gage height, 0.50 ft (0.152 m), result of construction at mill dam upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage about equal to that of Jan. 29, 1957, from information by local resident. Flood of June 30, 1928, reached a stage 1.5 ft (0.46 m) higher than that in March 1929 at a point 12.5 mi (20.1 km) upstream, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,600 ft³/s (102 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	0530	10500 297	8.42 2.566	Feb. 25	1530	4760 135	6.42 1.957
Dec. 9	0400	*16200 459	9.72 2.963	Apr. 12	1400	5610 159	6.83 2.082
Jan. 1	1745	4430 125	6.26 1.908	May 4	0945	5400 153	6.73 2.051
Jan. 21	1130	4030 114	6.07 1.850				

Minimum discharge, 18 ft³/s (0.51 m³/s) Aug. 21, gage height 1.26 ft (0.384 m), but may have been less during period of missing record.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	20	144	2130	190	432	259	102	94	37	63	251
2	30	20	121	1590	162	337	1480	90	86	30	53	180
3	28	20	542	639	163	284	2260	79	269	28	44	114
4	27	20	4930	409	152	368	1300	2700	294	27	38	85
5	26	20	845	317	144	343	842	1240	189	28	35	69
6	25	20	423	276	135	291	519	591	141	26	32	56
7	23	20	671	2150	142	259	375	374	112	27	30	47
8	22	24	1760	1380	124	250	311	272	90	41	28	40
9	21	29	7170	621	116	217	769	213	94	55	27	36
10	20	27	1010	417	101	289	555	177	113	55	25	33
11	20	25	511	315	101	353	403	150	137	42	25	31
12	20	24	353	262	109	298	2770	128	116	35	35	30
13	20	23	269	233	147	254	1430	113	89	31	30	35
14	25	22	214	213	145	223	836	103	73	138	25	116
15	25	21	182	169	472	187	544	84	59	206	22	71
16	25	66	161	154	817	162	391	79	51	109	22	47
17	20	180	151	146	467	148	310	70	47	73	21	38
18	20	179	136	142	347	137	253	64	42	54	20	35
19	20	110	132	138	265	130	214	60	38	83	20	33
20	20	78	145	2250	226	123	186	57	35	193	19	31
21	20	62	1070	3010	372	117	163	68	32	177	20	59
22	20	52	522	1120	428	108	147	66	32	115	21	230
23	20	65	351	645	583	213	138	84	70	85	31	175
24	20	170	287	809	505	465	129	487	67	68	25	119
25	20	134	275	544	2560	383	122	324	51	62	27	88
26	20	113	225	405	1540	302	122	266	39	78	172	71
27	20	160	190	350	758	275	151	201	34	204	216	89
28	25	175	166	350	564	297	133	206	31	285	116	1280
29	25	155	151	282	---	267	118	168	30	155	94	662
30	25	163	188	246	---	234	110	133	35	103	920	319
31	25	---	585	225	---	206	---	115	---	81	271	---
TOTAL	705	2197	23880	21937	11835	7952	17340	8864	2590	2731	2527	4470
MEAN	22.7	73.2	770	708	423	257	578	286	86.3	88.1	81.5	149
MAX	30	180	7170	3010	2560	465	2770	2700	294	285	920	1280
MIN	20	20	121	138	101	108	110	57	30	26	19	30
CFSM	.21	.69	7.26	6.68	3.99	2.43	5.45	2.70	.81	.83	.77	1.41
IN.	.25	.77	8.38	7.70	4.15	2.79	6.09	3.11	.91	.96	.89	1.57

CAL YR 1978 TOTAL 75836 MEAN 208 MAX 7170 MIN 20 CFSM 1.96 IN 26.61
WTR YR 1979 TOTAL 107028 MEAN 293 MAX 7170 MIN 19 CFSM 2.76 IN 37.56

NOTE.--No gage-height record Oct. 12 to Nov. 14.

CUMBERLAND RIVER BASIN

03416000 WOLF RIVER NEAR BYRDSTOWN, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May to September 1979.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY 24...	1300	634	200	7.8	13.0	--	--	--	--	--
JUN 13...	1430	88	186	8.0	18.0	--	--	--	--	--
JUL 13...	0930	33	254	8.2	22.0	--	--	--	--	--
AUG 15...	1300	22	300	8.3	21.5	--	--	--	--	--
SEP 06...	1400	54	270	8.4	23.0	130	24	42	7.0	3.6

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
MAY 24...	--	--	--	86	14	--	--	--	131	--
JUN 13...	--	--	--	67	22	--	--	--	121	--
JUL 13...	--	--	--	96	28	--	--	--	169	--
AUG 15...	--	--	--	110	33	--	--	--	--	--
SEP 06...	6	.1	.9	98	33	5.0	.1	5.3	169	163

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	.18	224	1500	40	110	30	56	96	83
JUN 13...	.16	28.8	380	0	50	30	14	3.3	80
JUL 13...	.23	15.3	590	20	40	20	13	1.2	--
AUG 15...	--	--	310	20	30	40	5	.31	--
SEP 06...	.23	24.6	350	10	80	70	9	1.3	--

CUMBERLAND RIVER BASIN

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03416000 WOLF RIVER NEAR BYRDSTOWN, TN--Continued

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL FM BOT- TOM MA- TERIAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
SEP 06...	.43	.010	3	0	100	2	<10	<10	10	10	4	<10

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CYANIDE TOTAL (MG/L AS CN)
SEP 06...	8100	2	10	400	<.5	.00	0	0	1	30	20	.00

CUMBERLAND RIVER BASIN

03417500 CUMBERLAND RIVER AT CELINA, TN

LOCATION.--Lat 36°33'15", long 85°30'52", Clay County, Hydrologic Unit 05130106, on right bank at State Highway 52 bridge, 0.5 mi (0.8 km) northwest of courthouse in Celina, 600 ft (183 m) downstream from Obey River, and at mile 380.8 (612.7 km).

DRAINAGE AREA.--7,307 mi² (18,925 km²).

PERIOD OF RECORD.--October 1922 to current year. Gage-height records collected at same site 1903-54 are in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 893: 1923-38. WSP 1276: 1924. WSP 1306: 1943 (monthly runoff). WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 489.00 ft (149.047 m) National Geodetic Vertical Datum of 1929.

Prior to Nov. 20, 1930, nonrecording gage at site 400 ft (122 m) downstream at same datum. Since Feb. 2, 1973, auxiliary water-stage recorder 15.8 mi (25.4 km) downstream from base gage at same datum.

REMARKS.--Records good except those for days when discharge is below about 3,000 ft³/s (85.0 m³/s), which are fair due to indefinite stage-fall-discharge relation. Flow regulated by Lake Cumberland and Dale Hollow Lake (see page 129).

AVERAGE DISCHARGE.--57 years, 11,780 ft³/s (333.5 m³/s), 21.89 in/yr (556 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 145,000 ft³/s (4,110 m³/s) Dec. 29, 1926, maximum gage height, 57.25 ft (17.450 m), Dec. 29, 1926, from graph based on gage readings; minimum daily, 69 ft³/s (1.95 m³/s) Sept. 2, 11-14, 1925; minimum gage height observed, 0.20 ft (0.061 m) Sept. 2, 11-14, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, 59.2 ft (18.04 m) in March 1826, from Cumberland River profile.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 57,100 ft³/s (1,620 m³/s) Dec. 9, gage height, 33.40 ft (10.180 m); minimum daily, 2,190 ft³/s (62.0 m³/s) Dec. 2; minimum recorded gage height, 9.91 ft (3.021 m) Dec. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2230	3170	4840	32100	23900	33300	11100	10700	12500	5470	15500	15400
2	3880	3200	1220	37800	25800	32500	24600	12900	9880	5240	15000	10300
3	4680	2640	6350	34800	23000	32000	30800	12900	9500	11900	15400	5650
4	4220	1760	32400	32700	19600	34700	36600	9240	9270	14700	14500	12100
5	5110	2640	25900	31300	21300	35000	36800	24300	9740	10400	7710	18300
6	3660	3500	8890	30800	23700	33900	35600	12400	12200	12600	6840	19400
7	2560	5030	11400	34100	24100	33600	34600	13400	13100	12700	14100	19100
8	2530	4730	34900	34400	18600	33800	33900	22100	14000	14100	16100	19100
9	2810	5110	53400	29100	19500	31600	36700	22800	15800	16500	17600	9980
10	8630	5020	28100	29000	26900	30100	37300	22700	11900	14500	19400	7070
11	3750	1820	21500	29800	24700	29900	35800	22500	12500	13800	17900	14900
12	4590	1820	20400	30000	12100	29600	41500	19100	14700	13900	12000	15700
13	4300	1820	25600	28800	12500	28900	40100	8100	14100	15100	8590	18400
14	4160	880	29200	24500	16000	27900	37900	5890	14300	15100	15500	26100
15	2120	890	29400	23700	15100	28700	26000	13100	13800	13800	17000	14500
16	3080	3750	28500	24700	15300	28400	21700	15400	12900	9030	16700	11300
17	4870	2130	26700	22900	19600	25300	20700	13000	10700	12800	16900	8090
18	12500	3970	28400	21400	18700	20700	20800	10700	11000	14900	16700	13900
19	7300	2240	28200	21100	13300	17000	22700	9450	15100	11700	14800	18300
20	5770	2620	29200	32600	13600	18500	29600	5050	15700	11400	9890	15900
21	3870	2640	33300	34600	16400	16300	33500	4900	16700	10900	13800	26800
22	3390	1980	32900	32200	12300	14300	34800	10600	15300	7150	16400	33900
23	2580	3040	28700	35300	8310	11100	35600	14100	15800	6040	16200	15000
24	2880	3680	21500	37800	8560	15000	30600	12900	8180	11500	14800	12200
25	3490	2460	18400	37700	14600	10400	25900	9490	4100	12900	12200	17000
26	4410	4080	19700	36300	19900	6660	21800	6450	8880	14400	10600	16200
27	2050	5860	26000	35600	27500	9010	19200	5030	11200	14900	10500	15700
28	1760	3920	25700	33200	32800	10600	8660	3320	12200	13200	14100	25800
29	1760	4790	26400	32300	---	10400	3820	5950	10400	14000	16000	25400
30	1750	5520	27700	31500	---	11200	11900	10400	10400	13600	19700	14200
31	2610	---	27800	26200	---	9990	---	12100	---	15700	20500	---
TOTAL	123300	96710	762600	958300	527670	710360	840580	380970	365850	383930	452930	495690
MEAN	3977	3224	24600	30910	18850	22910	28020	12290	12200	12380	14610	16520
MAX	12500	5860	53400	37800	32800	35000	41500	24300	16700	16500	20500	33900
MIN	1750	880	1220	21100	8310	6660	3820	3320	4100	5240	6840	5650

CAL YR 1978 TOTAL 4709660 MEAN 12900 MAX 53400 MIN 880 MEAN‡ 13026 CFSM‡ 1.78 IN.‡ 24.20
WTR YR 1979 TOTAL 6098890 MEAN 16710 MAX 53400 MIN 880 MEAN‡ 18114 CFSM‡ 2.48 IN.‡ 33.65

‡ Adjusted for change in contents in Lake Cumberland and Dale Hollow Lake.

NOTE.--No gage-height record Oct. 8 to Dec. 7.

CUMBERLAND RIVER BASIN

03418070 ROARING RIVER ABOVE GAINESBORO, TN

LOCATION.--Lat 36°21'04", long 85°32'45", Jackson County, Hydrologic Unit 05130106, near left bank of downstream end of county road bridge, 1.1 mi (1.8 km) upstream from Blackburn Fork, 6.3 mi (10.1 km) east of Gainesboro, and at mile 9.1 (14.6 km).

DRAINAGE AREA.--210 mi² (544 km²), includes 34 mi² (88 km²) without surface drainage.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 520.31 ft (158.590 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those below 5.0 ft³/s (0.14 m³/s), which are poor.

AVERAGE DISCHARGE.--5 years, 313 ft³/s (8.864 m³/s), 20.24 in/yr (514 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,400 ft³/s (634 m³/s) Mar. 12, 1975, gage height, 21.83 ft (6.654 m) from high-water marks; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,000 ft³/s (142 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	0415	9940 282	15.10 4.602	Feb. 25	1215	6160 174	12.07 3.679
Dec. 9	0345	*13900 394	17.51 5.337	Apr. 12	1515	8890 252	14.32 4.365
Jan. 1	1700	7330 208	13.08 3.987	May 4	0915	8820 250	14.27 4.349
Jan. 7	2015	6160 174	12.07 3.679	Aug. 30	0415	6280 178	12.18 3.712
Jan. 21	1015	6110 173	12.02 3.664	Sept. 28	1045	5480 155	11.43 3.484

Minimum discharge, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	9.3	3890	310	682	503	97	110	106	21	266
2	.00	.00	6.8	3230	263	519	3020	85	74	49	11	153
3	.00	.00	576	1270	249	440	3330	120	142	23	7.0	111
4	.00	.00	5330	706	241	1250	2260	5550	278	11	6.1	79
5	.00	.00	1180	527	216	918	1420	2330	163	11	5.5	53
6	.00	.00	539	488	204	630	878	983	114	5.8	5.0	37
7	.00	.00	731	4190	218	507	607	577	76	186	5.0	27
8	.00	.00	2240	3170	181	458	492	409	46	308	4.3	20
9	.00	.00	8450	1300	171	352	1340	305	32	381	2.4	13
10	.00	.00	1980	800	149	477	873	244	40	280	.02	9.4
11	.00	.00	878	568	149	590	599	199	133	139	.07	6.3
12	.00	.00	547	451	153	477	4740	173	44	97	1.9	3.5
13	.00	.00	405	385	233	388	3400	153	22	69	2.4	88
14	.00	.00	310	337	275	337	1750	137	12	107	.02	221
15	.00	.00	258	249	816	278	1080	117	8.5	241	.00	60
16	.00	4.5	231	216	971	231	731	97	7.3	116	.00	26
17	.00	14	216	201	577	206	539	80	6.6	74	.00	14
18	.00	25	190	188	455	186	419	65	6.3	47	.00	8.8
19	.00	8.3	177	175	356	175	343	53	5.5	33	.00	6.6
20	.00	.37	186	2380	308	175	291	51	4.8	57	.00	3.7
21	.00	.00	1370	4560	535	157	255	96	4.3	53	.00	163
22	.00	.00	822	2250	603	142	228	103	3.9	49	27	258
23	.00	3.3	492	1300	757	228	223	120	5.5	34	7.0	113
24	.00	88	412	1760	800	762	206	252	6.6	26	3.3	69
25	.00	34	395	1250	4230	594	188	201	7.0	24	1.9	44
26	.00	9.7	316	850	2580	437	181	173	5.0	266	822	29
27	.00	14	258	687	1280	385	183	142	3.5	128	462	55
28	.00	13	223	682	926	405	149	119	2.1	87	137	3380
29	.00	7.6	206	531	---	356	125	90	1.6	65	104	1270
30	.00	7.7	223	440	---	305	111	70	375	39	3040	523
31	.00	---	644	385	---	263	---	127	---	42	527	---
TOTAL	.00	229.47	29801.1	39416	16206	13310	30464	13318	1739.5	3153.8	5202.91	7110.3
MEAN	.000	7.65	961	1271	650	429	1015	430	58.0	102	168	237
MAX	.00	88	8450	4560	4230	1250	4740	5550	375	381	3040	3380
MIN	.00	.00	6.8	175	149	142	111	51	1.6	5.8	.00	3.5
CFSM	.000	.04	4.58	6.05	3.10	2.04	4.83	2.05	.28	.49	.80	1.13
IN.	.00	.04	5.28	6.98	3.23	2.36	5.40	2.36	.31	.56	.92	1.26

CAL YR 1978	TOTAL	90572.69	MEAN	248	MAX	8450	MIN	.00	CFSM	1.18	IN	16.04
WTR YR 1979	TOTAL	161951.08	MEAN	444	MAX	8450	MIN	.00	CFSM	2.11	IN	28.69

CUMBERLAND RIVER BASIN

03421000 COLLINS RIVER NEAR MCMINNVILLE, TN

LOCATION.--Lat 35°42'32", long 85°43'46", Warren County, Hydrologic Unit 05130107, on left bank at downstream side of bridge on U. S. Highway 70S, 1.8 mi (2.9 km) downstream from Barren Fork River, 2.5 mi (4.0 km) north-east of McMinnville, and at mile 19.5 (31.4 km).

DRAINAGE AREA.--640 mi² (1,658 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1924 to current year. Prior to April 1925 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 873: 1929, 1932(M), 1934-35, 1936(M), 1937. WSP 1276: 1925-26, 1928(M), 1933, 1936, 1940. WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 825.78 ft (251.698 m) Sandy Hook datum. Prior to Oct. 16, 1926, nonrecording gage on upstream side of bridge at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.-- 55 years, 1,175 ft³/s (33.28 m³/s), 24.93 in/yr (633 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,300 ft³/s (2,130 m³/s) Mar. 23, 1929, gage height, 39.1 ft (11.92 m) from rating curve extended above 42,000 ft³/s (1,190 m³/s) on basis of slope-area measurement of peak flow; minimum, 35 ft³/s (0.991 m³/s) Sept. 21, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1854 is believed to have been about equal to that of Mar. 23, 1929, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 11,000 ft³/s (311 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	0900	15400 436	15.57 5.355	Feb. 25	2100	13500 382	16.15 4.922
Jan. 7	2400	12000 340	14.94 4.560	Mar. 4	1930	*15600 442	17.67 5.386
Jan. 21	2130	12600 357	15.44 4.706	Sept. 28	2100	11400 323	14.58 4.444

Minimum discharge, 89 ft³/s (2.52 m³/s) Oct. 24, gage height, 1.22 ft (0.372 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	92	307	6160	1270	2740	1080	765	3230	179	508	627
2	127	90	300	13100	1120	2250	2960	704	2370	172	450	487
3	114	90	283	6360	1040	1940	6230	722	2010	167	517	433
4	116	90	884	3370	1080	10300	5700	1940	2310	162	487	623
5	110	90	1230	2340	1040	9120	4150	2060	1700	184	517	535
6	104	92	889	1960	990	4520	2930	1490	1240	172	466	437
7	103	101	685	7190	1250	3100	2230	1220	995	174	386	367
8	101	104	649	8460	1430	2400	1830	1020	848	189	317	303
9	101	103	5460	4290	1370	1920	1910	879	699	194	260	250
10	99	97	3830	2870	1260	2000	1700	779	658	197	234	208
11	97	95	2000	2110	1170	2720	1400	704	614	205	241	179
12	97	94	1340	1720	1210	2150	3350	632	500	200	263	162
13	101	92	1040	1530	1580	1840	9370	575	418	222	234	162
14	106	92	858	1380	1660	1700	7610	539	364	244	244	345
15	108	92	727	1170	1910	1660	4820	504	327	231	210	517
16	103	143	654	1010	2440	1450	3220	458	300	216	192	458
17	99	283	640	947	2170	1300	2390	418	279	192	179	345
18	95	279	632	979	1760	1200	1890	386	260	174	169	279
19	95	231	618	968	1510	1140	1570	364	244	197	162	237
20	95	164	605	2960	1340	1170	1360	349	228	957	155	211
21	95	136	1640	10300	2100	1110	1200	398	219	1450	152	211
22	94	125	1920	8910	3400	1020	1070	441	219	1020	167	208
23	94	138	1480	4820	2960	1260	984	864	208	784	189	250
24	90	164	1170	4570	2970	3410	915	3920	205	593	182	260
25	90	167	1030	3720	9170	3490	864	3340	211	575	197	228
26	90	150	899	2830	7590	2570	828	2050	197	1830	375	200
27	92	194	770	2380	4430	1970	920	1390	189	1780	1820	593
28	92	253	681	2180	3350	1650	1050	1160	182	1180	946	8580
29	92	244	614	1800	---	1440	941	1420	179	823	1500	8110
30	92	256	654	1550	---	1260	843	1540	182	636	1030	3870
31	92	---	1960	1420	---	1150	---	1890	---	588	875	---
TOTAL	3113	4341	36489	115354	64570	76950	77315	34921	21585	15887	13624	29675
MEAN	100	145	1177	3721	2306	2482	2577	1126	720	512	439	989
MAX	129	283	5460	13100	9170	10300	9370	3920	3230	1830	1820	8580
MIN	90	90	283	947	990	1020	828	349	179	162	152	162
CFSM	.16	.23	1.84	5.81	3.60	3.88	4.03	1.76	1.13	.80	.69	1.55
IN.	.18	.25	2.12	6.70	3.75	4.47	4.49	2.03	1.25	.92	.79	1.72

CAL YR 1978 TOTAL 333640 MFAN 914 MAX 7560 MIN 90 CFSM 1.43 IN 19.39
WTR YR 1979 TOTAL 493824 MEAN 1353 MAX 13100 MIN 90 CFSM 2.11 IN 28.70

CUMBERLAND RIVER BASIN

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03421000 COLLINS RIVER NEAR MCMINNIVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May to September 1979.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY 23...	1245	818	190	8.1	19.0	--	--	--	--	--
JUN 12...	1245	488	180	8.0	19.5	--	--	--	--	--
JUL 06...	1215	171	225	8.1	24.0	--	--	--	--	--
AUG 14...	1215	234	220	8.1	23.0	--	--	--	--	--
SEP 05...	1130	534	158	7.9	22.5	75	20	23	4.3	2.7

DATE	SODIUM PERCENT	SODIUM AN- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
MAY 23...	--	--	--	106	9.9	--	--	--	109	--
JUN 12...	--	--	--	74	12	--	--	--	112	--
JUL 06...	--	--	--	100	12	--	--	--	146	--
AUG 14...	--	--	--	91	15	--	--	--	--	--
SEP 05...	7	.1	.9	61	17	2.8	.0	5.2	106	89

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	.15	241	400	30	50	20	14	31	71
JUN 12...	.15	148	680	0	50	20	16	21	86
JUL 06...	.20	67.4	210	30	40	10	8	3.7	--
AUG 14...	--	--	200	30	30	50	3	1.9	--
SEP 05...	.14	153	290	20	50	20	10	14	--

CUMBERLAND RIVER BASIN

03421000 COLLINS RIVER NEAR MCMINNVILLE, TN--Continued

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
SFP 05...	.66	.030	3	0	0	1	<10	<10	20	<10	4	<10
DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PR)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CYANIDE TOTAL (MG/L AS CN)
SFP 05...	8600	2	20	690	<.5	.00	0	0	0	30	30	.00

03422500 CANEY FORK NEAR ROCK ISLAND, TN

LOCATION.--Lat 35°48'26", long 85°37'44", White County, Hydrologic Unit 05130108, on right bank 180 ft (50 m) downstream from powerhouse of Tennessee Valley Authority, 0.8 mi (1.3 km) downstream from Great Falls Dam, 0.9 mi (1.4 km) downstream from Collins River, 1.5 mi (2.4 km) northwest of Rock Island, and at mile 90.3 (145.3 km).

DRAINAGE AREA.--1,678 mi² (4,346 km²).

PERIOD OF RECORD.--November 1911 to April 1913, July 1913 to May 1914, August 1914 to current year. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 1276: 1934, 1937. WSP 1910: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 647.09 ft (197.233 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 30, 1924, at sites from 80 ft (24 m) to 0.5 mi (0.8 km) upstream at different datums. Apr. 12, 1925, to Sept. 9, 1930, at present site at datum 5.00 ft (1.524 m) higher and Sept. 10, 1930, to Sept. 18, 1964, 3.00 ft (0.914 m) higher.

REMARKS.--Records good. Flow regulated since Dec. 8, 1916, by Great Falls Lake (station 03422000). Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--65 years (1915-79), 3,212 ft³/s (90.96 m³/s), 25.99 in/yr (660 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft³/s (5,950 m³/s) Mar. 23, 1929, gage height, 43.6 ft (13.29 m), present datum, from floodmark, from rating curve extended above 110,000 ft³/s (3,120 m³/s); minimum daily, 25 ft³/s (0.71 m³/s) several days in August to October 1951.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1902 reached a stage about 10 ft (3.0 m) lower than the flood of Mar. 23, 1929, at a point 8 mi (13 km) downstream, from profile by Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,100 ft³/s (1,140 m³/s) Jan. 1, gage height, 21.55 ft (6.568 m); minimum, 34 ft³/s (0.96 m³/s) Oct. 6, gage height, 2.08 ft (0.634 m); minimum daily, 36 ft³/s (1.02 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	51	242	1220	17900	3260	6270	3150	3040	4160	46	1820	820		
2	589	246	1060	32100	3150	5450	5160	3020	3980	328	2200	834		
3	655	44	44	13600	3140	5020	17200	2990	5120	306	1910	849		
4	36	44	2260	7710	3140	23800	15500	2990	5190	47	700	1040		
5	986	43	3020	5670	3120	19200	10700	3080	4100	310	739	568		
6	996	44	3050	4690	3110	9870	7210	3130	3460	312	703	821		
7	50	45	3040	22900	3100	6930	5110	3150	3190	49	807	835		
8	48	281	3010	21000	3100	5080	4750	3150	3160	1360	886	960		
9	596	442	8180	10300	3110	4380	6120	3140	3150	2470	838	57		
10	602	307	9910	7360	3100	4550	5660	3120	3130	1240	602	602		
11	473	43	5470	4820	3090	6100	4780	3110	3120	1450	59	407		
12	881	43	3590	4280	3070	4990	10800	3090	3040	2450	58	1150		
13	48	220	3070	3770	3080	4350	25000	3060	2640	1650	636	2570		
14	48	43	2990	3400	3070	3910	18500	2720	1600	48	587	945		
15	47	45	3080	3200	3070	4040	11900	2640	2190	49	429	53		
16	573	46	3080	2820	3100	3680	7300	2380	1240	550	545	53		
17	582	43	3080	3160	4470	3390	5670	2180	673	1020	595	927		
18	1670	43	3050	3140	4630	3220	4360	1950	1240	882	58	868		
19	1230	55	3020	3090	3890	3180	3640	44	1260	889	58	906		
20	44	1570	2980	7770	3460	3170	3410	44	1020	519	434	1260		
21	44	876	3040	31700	4760	3170	3220	1140	998	1680	390	1270		
22	44	945	3080	19600	8730	3160	3180	1870	415	9300	339	1240		
23	168	43	3110	11800	6610	3140	3170	1840	48	4650	325	1350		
24	293	42	3090	10900	6780	7910	3160	3070	46	3190	323	928		
25	299	1110	3110	8980	21300	8350	3140	7840	676	3150	59	914		
26	179	1460	3120	6530	20000	6280	3130	4940	481	5340	61	850		
27	232	537	3130	5620	10800	4730	3110	3880	467	5720	2160	1170		
28	42	860	3120	5330	8260	4110	3100	3430	463	3990	2860	7040		
29	42	645	3100	4020	---	3700	3080	3240	460	3310	1520	14300		
30	162	874	3070	3680	---	3400	3070	3160	63	3140	2300	7120		
31	232	---	3060	3500	---	3190	---	3150	---	3110	1050	---		
TOTAL	11942	11281	102234	294340	153500	181720	207280	89588	60780	62555	26051	52707		
MEAN	385	376	3298	9495	5482	5862	6909	2890	2026	2018	840	1757		
MAX	1670	1570	9910	32100	21300	23800	25000	7840	5190	9300	2860	14300		
MIN	36	42	44	2820	3070	3140	3070	44	46	46	58	53		
(†)	-6800	+1000	+12300	+2900	+100	-600	-9100	+9000	-12600	+10100	-2100	+3600		
MEAN‡	166	409	3695	9588	5486	5843	6606	3180	1606	2344	773	1877		
CFSM‡	.10	.24	2.20	5.71	3.27	3.48	3.94	1.90	.96	1.40	.46	1.12		
IN.‡	.11	.27	2.54	6.59	3.40	4.01	4.39	2.19	1.07	1.61	.53	1.25		
CAL YR 1978 TOTAL	886068		MEAN	2428	MAX	27300	MIN	36	MEAN‡	2420	CFSM‡	1.44	IN.‡	19.58
WTR YR 1979 TOTAL	1253978		MEAN	3436	MAX	32100	MIN	36	MEAN‡	3457	CFSM‡	2.06	IN.‡	27.97

† Change in contents, in cfs-days, in Great Falls Lake.

‡ Adjusted for change in contents.

CUMBERLAND RIVER BASIN

03425000 CUMBERLAND RIVER AT CARTHAGE, TN
(National stream-quality accounting network station)

LOCATION.--Lat 36°14'53", long 85°57'19", Smith County, Hydrologic Unit 05130201, on left bank of Cordell Hull Bridge on State Highway 25, at Carthage, 1.0 mi (1.6 km) downstream from Caney Fork River, and at mile 308.2 (495.9 km).

DRAINAGE AREA.--10,690 mi² (27,687 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1922 to current year. Gage-height records collected in this vicinity since 1885 are in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 893: 1923-39. WSP 1276: 1927, 1929(M), 1937(M). WSP 1306: 1943 (monthly runoff). WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 437.53 ft (133.359 m) National Geodetic Vertical Datum of 1929. Prior to May 12, 1936, nonrecording gage at site 1,000 ft (305 m) downstream at same datum. May 12 to July 17, 1936, nonrecording gage at present site and datum. Since Oct. 1, 1957, auxiliary water-stage recorder 15.8 mi (25.4 km) downstream from base gage at same datum.

REMARKS.--Records good. Flow regulated by five upstream lakes or reservoirs, (see p.126).

AVERAGE DISCHARGE.--57 years, 17,640 ft³/s (500.0 m³/s), 22.40 in/yr (569 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft³/s (5,950 m³/s) Dec. 30, 1926; maximum gage height, 59.8 ft (18.23 m) Dec. 30, 1926; minimum daily discharge, 366 ft³/s (10.4 m³/s) Oct. 29, 1940; minimum gage height since filling of Old Hickory Lake on Dec. 30, 1956, 4.3 ft (1.31 m) Oct. 28, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, that of Dec. 30, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 79,100 ft³/s (2,240 m³/s) Dec. 9; maximum gage height, 35.47 ft (10.811 m) Dec. 9; minimum daily, 1,420 ft³/s (40.2 m³/s), Dec. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2600	4700	6530	58400	40100	50800	23400	15000	21100	4370	18700	24300
2	4670	5880	1420	66100	39400	50100	61900	13800	15300	6160	20100	10700
3	5960	6300	7410	53100	36900	50400	66700	13400	8600	12600	18900	5240
4	5080	2180	40600	53800	29800	56600	58800	59400	11700	11400	17300	12200
5	5960	3070	27900	53500	31500	54800	54200	48600	17800	11600	7780	15900
6	5340	6160	11500	48000	37100	52400	53100	32800	18100	11600	6170	22200
7	5430	6350	13300	62300	37300	49500	51000	22100	17700	11900	17600	22200
8	3470	6850	34000	65400	31800	51000	50700	24000	17500	17200	20200	21900
9	4740	7200	79100	54000	28000	51700	54700	23700	18100	16500	20900	10600
10	10800	7320	57700	52100	34600	48400	51200	24400	15100	16900	21100	8510
11	6120	2120	32000	47800	34000	44500	52200	29200	15400	16300	20000	16000
12	5730	2270	29400	50800	23900	47400	61800	24700	20500	15000	11300	16600
13	5620	3820	28900	47000	16100	50600	63900	12600	17300	15300	10000	23000
14	4960	3070	31000	38500	24800	46500	53600	8500	17200	18800	18000	34000
15	2470	1490	40600	38100	23900	39100	49300	15900	18300	12500	17900	18300
16	4730	4710	37700	38800	25600	49100	36300	20500	15200	10700	17800	12400
17	6690	3480	31600	38900	28900	30700	31200	17700	11600	15400	16100	11800
18	17400	6390	34600	37800	32400	28400	31800	13000	14300	17100	17200	17500
19	10400	3600	36100	32600	21600	21800	31800	13800	18700	14200	15800	18500
20	6720	1670	34200	54100	25900	27500	38200	7350	18800	11400	19000	18600
21	4660	3880	38800	74100	19100	25800	44000	5400	19800	12200	15200	27800
22	3950	3310	39000	61800	21000	22600	44700	12800	7740	5030	18400	45800
23	4390	4000	36300	54400	17800	18500	48800	17000	22000	4940	18100	20600
24	5140	4500	26300	57800	15400	28400	43900	21700	6760	13200	16400	14600
25	5570	2860	22200	57700	33600	22000	45100	15900	4480	16400	15300	20500
26	6640	5340	22000	54600	40300	17200	35600	9140	8500	17900	17800	18400
27	3440	6830	33700	52600	48200	16100	34000	9300	11200	18500	15500	19200
28	2810	6460	32700	52500	50600	16200	22100	5460	17300	19300	20300	47300
29	2050	7480	39700	51800	---	17600	9770	11700	11500	15300	22000	39900
30	3800	7100	35100	49600	---	20000	14700	16500	9100	16900	21600	23100
31	3860	---	40300	47900	---	20900	---	19200	---	18200	22900	---
TOTAL	171200	140390	981660	1605900	849600	1126600	1318470	584550	446680	424800	535350	617650
MEAN	5523	4680	31670	51800	30340	36340	43950	18860	14890	13700	17270	20590
MAX	17400	7480	79100	74100	50600	56600	66700	59400	22000	19300	22900	47300
MIN	2050	1490	1420	32600	15400	16100	9770	5400	4480	4370	6170	5240

CAL YR 1978 TOTAL 6550230 MEAN 17950 MAX 79100 MIN 1420 MEAN‡ 17938 CFSM‡ 1.68 IN.‡ 22.78
WTR YR 1979 TOTAL 8802850 MEAN 24120 MAX 79100 MIN 1420 MEAN‡ 25895 CFSM‡ 2.42 IN.‡ 32.88

‡ Adjusted for change in contents in Lake Cumberland, Dale Hollow Lake, Cordell Hull Reservoir, Great Falls and Center Hill Lakes.

NOTE.--No gage-height record Oct. 1 to Nov. 6.

CUMBERLAND RIVER BASIN

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03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to current year.

WATER TEMPERATURE: October 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1975.

REMARKS.--Interruptions in the record were due to water levels falling below the instrument probes and recorder failure.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 311 micromhos/cm Sept. 30, 1979; minimum, 125 micromhos/cm Jan. 29, Feb. 25, 1978.

WATER TEMPERATURES: Maximum daily, 29.5°C Oct. 10, 1977; minimum, 3.5°C Feb. 24, 1978, Feb. 11, 12, 1979.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TUOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HAKU- NESS, (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT												
17...	1030	8400	--	6.8	16.0	4.0	9.2	--	--	76	17	22
NOV												
20...	1000	1380	170	7.3	15.0	5.0	9.0	K2	K11	80	30	23
DEC												
22...	1145	42200	180	--	10.5	15	6.9	--	--	76	28	21
JAN												
18...	0930	40400	185	7.3	8.0	15	10.6	K22	110	75	23	22
FEB												
22...	1015	24200	165	7.2	5.0	20	11.2	K33	62	72	19	22
MAR												
28...	1030	18700	150	--	10.0	20	9.8	K36	K28	66	25	19
APR												
20...	1100	44900	160	7.4	11.0	15	9.6	45	K13	67	17	20
MAY												
31...	1045	18500	170	7.8	15.5	15	8.9	92	190	71	23	21
JUL												
17...	1215	18700	180	7.5	17.5	15	8.3	64	K12	66	16	19
AUG												
02...	1000	16500	155	7.4	18.0	7.0	8.2	36	68	68	14	20
22...	1130	20200	150	7.4	18.0	7.0	8.4	--	98	63	23	18
SEP												
26...	1030	17300	150	7.2	17.0	35	6.9	--	130	67	19	20

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
OCT												
17...	5.0	3.4	9	.2	1.4	59	25	3.0	.1	3.7	99	99
NOV												
20...	5.4	4.7	11	.2	1.6	50	28	4.1	.1	3.2	97	100
DEC												
22...	5.7	4.3	11	.2	1.6	48	26	2.8	.1	4.0	104	94
JAN												
18...	4.8	3.5	9	.2	1.7	52	25	3.1	.1	4.0	100	96
FEB												
22...	4.2	2.7	7	.1	1.3	53	21	2.6	.0	4.3	93	90
MAR												
28...	4.5	2.9	9	.2	1.2	41	25	3.0	.0	4.5	93	85
APR												
20...	4.2	2.4	7	.1	1.6	50	20	2.4	.1	4.6	98	85
MAY												
31...	4.4	2.8	8	.1	1.3	48	22	3.5	--	4.4	--	88
JUL												
17...	4.6	3.4	10	.2	1.3	50	24	2.7	.1	4.6	113	90
AUG												
02...	4.5	2.9	8	.2	1.2	54	22	3.0	.1	4.3	107	90
22...	4.4	3.1	9	.2	1.2	40	26	2.9	.1	4.4	97	84
SEP												
26...	4.1	2.8	8	.2	1.4	48	18	2.3	.1	4.9	89	84

K--Results based on colony count outside acceptable range (non-ideal colony count)

CUMBERLAND RIVER BASIN

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 17...	.13	2250	.29	--	.04	--	--	.78	--	.020	.010	--
NOV 20...	.13	361	.26	--	.04	.25	.29	.13	.55	.010	.000	1.4
DEC 22...	.14	11900	.37	--	.02	.18	.20	.16	.57	.020	.010	1.7
JAN 18...	.14	10900	.42	--	.01	--	--	.36	--	.030	.010	--
FEB 22...	.13	6080	.47	--	.00	--	--	.40	--	.050	.020	1.8
MAR 28...	.13	4700	.45	--	.01	.26	.27	.18	.72	.050	.050	2.0
APR 20...	.13	11900	.47	--	.00	.16	.16	.16	.63	.030	.040	--
MAY 31...	.12	4400	.39	--	.03	--	--	.56	--	.060	.010	--
JUL 17...	.15	5710	.35	--	.01	.23	.24	.22	.59	.080	.010	--
AUG 02...	.15	4770	.36	--	.05	.34	.39	.18	.75	.030	.010	2.0
22...	.13	5290	.32	--	.03	.14	.17	.05	.49	.030	.000	5.4
SEP 26...	.12	4160	.37	.34	.02	.54	.56	.36	.93	.100	.050	4.4

DATE	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	SEDI- MENT, DIS- SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 17...	1.8	.6	--	--	--	--	--	--	32	726	36
NOV 20...	--	--	2800	--	--	--	--	--	8	30	81
DEC 22...	--	--	--	--	--	--	--	--	20	2280	92
JAN 18...	2.5	.3	--	--	--	--	--	--	11	1200	90
FEB 22...	--	--	--	--	.080	.080	.070	.000	13	849	92
MAR 28...	--	--	670	--	--	--	--	--	11	555	96
APR 20...	--	--	130	--	--	--	--	--	80	9700	23
MAY 31...	2.7	.1	--	--	--	--	--	--	27	1350	71
JUL 17...	4.7	.2	2400	--	--	--	--	--	31	1570	59
AUG 02...	--	--	1100	170	.950	1.10	.880	.000	17	757	80
22...	--	--	850	--	--	--	--	--	25	1360	72
SEP 26...	--	--	1300	--	--	--	--	--	32	1500	99

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
OCT 17...	1	1	0	0	2	1	<10	0	2
JAN 18...	5	1	100	100	0	0	10	0	0
MAY 31...	0	0	--	20	--	2	--	10	--
JUL 17...	1	0	--	30	--	3	20	20	1

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 17...	1	5	2	170	50	31	8	50	20
JAN 18...	0	5	1	350	10	6	1	40	20
MAY 31...	0	--	5	--	10	--	1	--	7
JUL 17...	0	2	1	800	30	2	2	90	20

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 17...	<.5	<.5	0	0	0	0	10	10
JAN 18...	.5	.5	0	0	0	0	20	20
MAY 31...	<.5	<.5	0	0	0	0	--	10
JUL 17...	<.5	<.5	0	0	1	0	--	20

CUMBERLAND RIVER BASIN

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 20,78 1000	MAR 28,79 1030	APR 20,79 1100	JUL 17,79 1215				
TOTAL CELLS/ML	2800	670	130	2400				
DIVERSITY: DIVISION	1.5	0.8	0.5	1.3				
...CLASS	1.6	0.8	0.5	1.3				
...ORDER	2.0	1.1	0.5	1.6				
...FAMILY	2.2	1.1	0.5	1.8				
...GENUS	3.0	1.1	0.5	1.9				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...COELASTRACEAE								
...COELASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
...MICRACTINIUM	120	4	--	-	--	-	--	-
...OOCYSTACEAE								
...ANKISTRODESMUS	120	4	--	-	--	-	33	1
...CHODATELLA	120	4	--	-	--	-	--	-
...DICTYOSPHAERIUM	250	9	--	-	--	-	--	-
...GLOEOACTINIUM	200	7	--	-	--	-	--	-
...KIRCHNERIELLA	14	1	--	-	--	-	--	-
...OOCYSTIS	--	-	--	-	15	11	--	-
...TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
...ACTINASTRUM	--	-	--	-	--	-	160	7
...CRUCIGENIA	--	-	--	-	--	-	--	-
...SCENEDESMUS	--	-	25	4	--	-	170	7
...TETRASPORALES								
...COCCOMYXACEAE								
...ELAKATOTHRIX	--	-	--	-	--	-	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE								
...CHLAMYDOMONAS	--	-	63	9	--	-	83	3
...VOLVOCAEAE								
...PANDORINA	--	-	--	-	--	-	270	11
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCAEAE								
...CYCLOTELLA	290	10	540#	81	120#	89	1500#	62
...MELOSIRA	850#	31	--	-	--	-	--	-
...STEPHANODISCUS	--	-	--	-	--	-	--	-
...PENNALES								
...FRAGILARIACEAE								
...ASTERIONELLA	120	4	--	-	--	-	--	-
...FRAGILARIA	--	-	--	-	--	-	--	-
...SYNEDRA	--	-	6	1	--	-	--	-
...GOMPHONEMATAEAE								
...GOMPHONEMA	--	-	--	-	--	-	--	-
...NITZSCHIAEAE								
...NITZSCHIA	--	-	13	2	--	-	--	-
..CHRYSOPHYCEAE								
...CHRYSOMONADALES								
...MALLOMONADACEAE								
...MALLOMONAS	14	1	--	-	--	-	--	-
...OCHROMONADACEAE								
...OCHROMONAS	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
...ANACYSTIS	430#	16	--	-	--	-	--	-
...HORMOGONALES								
...OSCILLATORIAEAE								
...OSCILLATORIA	250	9	--	-	--	-	--	-
...SCHIZOTHRIX	--	-	--	-	--	-	200	8
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
...EUGLENA	--	-	6	1	--	-	--	-
...TRACHELOMONAS	--	-	6	1	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...PERIDINIALES								
...GLENODINIACEAE								
...GLENODINIUM	--	-	6	1	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CUMBERLAND RIVER BASIN

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03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	AUG 2,79 1000	AUG 22,79 1130	SEP 26,79 1030
TOTAL CELLS/ML	1100	850	1300
DIVERSITY: DIVISION	1.4	1.0	1.4
..CLASS	1.4	1.1	1.4
...ORDER	1.7	1.7	1.5
...FAMILY	1.8	2.8	2.3
....GENUS	2.3	3.2	2.5

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...COELASTRACEAE						
....COELASTRUM	--	-	100	12	460#	36
...MICHACTINIACEAE						
....MICHACTINIUM	--	-	52	6	--	-
...OOCYSTACEAE						
....ANKISTRODESMSUS	26	2	39	5	72	6
....CHODATELLA	13	1	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-
....GLOEOACTINIUM	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	29	2
....OOCYSTIS	--	-	--	-	--	-
....TREUBARIA	26	2	--	-	14	1
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	--	-	--	-
....CRUCIGENIA	100	10	--	-	43	3
....SCENEDESMUS	26	2	230#	27	86	7
..TETRASPORALES						
...CUCCOMYXACEAE						
....ELAKATOTHRIX	--	-	26	3	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	39	4	--	-	14	1
...VOLVOCAEEAE						
....PANDORINA	--	-	--	-	--	-
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	39	4	77	9	--	-
....MELOSIRA	91	9	120	14	330#	26
....STEPHANODISCUS	78	7	--	-	--	-
..PENNALES						
...FRAGILARIACEAE						
....ASTERIONELLA	--	-	77	9	--	-
....FRAGILARIA	--	-	26	3	--	-
....SYNEDRA	--	-	13	2	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	13	2	--	-
...NITZSCHIA						
....NITZSCHIA	26	2	64	8	14	1
..CHRYSTOPHYCEAE						
...CHRYSOMONADALES						
...MALLOMONADACEAE						
....MALLOMONAS	--	-	--	-	--	-
...OCHROMONADACEAE						
....OCHROMONAS	--	-	13	2	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	--	-	--	-	200#	16
...HORMOGONALES						
...OSCILLATORIACEAE						
....OSCILLATORIA	600#	56	--	-	--	-
....SCHIZOTHRIX	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CUMBERLAND RIVER BASIN

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1							---	---	---	233	202	213
2							---	---	---	227	193	206
3							---	---	---	197	178	187
4							---	---	---	178	171	173
5							---	---	---	175	172	174
6							---	---	---			
7							---	---	---	179	172	174
8							---	---	---	201	182	192
9							---	---	---	209	190	198
10							---	---	---	191	183	186
							---	---	---	183	179	180
11							---	---	---			
12							---	---	---	180	178	179
13							---	---	---	181	178	179
14							---	---	---	180	177	178
15							---	---	---	182	176	179
							---	---	---	182	175	178
16							---	---	---			
17							---	---	---	179	176	177
18							---	---	---	179	177	178
19							---	---	---	181	177	179
20							---	---	---	183	177	179
							---	---	---	184	171	177
21							---	---	---			
22							---	---	---	190	181	186
23							---	---	---	191	186	189
24							191	184	188	189	178	183
25							267	184	205	195	178	190
							238	179	199	190	180	184
26												
27							265	179	211	183	177	179
28							198	170	181	177	173	175
29							201	166	185	174	170	172
30							190	163	173	172	166	170
31							194	171	183	168	163	166
							219	176	195	169	162	166
MONTH							---	---	---	233	162	181
	FEBRUARY			MARCH			APRIL			MAY		
1	169	161	164	157	153	155	194	154	169	166	146	154
2	171	159	163	154	151	152	202	168	185	---	---	---
3	169	157	163	---	---	---	196	188	191	---	---	---
4	170	159	164	---	---	---	189	183	185	170	140	155
5	164	156	159	167	162	164	184	174	177	230	171	204
6	160	153	156	163	160	161	174	169	171	188	175	180
7	162	153	156	162	158	159	169	164	166	250	159	189
8	177	150	158	160	157	158	165	161	163	201	166	175
9	157	151	153	159	156	157	180	162	171	191	168	174
10	157	146	151	162	157	159	176	170	172	192	167	175
11	164	146	151	166	162	163	171	169	169	182	167	175
12	194	149	161	163	158	159	174	141	160	182	154	174
13	190	153	167	158	157	157	195	167	183	197	175	179
14	191	152	166	158	155	156	235	170	197	---	---	---
15	254	154	193	156	153	154	191	169	174	---	---	---
16	233	156	178	155	151	152	184	162	171	171	151	161
17	172	151	161	162	151	155	175	157	167	168	147	158
18	165	148	154	176	154	161	191	154	166	---	---	---
19	192	157	169	177	152	160	181	151	163	---	---	---
20	179	142	154	197	156	165	162	151	156	---	---	---
21	225	148	169	198	157	166	156	152	154	---	---	---
22	244	153	187	204	152	166	153	150	152	---	---	---
23	227	169	197	217	158	171	153	150	152	---	---	---
24	---	---	---	188	169	179	154	148	150	239	198	223
25	---	---	---	217	172	192	151	147	150	241	166	197
26	198	170	185	236	162	187	153	146	150	---	---	---
27	170	161	166	207	160	175	159	147	150	---	---	---
28	163	156	159	---	---	---	177	146	157	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	199	151	167	---	---	---	178	148	160
31	---	---	---	177	151	160	---	---	---	169	145	155
MONTH	254	142	166	236	151	163	235	141	167	---	---	---

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SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

[illegible]

CUMBERLAND RIVER BASIN

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1							---	---	---	12.0	10.5	11.0
2							---	---	---	11.0	9.5	10.0
3							---	---	---	10.0	9.5	9.5
4							---	---	---	10.0	9.5	9.5
5							---	---	---	10.0	9.5	9.5
6							---	---	---	10.0	9.5	10.0
7							---	---	---	10.0	9.0	9.5
8							---	---	---	9.5	8.5	9.0
9							---	---	---	9.5	9.0	9.0
10							---	---	---	9.5	8.5	9.0
11							---	---	---	9.5	8.5	9.0
12							---	---	---	9.5	8.5	9.0
13							---	---	---	10.0	9.5	9.5
14							---	---	---	10.0	8.5	9.5
15							---	---	---	9.5	8.5	9.0
16							---	---	---	9.5	9.0	9.5
17							---	---	---	10.0	9.5	9.5
18							---	---	---	10.0	9.0	9.5
19							---	---	---	9.5	9.5	9.5
20							---	---	---	9.5	9.0	9.0
21							---	---	---	10.0	8.5	9.0
22							---	---	---	9.0	8.5	8.5
23							10.0	10.0	10.0	9.0	8.0	8.5
24							9.5	8.5	9.5	8.5	7.5	8.0
25							9.5	9.0	9.0	7.5	7.5	7.5
26							9.5	8.5	9.0	7.5	7.0	7.5
27							10.0	9.0	9.5	7.5	7.0	7.5
28							10.0	8.5	9.0	7.5	7.0	7.0
29							10.5	9.0	10.0	7.0	6.5	7.0
30							10.5	9.5	10.0	7.5	6.5	7.0
31							10.5	10.0	10.0	7.0	6.5	6.5
MONTH							---	---	---	12.0	6.5	9.0
	FEBRUARY			MARCH			APRIL			MAY		
1	7.0	6.0	6.5	6.0	5.5	6.0	11.5	9.5	10.0	---	---	---
2	6.5	5.5	6.0	6.0	5.5	5.5	12.5	10.0	11.5	---	---	---
3	6.5	5.5	6.0	6.5	5.5	6.0	12.0	11.0	11.0	---	---	---
4	6.5	6.0	6.5	9.0	6.0	8.0	11.5	11.0	11.0	16.5	13.5	15.5
5	6.0	5.5	6.0	8.0	6.5	7.0	11.5	10.5	11.0	16.0	13.5	14.5
6	6.0	5.5	5.5	7.0	6.5	6.5	10.5	10.0	10.0	14.5	13.0	13.5
7	5.5	5.0	5.5	6.5	6.0	6.5	10.0	9.0	10.0	17.0	14.0	15.0
8	5.5	4.0	5.0	6.5	6.0	6.5	10.0	10.0	10.0	15.5	14.0	14.5
9	5.5	4.5	5.0	6.5	6.0	6.5	10.0	9.5	10.0	15.0	14.0	14.5
10	5.5	4.0	4.5	6.5	6.0	6.5	9.5	9.0	9.0	15.5	14.5	15.0
11	4.5	3.5	4.0	6.5	6.0	6.0	11.0	9.5	10.0	16.5	14.5	15.5
12	5.0	3.5	4.5	6.5	6.0	6.5	12.5	11.0	11.5	16.5	13.0	15.5
13	5.5	5.0	5.0	6.5	6.0	6.0	12.5	11.5	12.0	16.0	14.5	15.0
14	6.0	4.0	5.0	7.0	6.5	6.5	13.5	12.0	12.5	---	---	---
15	8.5	4.5	6.0	7.0	6.0	6.5	12.0	11.5	12.0	---	---	---
16	7.5	4.5	6.0	7.0	5.5	6.0	11.5	10.5	11.0	16.0	13.0	14.0
17	5.0	4.0	4.5	7.5	6.0	7.0	11.5	10.5	11.0	15.5	12.0	14.0
18	4.5	4.0	4.0	8.0	6.5	7.0	12.5	10.5	11.5	---	---	---
19	4.5	3.5	4.0	8.5	7.0	7.5	12.5	10.5	11.5	---	---	---
20	4.5	4.0	4.0	10.0	7.0	8.0	12.0	11.0	11.5	---	---	---
21	7.0	4.0	5.5	10.0	7.5	8.5	12.0	11.0	11.5	---	---	---
22	7.5	4.0	5.5	10.5	8.0	8.5	11.5	11.0	11.5	---	---	---
23	9.0	5.0	7.0	11.5	8.5	9.5	11.5	11.0	11.0	---	---	---
24	---	---	---	10.0	9.0	9.5	11.5	11.0	11.0	---	---	---
25	---	---	---	9.0	7.5	8.0	11.5	11.0	11.0	15.0	12.5	14.0
26	8.5	6.0	6.5	8.5	8.0	8.0	11.5	11.0	11.0	---	---	---
27	6.0	5.5	6.0	8.5	8.0	8.0	11.5	11.0	11.0	---	---	---
28	6.0	5.5	6.0	10.0	8.5	9.0	13.0	11.0	11.5	---	---	---
29	---	---	---	11.0	9.0	9.5	---	---	---	---	---	---
30	---	---	---	11.0	9.0	9.5	---	---	---	15.5	12.5	14.5
31	---	---	---	10.0	9.0	9.5	---	---	---	16.0	13.0	14.0
MONTH	9.0	3.5	5.5	11.5	5.5	7.5	13.5	9.0	11.0	---	---	---

CUMBERLAND RIVER BASIN

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03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE				JULY				AUGUST		
											SEPTEMBER	
1	16.0	13.0	14.5	19.5	16.5	17.5	---	---	---	19.0	17.5	18.5
2	16.5	12.5	14.5	21.0	17.5	18.5	19.0	9.5	14.5	19.0	17.5	18.5
3	15.5	12.5	14.5	21.0	18.0	19.5	19.5	14.0	17.0	21.0	18.5	19.5
4	---	---	---	21.0	14.5	18.0	19.5	14.0	17.5	20.5	15.0	18.0
5	17.0	13.0	15.5	20.5	17.5	19.0	22.5	16.0	18.5	19.0	15.0	17.5
6	17.0	14.0	16.0	20.5	16.0	19.5	21.5	18.0	19.5	19.5	17.0	18.5
7	17.0	13.0	16.0	20.5	18.5	19.5	20.0	15.5	18.0	19.5	18.0	18.5
8	17.5	13.0	16.0	20.5	19.0	20.0	20.0	14.5	18.0	19.0	17.5	18.5
9	17.5	15.0	16.5	20.0	19.0	19.5	20.0	14.5	18.0	19.5	15.0	18.5
10	18.0	16.0	17.0	19.5	18.0	19.0	20.0	14.5	18.0	19.0	13.5	17.0
11	19.0	14.0	16.5	19.0	18.0	18.5	20.0	17.0	18.5	20.0	16.0	17.5
12	19.5	13.0	17.5	21.5	18.0	18.5	19.5	16.0	18.5	18.5	16.5	17.5
13	19.5	13.5	17.5	21.0	16.0	18.0	20.0	15.0	18.5	19.5	16.5	17.5
14	19.0	15.5	18.0	18.0	14.0	16.5	19.0	14.0	17.5	19.5	18.5	19.0
15	19.0	13.0	16.5	21.5	16.0	18.0	19.0	14.0	17.5	18.0	17.0	17.5
16	18.5	13.5	17.0	21.5	17.0	19.0	18.5	13.5	17.0	17.5	17.0	17.5
17	18.5	13.0	17.0	---	---	---	18.5	13.0	17.0	19.0	14.5	17.0
18	18.5	14.5	17.5	---	---	---	18.5	14.5	17.0	18.0	16.0	16.5
19	19.5	13.5	17.0	---	---	---	18.0	14.5	17.0	17.5	15.5	16.5
20	19.0	13.5	17.5	---	---	---	18.5	16.0	18.0	18.0	15.5	17.0
21	19.0	14.5	17.5	---	---	---	18.0	14.5	17.0	18.5	15.0	17.5
22	---	---	---	---	---	---	18.0	14.5	17.0	18.0	17.0	17.5
23	19.0	14.5	18.0	---	---	---	18.5	15.0	17.0	17.0	15.5	16.0
24	18.5	15.0	17.5	---	---	---	19.0	15.5	18.0	16.5	13.5	16.0
25	18.5	13.0	16.5	---	---	---	19.5	17.0	18.0	16.5	15.0	16.0
26	18.5	14.5	17.0	---	---	---	20.5	17.5	19.5	17.0	15.5	16.5
27	19.0	16.5	17.5	---	---	---	19.5	18.5	19.0	17.5	15.0	16.5
28	19.5	16.5	18.0	---	---	---	19.5	16.5	18.0	17.0	16.5	16.5
29	19.0	14.5	17.5	---	---	---	18.5	15.5	17.5	16.5	16.0	16.5
30	18.5	17.0	17.5	---	---	---	18.0	15.0	17.0	17.5	16.5	16.5
31	---	---	---	---	---	---	18.5	15.0	17.5	---	---	---
MONTH	19.5	12.5	17.0	---	---	---	22.5	9.5	17.5	21.0	13.5	17.5

CUMBERLAND RIVER BASIN

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN

WATER-QUALITY RECORDS

LOCATION.--Lat 36°17'47", long 86°39'28", Davidson County, Hydrologic Unit 05130202, at end of lock wall near left downstream bank, at Old Hickory Dam, 2.0 mi (3.2 km) west of Hendersonville, and at mile 216.2 (347.9 km).

DRAINAGE AREA.--11,673 mi² (30,233 km²).

PERIOD OF RECORD.--April to September 1979.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April to September 1979.

pH: April to September 1979.

WATER TEMPERATURE: April to September 1979.

DISSOLVED OXYGEN: April to September 1979.

INSTRUMENTATION.--Water-quality monitor since April 1979.

REMARKS.--Flow regulated by Old Hickory Dam and other reservoirs above station. Continuous discharge records are published under station 03426500 Cumberland River below Old Hickory, TN.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum 190 micromhos June 2; minimum, 146 micromhos May 6.

pH: Maximum, 8.7 units May 30; minimum, 7.2 units April 16, June 30, July 1, 2, 4, 5, Sept. 27, 30.

WATER TEMPERATURE: Maximum, 25.5°C July 24, Aug. 9-13; minimum, 9.5°C April 10.

DISSOLVED OXYGEN: Maximum, 12.6 mg/L April 10, 11; minimum, 6.2 mg/L July 4, 5.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) • WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1							---	---	---	150	148	149
2							---	---	---	154	152	153
3							---	---	---	154	153	153
4							---	---	---	156	152	154
5							---	---	---	159	151	156
6							---	---	---	153	146	149
7							179	167	174	153	149	151
8							166	164	165	161	152	157
9							164	161	163	173	161	166
10							165	160	162	180	173	177
11							168	165	166	178	175	177
12							165	163	164	175	170	172
13							173	164	169	170	168	169
14							168	161	163	173	168	171
15							171	163	167	173	170	172
16							176	171	174	173	170	172
17							174	168	171	174	171	172
18							170	164	167	174	172	173
19							166	163	164	175	173	174
20							167	165	166	175	172	174
21							166	163	164	178	175	177
22							163	161	162	176	172	175
23							162	157	159	172	170	171
24							157	154	155	170	167	168
25							153	151	152	167	164	166
26							151	149	150	166	164	165
27							149	148	149	166	165	165
28							149	148	148	166	165	166
29							149	148	149	168	165	166
30							150	148	149	168	165	166
31							---	---	---	172	168	169
MONTH							179	148	161	180	146	166

CUMBERLAND RIVER BASIN

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03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	182	172	176	169	167	168	165	162	163	170	161	165
2	190	181	187	168	166	167	165	164	165	180	170	175
3	189	183	185	168	165	167	165	164	165	182	177	180
4	184	181	183	168	165	166	164	163	164	177	173	176
5	181	178	179	168	165	167	164	161	162	175	171	173
6	178	175	176	169	166	168	163	160	162	172	168	170
7	179	176	177	169	167	168	163	160	161	171	168	169
8	178	177	178	167	166	166	163	160	162	169	167	168
9	179	176	177	165	164	165	163	161	162	169	166	168
10	178	176	177	165	164	164	163	161	162	171	165	169
11	179	177	178	164	162	163	162	160	161	173	167	171
12	178	176	177	163	161	162	163	159	161	175	165	170
13	177	174	176	164	162	163	165	161	163	172	163	170
14	176	173	174	165	162	163	162	160	161	165	161	162
15	175	172	174	167	165	166	161	158	160	162	150	156
16	175	172	173	169	167	168	159	156	158	---	---	---
17	173	169	172	171	167	169	159	156	158	---	---	---
18	174	171	173	170	166	168	158	155	157	---	---	---
19	175	172	174	167	166	167	160	155	158	---	---	---
20	175	173	174	167	165	166	161	156	158	---	---	---
21	175	173	174	167	164	165	160	156	158	---	---	---
22	174	170	173	164	162	163	158	155	157	---	---	---
23	171	168	169	165	162	163	159	156	158	---	---	---
24	169	167	168	166	163	165	159	157	158	---	---	---
25	172	167	169	167	164	165	157	156	156	---	---	---
26	170	168	169	---	---	---	157	155	156	---	---	---
27	170	167	168	---	---	---	156	155	156	175	170	172
28	169	165	168	165	163	164	156	154	155	185	174	179
29	169	167	168	164	162	163	157	154	155	185	183	184
30	168	166	167	165	162	163	158	156	157	184	175	178
31	---	---	---	164	162	163	162	157	159	---	---	---
MONTH	190	165	174	171	161	165	165	154	160	---	---	---

PH (UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	7.7	7.5	7.9	7.7	7.3	7.2	8.2	7.5	7.8	7.5
2	---	---	8.1	7.7	8.1	7.8	7.5	7.2	8.1	7.5	7.6	7.4
3	---	---	7.9	7.7	8.0	7.7	7.5	7.3	8.1	7.6	7.5	7.4
4	---	---	7.7	7.6	8.2	7.8	7.3	7.2	8.3	7.5	7.7	7.3
5	---	---	7.6	7.5	8.4	7.9	7.8	7.2	7.7	7.5	7.7	7.4
6	---	---	7.5	7.5	8.6	7.9	7.7	7.3	7.8	7.3	8.0	7.5
7	7.7	7.6	7.5	7.4	8.3	7.8	7.5	7.4	7.8	7.4	8.0	7.6
8	7.6	7.5	7.5	7.4	7.8	7.6	7.5	7.4	8.0	7.4	8.0	7.7
9	7.6	7.6	7.5	7.4	8.0	7.6	7.5	7.4	8.1	7.5	8.2	7.8
10	7.6	7.5	7.6	7.4	7.6	7.5	7.5	7.4	8.0	7.5	8.1	7.7
11	7.6	7.6	7.8	7.6	7.8	7.5	7.7	7.4	8.1	7.7	8.0	7.4
12	7.6	7.6	7.9	7.5	8.0	7.8	7.6	7.4	8.1	7.6	8.2	7.5
13	7.5	7.5	7.6	7.5	8.1	7.7	7.6	7.3	8.3	7.7	8.2	7.6
14	7.5	7.4	7.7	7.5	8.2	7.7	7.7	7.4	8.1	7.7	8.0	7.5
15	7.5	7.4	7.5	7.4	8.0	7.5	7.6	7.4	8.5	7.8	7.4	7.3
16	7.4	7.2	8.3	7.4	8.0	7.5	7.6	7.4	8.4	8.0	---	---
17	7.5	7.3	8.3	7.8	7.6	7.4	7.7	7.4	8.6	8.1	---	---
18	7.5	7.4	8.3	7.7	7.8	7.4	8.2	7.4	8.5	8.0	---	---
19	7.5	7.4	7.9	7.6	8.0	7.4	8.3	7.5	8.3	8.0	---	---
20	7.5	7.4	7.6	7.4	8.2	7.4	8.0	7.5	8.3	7.9	---	---
21	7.5	7.4	7.5	7.3	7.8	7.5	8.1	7.5	8.3	8.1	---	---
22	7.5	7.5	8.2	7.4	7.6	7.5	7.7	7.4	8.2	8.0	---	---
23	7.5	7.5	8.0	7.6	7.7	7.4	7.7	7.3	8.4	8.0	---	---
24	7.5	7.5	8.3	7.7	7.5	7.3	8.0	7.3	8.0	7.6	---	---
25	7.5	7.5	7.8	7.6	7.5	7.4	7.6	7.4	7.9	7.5	---	---
26	7.5	7.5	7.6	7.6	7.7	7.4	---	---	8.0	7.7	---	---
27	7.5	7.5	7.6	7.5	7.9	7.3	---	---	7.8	7.6	7.3	7.2
28	7.6	7.5	7.6	7.4	7.6	7.3	8.2	7.5	7.8	7.5	7.5	7.3
29	7.7	7.5	7.5	7.4	7.6	7.4	8.0	7.4	7.9	7.4	7.3	7.3
30	7.7	7.5	8.7	7.5	7.4	7.2	8.1	7.6	7.8	7.4	7.3	7.2
31	---	---	8.3	7.7	---	---	7.9	7.5	8.1	7.5	---	---
MONTH	7.7	7.2	8.7	7.3	8.6	7.2	8.3	7.2	8.6	7.3	---	---

CUMBERLAND RIVER BASIN

03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1							---	---	---	15.0	13.0	14.0
2							---	---	---	15.5	14.0	15.0
3							---	---	---	15.0	14.5	15.0
4							---	---	---	15.0	14.5	15.0
5							---	---	---	15.0	14.5	15.0
6							---	---	---			
7							13.5	12.5	13.0	16.5	15.0	15.5
8							13.0	12.0	12.5	17.5	15.5	16.5
9							11.5	10.0	11.0	18.0	17.0	17.5
10							10.0	9.5	10.0	18.5	17.5	18.0
11												
12							11.0	10.0	10.5	18.5	18.0	18.0
13							11.0	10.5	10.5	19.0	18.0	18.5
14							11.0	10.5	10.5	18.0	18.0	18.0
15							12.0	11.0	11.5	18.5	17.5	18.0
							12.5	11.5	12.0	18.0	17.0	17.5
16												
17							13.0	12.0	12.5	19.0	17.0	18.0
18							14.0	13.0	13.5	19.5	18.0	18.5
19							14.5	13.5	14.0	19.5	18.0	19.0
20							14.5	14.0	14.0	19.0	18.5	18.5
							14.5	14.0	14.5	19.0	18.0	18.5
21												
22							14.5	14.0	14.5	18.5	18.0	18.5
23							14.5	14.0	14.5	19.5	18.5	19.0
24							14.0	13.5	14.0	19.5	18.5	19.0
25							13.5	13.5	13.5	20.5	18.5	19.0
							13.5	13.0	13.0	19.0	18.5	18.5
26												
27							13.0	12.5	13.0	18.5	18.0	18.5
28							13.0	12.5	13.0	18.5	18.0	18.5
29							13.5	12.5	13.0	18.5	18.0	18.5
30							14.5	13.0	13.5	18.5	18.0	18.5
31							14.0	13.5	14.0	21.0	18.5	19.5
							---	---	---	20.0	19.0	19.5
MONTH							14.5	9.5	13.0	21.0	13.0	17.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	19.5	19.0	19.5	22.0	21.0	21.5	24.5	22.5	23.5	24.5	23.0	23.5
2	20.5	19.5	20.0	22.5	21.0	21.5	24.0	22.5	23.5	24.0	23.0	23.5
3	20.0	19.5	19.5	23.0	21.5	22.0	24.5	23.0	23.5	23.5	23.0	23.5
4	20.5	19.5	20.0	22.5	21.5	22.0	24.5	23.0	24.0	23.5	23.0	23.5
5	21.0	19.5	20.0	24.0	21.5	23.0	24.0	23.0	23.5	23.5	23.0	23.5
6	22.0	19.5	21.0	24.5	22.5	23.5	24.0	23.0	23.5	24.0	23.0	23.5
7	22.0	20.0	21.0	24.0	23.0	23.5	24.5	23.0	24.0	24.0	23.5	24.0
8	21.5	20.0	21.0	24.0	23.5	23.5	25.0	23.0	24.5	24.0	23.5	24.0
9	22.0	20.5	21.5	24.0	23.5	23.5	25.5	23.5	24.5	24.5	23.5	24.0
10	21.5	20.0	21.0	23.5	23.0	23.5	25.5	24.0	25.0	24.5	23.5	24.0
11	21.5	20.0	21.0	24.0	23.0	23.5	25.5	24.5	25.0	24.0	23.0	23.5
12	22.5	21.5	22.0	23.5	22.5	23.0	25.5	24.5	25.0	24.0	23.0	23.5
13	22.5	21.0	22.0	23.5	22.5	23.0	25.5	24.5	25.0	24.0	23.0	23.5
14	23.0	21.5	22.0	24.0	23.0	23.5	24.5	24.0	24.5	23.0	22.0	22.5
15	23.0	21.0	22.0	23.5	23.0	23.5	24.0	23.5	24.0	22.0	21.0	21.5
16	23.0	21.0	22.0	24.0	23.0	23.5	24.0	23.5	24.0	---	---	---
17	22.5	21.5	22.0	24.0	23.0	23.5	24.5	23.5	24.0	---	---	---
18	22.5	21.0	22.0	25.0	23.0	24.0	24.5	23.0	24.0	---	---	---
19	23.5	21.5	22.5	25.0	24.0	24.5	24.0	23.5	24.0	---	---	---
20	24.0	21.5	23.0	24.5	23.5	24.0	24.5	23.5	24.0	---	---	---
21	23.5	22.5	23.0	25.0	23.5	24.0	24.5	23.0	24.0	---	---	---
22	23.5	22.5	23.0	23.5	23.0	23.5	24.0	23.0	23.5	---	---	---
23	23.5	22.5	23.0	24.0	22.5	23.5	24.5	23.5	24.0	---	---	---
24	23.0	22.0	22.5	25.5	23.0	24.0	24.0	23.0	23.5	---	---	---
25	22.5	21.5	22.0	24.0	23.0	23.5	24.0	23.0	23.5	---	---	---
26	23.5	22.0	23.0	---	---	---	24.0	23.5	24.0	---	---	---
27	23.5	22.0	23.0	---	---	---	24.0	23.5	23.5	20.0	20.0	20.0
28	23.0	22.0	22.5	25.0	23.5	24.0	23.5	23.0	23.5	20.0	19.5	20.0
29	23.0	22.0	22.5	24.5	23.0	24.0	23.5	22.5	23.0	19.5	19.0	19.5
30	22.0	21.5	21.5	24.5	23.5	24.0	23.0	22.5	22.5	19.5	19.0	19.5
31	---	---	---	24.0	23.0	23.5	24.0	22.5	23.5	---	---	---
MONTH	24.0	19.0	21.5	25.5	21.0	23.5	25.5	22.5	24.0	---	---	---

CUMBERLAND RIVER BASIN

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03426310 CUMBERLAND RIVER AT OLD HICKORY DAM (TAILWATER), TN--CONTINUED

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1							---	---	---	10.9	9.7	10.0
2							---	---	---	10.8	10.1	10.4
3							---	---	---	10.4	10.0	10.1
4							---	---	---	11.5	9.8	10.9
5							---	---	---	11.1	10.5	10.9
6							---	---	---	10.9	8.8	10.4
7							11.9	11.3	11.8	8.8	8.7	8.8
8							12.1	11.6	11.9	8.8	8.4	8.6
9							12.4	12.0	12.2	8.8	8.2	8.4
10							12.6	11.9	12.3	9.2	8.7	8.9
11							12.6	12.4	12.5	9.7	9.2	9.4
12							11.8	11.8	12.0	10.1	9.0	9.6
13							11.8	11.5	11.6	9.2	9.0	9.1
14							11.4	10.5	11.0	9.8	8.7	8.9
15							11.8	10.8	11.6	9.0	8.6	8.8
16							10.7	9.7	9.9	10.6	8.6	9.5
17							9.7	9.5	9.6	10.5	9.3	9.9
18							9.5	9.4	9.5	10.8	9.2	9.9
19							9.5	9.4	9.4	9.7	8.9	9.2
20							10.3	9.5	9.6	9.0	8.3	8.7
21							10.4	9.6	9.7	8.3	7.9	8.1
22							10.5	10.1	10.3	10.1	8.1	9.0
23							10.4	10.1	10.2	9.6	8.8	9.1
24							10.4	10.2	10.3	10.8	8.9	9.5
25							10.4	9.8	10.0	9.0	8.8	8.9
26							10.4	9.8	9.9	8.8	8.7	8.8
27							9.9	9.8	9.9	9.0	8.6	8.8
28							10.0	9.8	9.9	9.0	8.6	8.8
29							10.2	9.8	10.0	8.8	8.4	8.6
30							10.0	9.8	9.9	10.9	8.8	9.6
31							---	---	---	9.4	8.4	9.1
MONTH							12.6	9.4	10.6	11.5	7.9	9.3
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.8	8.2	8.6	6.9	6.3	6.6	8.5	7.3	7.8	8.4	7.2	7.8
2	9.6	8.5	9.0	7.3	6.5	6.9	8.4	7.1	7.6	7.8	6.7	7.2
3	8.9	8.3	8.6	7.3	6.7	7.0	8.6	7.4	7.9	7.4	6.6	7.0
4	9.4	8.5	8.9	6.7	6.2	6.5	9.0	7.5	8.1	8.1	6.7	7.5
5	9.7	8.7	9.1	7.5	6.2	6.7	8.1	7.4	7.7	7.9	7.1	7.5
6	10.6	9.0	9.6	7.3	6.3	6.8	8.2	6.9	7.4	8.2	7.0	7.6
7	9.4	8.6	9.0	6.8	6.3	6.6	8.4	7.3	7.9	8.2	7.5	7.9
8	8.7	8.1	8.4	6.9	6.3	6.6	8.5	7.2	7.9	8.2	7.6	7.9
9	8.9	8.1	8.5	7.0	6.5	6.8	8.8	7.2	8.0	8.6	7.9	8.2
10	8.2	7.8	8.0	7.5	6.8	7.0	8.7	7.4	8.1	10.3	7.7	8.4
11	8.3	7.9	8.0	8.0	7.0	7.4	8.3	7.7	8.0	9.7	6.9	7.8
12	8.7	8.1	8.3	7.8	7.2	7.5	8.0	7.3	7.7	9.7	7.6	8.7
13	9.2	8.0	8.6	7.9	6.8	7.2	8.4	7.0	7.6	9.2	7.9	8.4
14	9.6	8.3	8.7	8.2	7.1	7.6	8.6	7.0	8.0	9.9	7.7	9.4
15	9.2	7.9	8.5	7.5	6.9	7.2	9.2	7.8	8.3	9.5	7.4	8.9
16	9.2	7.8	8.5	7.6	6.4	7.0	9.1	8.3	8.8	---	---	---
17	8.4	7.9	8.1	7.9	6.8	7.2	9.6	8.4	9.0	---	---	---
18	8.4	7.4	8.0	8.2	6.9	7.5	9.7	8.3	9.0	---	---	---
19	8.5	7.4	7.9	8.3	7.0	7.6	9.4	8.3	8.7	---	---	---
20	8.8	7.0	7.8	8.0	7.3	7.7	9.2	8.0	8.6	---	---	---
21	7.8	7.3	7.5	8.4	7.3	7.7	9.1	8.2	8.7	---	---	---
22	7.7	7.3	7.5	7.7	7.2	7.4	8.8	7.9	8.4	---	---	---
23	8.0	7.2	7.5	7.8	6.7	7.2	8.8	7.9	8.4	---	---	---
24	7.4	6.9	7.1	7.8	6.8	7.2	8.4	7.6	7.9	---	---	---
25	7.4	7.0	7.2	7.3	6.9	7.1	8.0	7.4	7.7	---	---	---
26	7.7	6.8	7.3	---	---	---	8.2	7.6	7.9	---	---	---
27	8.2	6.6	7.3	---	---	---	8.4	7.7	8.0	6.9	6.5	6.7
28	7.4	6.6	7.0	8.3	7.4	7.8	8.2	7.4	7.8	10.3	6.9	9.2
29	7.7	6.9	7.3	8.5	7.2	7.8	8.3	7.3	7.6	9.8	8.1	9.2
30	6.9	6.5	6.6	8.7	7.6	8.1	8.2	7.0	7.4	8.7	6.8	7.4
31	---	---	---	8.3	7.3	7.8	9.0	7.3	8.0	---	---	---
MONTH	10.6	6.5	8.1	8.7	6.2	7.2	9.7	6.9	8.1	---	---	---

CUMBERLAND RIVER BASIN

03426500 CUMBERLAND RIVER BELOW OLD HICKORY, TN

LOCATION.--Lat 36°15'39", long 86°40'30", Davidson County, Hydrologic Unit 05130202, near left bank on downstream end of pier of bridge on State Highway 45, 1.5 mi (2.4 km) west of Old Hickory, 2.1 mi (3.4 km) east of Madison, 3.3 mi (5.3 km) downstream from Mansker Creek, 4.1 mi (6.6 km) downstream from Old Hickory Dam, and at mile 212.1 (341.3 km).

DRAINAGE AREA.--11,735 mi² (30,394 km²).

PERIOD OF RECORD.--October 1931 to September 1942, October 1947 to current year. Prior to July 1953, published as "at dam 3, near Old Hickory."

REVISED RECORDS.--WSP 923: 1932-39. WSP 1113: 1940(m). WSP 1910: Drainage area, at sites used prior to June 11, 1954. WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 380.00 ft (115.824 m) National Geodetic Vertical Datum of 1929. See WSP 1726 for history of changes prior to Oct. 1, 1956. Since Apr. 1, 1957, auxiliary gage at Old Hickory dam 4.1 mi (6.6 km) upstream from base gage at same datum.

REMARKS.--Records good. Flow regulated by six lakes or reservoirs (see p.129).

AVERAGE DISCHARGE.--43 years (water years 1932-42, 1948-79), 19,200 ft³/s (543.7 m³/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 173,000 ft³/s (4,900 m³/s) Jan. 29, 1937; maximum gage height, 48.13 ft (14.670 m) Mar. 14, 1975; minimum daily discharge, 86 ft³/s (2.44 m³/s) Aug. 15, 1936; minimum gage height since filling of Cheatham Lake on Oct. 1, 1956, 3.49 ft (1.064 m) Sept. 10, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, 57.4 ft (17.50 m) Dec. 31, 1926, present site and datum, from profile by Corps of Engineers, discharge, 200,000 ft³/s (5,660 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 110,000 ft³/s (3,120 m³/s) Dec. 9; maximum recorded gage height, 35.10 ft (10.698 m) Dec. 11; minimum daily discharge, 1,430 ft³/s (40.5 m³/s) Nov. 15; minimum gage height, 4.00 ft (1.219 m) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3150	5100	9770	65200	43200	52700	29400	14400	23400	5240	22100	23800
2	4760	4000	4960	83900	38200	53200	75000	15200	21200	6910	20000	19900
3	5500	3170	17200	68900	41400	52500	80700	19700	15000	11600	20100	7660
4	4100	2560	86400	57700	32300	55500	71700	56200	14100	11700	20400	11500
5	7320	3210	60100	57300	37100	62800	62900	81700	17400	11400	8670	16000
6	4800	6200	23500	52600	42000	57300	60100	48400	20000	12800	7960	21600
7	3800	5650	27900	67900	42300	52500	54800	20300	19200	10600	18000	23300
8	3400	9040	85000	81700	24500	52900	52000	26500	18500	15700	19200	14700
9	3910	8900	110000	73400	26100	52400	55900	26600	19700	28500	19100	13900
10	7660	8980	108000	56700	39300	52500	57600	27000	16800	18200	19200	10000
11	7630	4530	80000	50100	38300	50300	52200	29200	12900	14900	18500	16500
12	6550	2910	44000	51200	21600	43300	71900	31500	21800	14900	14000	17700
13	8700	4100	35200	52700	10800	43300	83400	19900	22100	17100	9560	21800
14	5290	1450	34700	46400	25800	47400	69400	12100	18100	20500	16600	64900
15	3270	1430	34000	43600	29800	48200	56500	11100	16800	11700	20100	64600
16	2820	2540	34000	43000	31300	43300	38100	15000	16800	10300	19200	36300
17	5240	9030	40800	37200	35800	44300	35300	24400	13700	14100	17100	17500
18	14000	9510	37000	37800	41000	42500	34400	16700	15500	19100	16900	15600
19	12400	6780	40100	36900	26400	24100	33200	11000	15700	20000	12400	16900
20	10400	4980	41500	55700	26700	28700	38400	7150	18100	13000	18400	16000
21	5000	5870	42200	83700	19200	25100	41300	7620	18400	13400	16900	34300
22	4230	4060	41900	85600	25500	23100	46100	14700	22600	5450	18300	67300
23	5270	3710	36900	73500	30700	31100	46600	18000	13800	5300	21600	51400
24	4450	10800	43000	60000	18000	26300	46700	31500	8320	13300	18500	20500
25	5320	8530	26500	58900	36000	37300	43400	25200	4600	16200	14700	23800
26	6400	5410	19300	60900	52900	22200	40500	13700	4980	19400	27100	20500
27	3630	7940	30800	57800	50300	20700	34700	10800	9570	20400	30600	18300
28	3200	9400	30900	55600	52600	20400	31300	8610	15500	21000	23600	43300
29	2340	9900	37200	55700	---	21100	13900	9350	21100	19800	16500	55700
30	4080	9400	42400	53400	---	24100	14100	18500	10600	15900	17800	37800
31	4720	---	46000	45900	---	23300	---	18900	---	21200	23000	---
TOTAL	173340	179090	1351230	1810900	939100	1234400	1471500	690930	486270	459600	566090	828060
MEAN	5592	5970	43590	58420	33540	39820	49050	22290	16210	14830	18260	27600
MAX	14000	10800	110000	85600	52900	62800	83400	81700	23400	28500	30600	67300
MIN	2340	1430	4960	36900	10800	20400	13900	7150	4600	5240	7960	7660

CAL YR 1978 TOTAL 7491850 MEAN 20530 MAX 110000 MIN 1430
WTR YR 1979 TOTAL 10190510 MEAN 27920 MAX 110000 MIN 1430

03426800 EAST FORK STONES RIVER AT WOODBURY, TN

LOCATION.--Lat 35°49'41", long 86°04'36", Cannon County, Hydrologic Unit 05130203, on center pier on downstream side of bridge on U. S. Highway 70S, at Woodbury, 0.4 mi (0.6 km) downstream from Doolittle Branch, and at mile 45.6 (73.4 km).

DRAINAGE AREA.--39.1 mi² (101.3 km²).

PERIOD OF RECORD.--Water years 1932-33, 1950, 1954, 1962, occasional low-flow measurements. October 1962 to current year.

REVISED RECORDS.--WSP 1910; Drainage area. WSP 2110: 1963, 1964(M), 1965.

GAGE.--Water-stage recorder. Datum of gage is 676.23 ft (206.115 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--17 years, 70.6 ft³/s (1.999 m³/s), 24.52 in/yr (623 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft³/s (374 m³/s) Mar. 15, 1973, gage height, 16.75 ft (5.105 m), from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of velocity-area study and contracted-opening measurement at gage height 16.52 ft (5.035 m) at bridge 4.6 mi (7.4 km) downstream; minimum, 2.7 ft³/s (0.076 m³/s) Oct. 30, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902, that of Mar. 15, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 8	2300	*2820 79.9	10.64 3.243	Sept. 13	1930	2810 79.6	10.63 3.240
Jan. 1	1145	2350 66.6	9.64 2.938	Sept. 28	0530	2000 56.6	8.75 2.667

Minimum discharge, 6.2 ft³/s (0.18 m³/s) Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	8.5	24	1030	52	118	106	25	66	18	17	25
2	8.5	8.5	19	370	47	92	728	25	54	17	17	23
3	7.7	8.5	22	169	48	181	484	100	155	17	18	19
4	7.7	8.5	262	104	46	760	364	510	122	17	16	18
5	7.5	8.8	84	81	43	244	237	200	77	18	15	17
6	7.2	8.8	46	164	46	152	150	120	61	17	14	16
7	7.2	14	37	847	66	115	109	90	51	18	14	15
8	7.0	12	571	336	61	92	95	70	43	21	13	15
9	7.0	9.4	731	166	60	74	234	55	38	21	13	14
10	7.0	8.8	181	106	53	111	135	45	46	19	13	14
11	7.0	8.5	98	84	54	104	120	40	45	17	13	14
12	6.7	8.3	68	68	86	87	740	35	35	18	14	13
13	11	8.3	51	61	118	77	520	30	31	17	13	319
14	12	8.3	41	51	120	86	230	30	29	17	12	258
15	8.8	8.3	37	40	176	74	150	30	27	16	12	78
16	8.0	69	38	38	128	68	110	29	25	16	12	49
17	7.7	91	35	39	90	63	90	27	25	15	12	38
18	7.5	50	32	39	78	60	80	26	24	14	12	31
19	7.5	22	32	56	68	70	70	25	23	25	12	29
20	7.5	15	70	770	75	89	65	29	22	37	12	27
21	7.7	12	300	678	169	75	60	34	23	27	12	40
22	7.7	11	128	291	150	70	55	32	22	20	17	49
23	7.7	45	81	219	194	108	50	367	21	18	17	39
24	8.0	43	70	300	189	160	45	433	24	18	14	31
25	8.0	24	60	174	800	128	40	152	22	19	47	29
26	8.8	19	48	126	319	97	35	89	20	19	228	26
27	8.8	20	40	109	199	83	35	66	19	17	98	484
28	8.5	18	37	95	150	74	30	54	19	19	75	1000
29	8.3	24	34	75	---	66	30	46	20	19	75	231
30	8.3	32	78	69	---	61	30	49	19	20	43	102
31	8.3	---	267	63	---	57	---	106	---	22	33	---
TOTAL	251.6	632.5	3622	6818	3685	3696	5227	2969	1208	593	933	3063
MEAN	8.12	21.1	117	220	132	119	174	95.8	40.3	19.1	30.1	102
MAX	12	91	731	1030	800	760	740	510	155	37	228	1000
MIN	6.7	8.3	19	38	43	57	30	25	19	14	12	13
CFSM	.21	.54	2.99	5.63	3.38	3.04	4.45	2.45	1.03	.49	.77	2.61
IN.	.24	.60	3.45	6.49	3.51	3.52	4.97	2.82	1.15	.56	.89	2.91

CAL YR 1978 TOTAL 20708.4 MEAN 56.7 MAX 904 MIN 6.7 CFSM 1.45 IN 19.70
WTR YR 1979 TOTAL 32698.1 MEAN 89.6 MAX 1030 MIN 6.7 CFSM 2.29 IN 31.11

NOTE.--No gage-height record Apr. 11 to May 14.

CUMBERLAND RIVER BASIN

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN

LOCATION.--Lat 35°55'06", long 86°20'02", Rutherford County, Hydrologic Unit 05130203, on left bank 100 ft (30 m) upstream from highway bridge, 2.5 mi (4.0 km) southwest of Lascassas, 3.7 mi (6.0 km) downstream from Bradley Creek, 6.0 mi (9.7 km) northeast of the courthouse in Murfreesboro, and at mile 15.4 (24.8 km).

DRAINAGE AREA.--262 mi² (679 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1950 to November 1958, May 1963 to current year. Prior to February 1951 monthly discharge only, published in WSP 1726.

REVISED RECORDS.--WSP 1910: Drainage Area. WDR-TN-75-1: 1955(M), 1963(M), 1970(M), 1973 (M)(P).

GAGE.--Water-stage recorder. Datum of gage is 507.88 ft (154.802 m) Sandy Hook datum (levels by Corps of Engineers). Prior to Oct. 1, 1973, water-stage recorder 100 ft (30 m) downstream at same datum.

REMARKS.--Records good. Frequent diurnal fluctuation at low flow caused by small mills above station.

AVERAGE DISCHARGE.--24 years (1950-57, 1964-79), 470 ft³/s (13.31 m³/s), 24.36 in/yr (619 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,200 ft³/s (1,170 m³/s) Mar. 13, 1975, gage height, 39.48 ft (12.034 m); minimum, 0.2 ft³/s (0.006 m³/s) Oct. 23, 1953, gage height, 2.22 ft (0.677 m); minimum daily, 0.4 ft³/s (0.011 m³/s) Aug. 31, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1902, that of Mar. 13, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft³/s (198 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	0715	*16800 476	28.27 8.617	Apr. 2	1315	10100 286	20.64 6.291
Jan. 1	1845	13200 374	24.43 7.446	Apr. 12	1230	9980 283	20.55 6.264
Jan. 7	1115	10400 295	21.07 6.422	May 4	0900	12600 357	23.70 7.224
Jan. 20	1315	9370 265	19.79 6.032	May 23	2330	9930 281	20.49 6.245
Feb. 25	1145	11600 329	22.49 6.855	Sept. 14	0315	14500 411	25.84 7.876
Mar. 4	0800	8300 235	18.40 5.608	Sept. 27	2215	13400 379	24.58 7.492

Minimum discharge, 11 ft³/s (0.31 m³/s) Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	16	246	9420	296	712	633	111	337	45	80	187
2	12	14	184	4950	256	535	6410	103	304	43	72	124
3	16	14	157	1430	236	500	4370	414	1280	41	68	95
4	21	15	3460	812	236	5500	2920	6360	1030	40	69	71
5	18	15	1120	576	216	1650	1870	1930	495	41	61	56
6	19	14	540	819	176	960	1080	906	318	47	48	46
7	17	16	872	8030	309	664	759	567	259	52	40	39
8	13	21	2320	3290	374	528	616	391	210	66	35	34
9	11	35	11800	1270	378	432	2070	296	176	68	32	29
10	12	27	1980	778	331	675	1040	247	149	56	28	26
11	12	21	927	544	308	782	774	210	200	64	26	24
12	12	19	579	424	494	556	6030	180	148	50	23	22
13	17	17	408	372	1010	468	4740	162	119	46	22	1290
14	24	17	302	349	774	462	1920	146	107	41	23	7010
15	39	17	250	290	484	438	1070	129	104	40	22	980
16	29	356	222	252	344	362	718	114	100	42	21	439
17	23	1270	218	236	821	322	528	105	90	37	19	260
18	19	934	198	236	1290	296	410	99	80	34	18	182
19	18	294	184	256	330	320	330	91	75	31	18	137
20	17	174	188	5250	381	789	288	508	70	30	18	111
21	17	117	3080	6290	1250	690	253	681	72	43	17	3570
22	15	90	1080	2830	1020	502	228	426	74	37	17	1590
23	15	331	605	1490	1190	861	213	4400	66	41	42	635
24	15	516	428	2750	1300	1220	196	4710	78	35	35	341
25	16	264	362	1470	6850	880	181	1240	86	34	60	237
26	18	182	283	888	2500	619	174	662	70	55	1050	175
27	21	288	236	672	3380	495	169	420	60	50	1060	4870
28	22	244	202	601	940	449	148	319	56	45	502	7190
29	17	192	178	488	---	368	130	259	52	40	1060	1620
30	15	305	349	398	---	311	119	222	50	35	468	722
31	15	---	2140	343	---	279	---	441	---	45	414	---
TOTAL	547	5835	35098	57804	27474	23625	40387	26849	6315	1374	5468	32112
MEAN	17.6	195	1132	1865	981	762	1346	866	211	44.3	176	1070
MAX	39	1270	11800	9420	6850	5500	6410	6360	1280	68	1060	7190
MIN	11	14	157	236	176	279	119	91	50	30	17	22
CFSM	.07	.74	4.32	7.12	3.74	2.91	5.14	3.31	.81	.17	.67	4.08
IN.	.08	.83	4.98	8.21	3.90	3.35	5.73	3.81	.90	.20	.78	4.56

CAL YR 1978 TOTAL 147878 MEAN 405 MAX 11800 MIN 10 CFSM 1.55 IN 21.00
WTR YR 1979 TOTAL 262888 MEAN 720 MAX 11800 MIN 11 CFSM 2.75 IN 37.33

NOTE.--No gage-height record June 14 to Aug. 1.

WATER-QUALITY RECORDS

WATER TEMPERATURE: October 1975 to current year.

WATER TEMPERATURES: Maximum, 31.5°C July 8, 14-16, 1977; minimum, 0.0°C Jan. 21, 1977.

WATER TEMPERATURES: Maximum, 29.5°C Aug. 5, 9, 10; minimum 3.0°C Feb. 10, 11.

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	333	326	330	379	370	374				---	---	---
2	338	330	334	384	372	378				---	---	---
3	346	333	338	389	329	379				---	---	---
4	340	334	336	389	320	375				---	---	---
5	348	336	340	---	---	---				---	---	---
6	464	332	335	---	---	---				---	---	---
7	347	330	337	---	---	---				---	---	---
8	344	321	333	---	---	---				---	---	---
9	343	321	333	---	---	---				---	---	---
10	344	323	334	---	---	---				---	---	---
11	346	333	342	---	---	---				380	366	372
12	354	331	341	---	---	---				386	379	383
13	342	324	331	---	---	---				393	386	389
14	344	324	332	---	---	---				392	390	391
15	338	316	328	---	---	---				391	385	389
16	338	326	331	---	---	---				387	384	386
17	340	328	334	---	---	---				388	383	385
18	343	335	339	---	---	---				394	387	390
19	347	336	342	---	---	---				394	390	392
20	348	336	341	---	---	---				393	359	376
21	354	335	342	---	---	---				356	342	347
22	365	338	349	---	---	---				342	326	332
23	365	344	353	---	---	---				327	317	320
24	364	346	357	---	---	---				319	305	311
25	380	347	358	---	---	---				318	305	311
26	369	361	364	---	---	---				331	318	323
27	362	341	351	---	---	---				343	331	339
28	356	339	345	---	---	---				347	342	344
29	373	350	357	---	---	---				350	323	339
30	383	355	367	---	---	---				358	342	351
31	401	363	373	---	---	---				343	335	337
MONTH	464	316	343	---	---	---				---	---	---

CUMBERLAND RIVER BASIN

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	341	337	339	340	331	334	354	243	320	249	232	241
2	341	336	338	344	335	340	267	148	205	238	227	234
3	338	334	337	339	322	336	286	233	256	233	219	228
4	337	334	336	321	135	205	320	268	298	224	124	151
5	337	335	336	296	244	277	334	274	319	219	165	194
6	333	327	331	320	298	307	341	328	334	264	218	242
7	326	316	322	325	316	321	349	336	344	288	263	278
8	322	316	319	332	323	330	346	338	343	323	287	305
9	331	323	327	335	330	333	337	236	277	348	321	332
10	339	331	334	336	328	333	344	291	321	385	344	360
11	349	339	343	327	302	312	364	344	350	428	379	402
12	353	349	351	337	322	331	346	148	218	460	417	441
13	355	367	389	343	337	339	284	217	251	478	457	466
14	324	310	317	337	327	333	321	283	305	485	468	476
15	336	325	330	332	320	327	333	319	323	496	478	487
16	338	330	333	336	322	327	335	317	325	503	489	495
17	332	329	331	332	310	322	333	314	323	496	485	492
18	332	331	331	330	304	316	332	312	320	500	489	496
19	334	329	331	322	291	306	310	302	306	514	496	504
20	334	330	333	324	305	315	305	278	291	518	507	514
21	340	322	331	336	309	324	295	271	282	518	507	511
22	323	306	316	353	335	348	291	271	281	507	500	505
23	330	321	327	351	310	333	287	271	280	493	321	412
24	336	320	327	347	323	334	286	271	278	318	308	313
25	337	146	226	360	348	356	279	270	274	326	317	320
26	284	231	262	363	352	358	273	266	269	328	318	323
27	312	285	298	363	355	359	273	255	264	317	298	306
28	329	314	320	360	351	356	271	251	260	294	281	289
29	---	---	---	355	346	350	261	246	253	300	282	292
30	---	---	---	351	341	345	255	243	243	314	295	305
31	---	---	---	354	329	341	---	---	---	330	310	318
MONTH	355	146	326	363	135	327	364	148	290	518	124	362
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	338	324	331	501	486	495	549	343	457	497	418	453
2	345	330	338	531	502	515	562	483	519	560	500	527
3	356	344	351	610	531	579	549	481	513	588	556	572
4	362	350	355	625	392	600	523	476	497	618	576	597
5	363	351	357	444	398	426	553	446	496	627	602	618
6	367	360	362	460	443	451	633	317	432	637	612	626
7	517	361	385	464	449	460	322	316	319	635	610	623
8	477	421	447	460	446	455	327	311	319	626	598	612
9	493	352	401	447	435	441	320	309	314	614	576	594
10	421	364	389	466	442	452	313	307	310	576	482	551
11	423	363	395	465	450	455	308	303	306	473	389	423
12	478	413	442	454	222	310	304	300	302	391	382	385
13	523	477	499	251	204	227	302	298	300	400	241	372
14	549	517	533	292	249	270	302	298	299	278	241	254
15	550	340	376	320	291	307	301	298	300	351	280	316
16	396	330	371	346	318	331	302	299	300	407	352	382
17	329	299	318	355	322	341	301	295	298	440	409	424
18	347	307	323	393	352	372	298	292	295	474	434	455
19	378	300	345	438	394	420	294	289	292	506	474	488
20	309	295	301	445	234	405	293	290	291	528	507	518
21	311	295	305	436	419	430	294	288	291	532	399	485
22	305	297	301	428	413	417	293	287	289	467	411	436
23	351	299	324	415	400	408	290	281	287	499	468	484
24	375	351	362	409	385	398	282	277	279	510	498	504
25	398	374	386	381	347	362	284	124	258	513	508	511
26	431	376	414	344	299	322	268	168	219	514	504	510
27	362	320	342	292	278	282	264	201	226	507	330	471
28	395	360	381	287	274	280	319	268	295	338	322	329
29	440	392	416	305	285	294	301	186	251	351	332	342
30	495	439	467	338	304	316	400	305	356	367	349	360
31	---	---	---	354	337	347	420	399	409	---	---	---
MONTH	550	295	377	625	204	393	633	124	333	637	241	474

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	22.0	21.0	21.5	16.0	14.0	15.0	12.0	11.0	11.5	13.5	11.0	12.5
2	22.0	19.0	20.5	16.0	14.0	15.0	12.5	10.5	11.5	11.0	8.5	9.5
3	20.5	19.0	20.0	16.0	13.5	14.5	15.0	12.0	13.0	8.0	7.5	7.5
4	21.0	19.0	20.0	15.0	13.0	14.0	16.0	13.5	15.0	8.5	6.5	7.5
5	20.0	18.0	19.0	---	---	---	13.5	12.0	12.5	8.5	8.0	8.0
6	19.0	17.0	18.0	---	---	---	12.5	11.0	11.5	8.5	8.0	8.5
7	17.0	15.5	16.5	---	---	---	14.5	12.0	13.0	9.5	7.0	8.5
8	16.5	14.0	15.5	---	---	---	16.0	10.5	14.5	9.0	7.5	8.5
9	16.0	13.5	15.0	---	---	---	11.0	9.5	10.0	7.5	6.5	7.0
10	16.5	14.0	15.0	---	---	---	10.5	9.5	10.0	8.0	6.5	7.5
11	18.0	15.5	17.0	---	---	---	10.0	9.0	9.5	7.5	6.5	7.0
12	20.0	17.0	18.5	---	---	---	10.0	8.5	9.5	8.5	7.5	8.0
13	19.5	18.0	19.0	---	---	---	9.5	9.0	9.5	10.0	8.5	9.5
14	18.0	15.0	16.5	---	---	---	9.0	8.0	9.0	10.0	7.0	8.5
15	15.0	13.0	14.0	---	---	---	9.0	7.0	8.0	6.5	5.5	6.0
16	15.0	13.5	14.5	---	---	---	9.5	8.5	9.0	6.5	5.5	6.0
17	14.5	12.5	13.5	---	---	---	9.5	8.5	9.0	8.0	6.5	7.5
18	14.5	12.5	13.5	---	---	---	9.0	7.5	8.0	8.5	7.5	8.0
19	15.0	13.0	14.0	---	---	---	10.5	8.5	9.5	8.5	8.0	8.5
20	15.5	13.0	14.5	---	---	---	13.0	10.5	12.0	11.0	8.0	9.0
21	16.0	13.5	14.5	---	---	---	13.5	11.0	12.5	11.0	7.0	8.5
22	16.5	14.0	15.0	---	---	---	11.0	10.0	10.5	9.5	8.5	9.0
23	16.5	14.5	16.0	---	---	---	10.5	9.0	10.0	10.0	9.0	9.5
24	16.0	15.0	15.5	---	---	---	10.0	10.0	10.0	9.5	7.5	8.5
25	16.5	13.5	15.0	---	---	---	10.0	9.0	9.5	7.5	6.5	7.5
26	17.5	16.0	16.5	---	---	---	9.5	8.0	9.0	9.0	7.0	8.0
27	16.0	14.5	15.0	---	---	---	8.0	6.5	7.5	9.0	8.5	9.0
28	14.5	13.0	14.0	---	---	---	7.0	5.5	6.5	9.0	7.5	8.0
29	14.5	12.5	13.5	---	---	---	8.0	5.5	6.5	8.0	7.0	7.5
30	15.0	12.5	14.0	---	---	---	10.0	7.5	8.5	7.5	7.0	7.5
31	15.5	13.5	14.5	---	---	---	13.5	10.0	11.5	8.0	6.0	7.5
MONTH	22.0	12.5	16.0	---	---	---	16.0	5.5	10.0	13.5	5.5	8.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	6.0	4.5	5.5	12.5	11.5	12.0	17.5	16.0	17.0	20.0	16.5	18.0
2	5.5	3.5	4.5	13.0	11.0	12.0	16.5	15.5	16.0	18.5	17.5	18.0
3	6.5	4.5	5.5	14.0	13.0	13.0	16.0	13.0	14.0	19.0	18.0	18.0
4	7.5	6.0	6.5	14.5	14.0	14.0	15.0	14.0	14.5	18.0	16.0	17.0
5	6.5	5.5	6.0	14.5	11.5	12.5	15.0	13.5	14.5	16.0	15.0	15.5
6	6.0	5.0	5.5	12.5	10.5	11.5	15.0	13.5	14.0	17.0	14.5	16.0
7	5.0	4.0	4.5	13.0	10.5	12.0	15.5	12.0	13.5	19.0	16.0	17.5
8	6.0	4.0	5.0	12.5	10.5	11.0	15.0	13.5	14.0	20.0	19.0	19.5
9	5.5	4.0	5.0	11.5	9.5	10.5	14.5	12.0	13.0	20.5	19.0	20.0
10	4.0	3.0	3.5	11.5	10.5	11.0	12.5	11.5	12.0	23.0	19.0	21.0
11	5.5	3.0	4.0	10.5	9.0	10.0	16.5	12.0	14.5	23.5	20.5	22.0
12	7.0	4.5	6.0	11.5	9.0	10.5	16.5	15.0	16.5	22.5	21.0	21.5
13	8.0	6.0	7.0	11.5	11.0	11.5	15.0	14.5	14.5	20.5	19.0	19.5
14	11.0	7.5	9.0	13.0	12.0	12.5	15.5	13.5	14.5	20.5	17.5	19.0
15	12.5	10.5	11.5	12.5	10.5	11.5	17.0	15.0	16.0	21.5	16.0	20.0
16	12.0	9.5	11.0	12.0	10.5	11.0	16.5	14.0	15.5	21.5	18.5	20.0
17	9.0	7.0	7.5	13.5	10.0	12.0	16.5	14.0	15.5	21.5	18.0	20.0
18	6.5	6.0	6.0	15.5	11.5	13.5	17.0	15.5	16.0	22.0	19.5	20.5
19	7.0	5.5	6.5	15.5	13.0	14.5	17.0	16.0	16.5	22.0	20.5	21.5
20	7.5	6.0	6.5	15.5	14.0	14.5	19.0	16.0	17.0	21.5	19.0	20.5
21	11.0	8.0	10.0	17.0	15.0	16.0	19.0	16.5	17.5	20.0	19.0	19.5
22	13.0	11.0	12.0	17.0	16.5	16.5	18.5	17.0	17.5	20.0	19.0	19.5
23	15.0	13.0	14.0	17.0	16.0	16.5	18.5	17.0	18.0	19.5	18.0	18.5
24	14.5	13.5	14.0	15.5	11.5	13.5	18.5	17.5	18.0	19.0	15.0	16.0
25	13.5	11.0	12.5	11.0	9.5	10.0	18.5	17.5	18.0	15.0	14.0	14.5
26	11.0	9.0	9.5	11.0	8.5	10.0	19.0	17.5	18.0	16.0	13.5	14.5
27	11.0	9.0	10.0	11.5	10.5	11.0	19.0	16.5	17.5	16.0	15.5	15.5
28	12.0	10.0	11.0	14.0	11.5	12.5	18.5	16.0	17.0	18.0	16.0	17.0
29	---	---	---	15.0	13.5	14.5	18.5	15.5	17.0	20.5	17.0	18.5
30	---	---	---	16.5	14.5	15.5	19.0	15.5	17.5	21.0	18.5	20.0
31	---	---	---	17.0	15.5	16.5	---	---	---	20.5	19.5	20.0
MONTH	15.0	3.0	8.0	17.0	8.5	12.5	19.0	11.5	16.0	23.5	13.5	18.5

CUMBERLAND RIVER BASIN

03427500 EAST FORK STONES RIVER NEAR LASCASSAS, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	21.5	19.5	20.5	26.0	23.5	25.0	26.0	19.0	23.0	26.0	23.5	24.5
2	22.5	20.5	21.5	25.5	24.0	24.5	25.5	22.0	24.0	25.5	24.5	25.0
3	21.5	19.5	20.5	27.5	24.5	25.5	26.5	25.0	25.5	27.0	24.5	25.5
4	20.0	18.5	19.5	28.0	25.5	26.5	28.0	26.0	27.0	27.5	25.5	26.0
5	20.5	18.5	19.5	26.5	25.5	26.0	29.5	27.5	28.5	27.5	25.5	26.5
6	21.0	19.5	20.5	26.5	24.0	25.5	29.0	26.5	27.0	27.5	26.0	27.0
7	21.5	14.5	20.5	26.0	24.5	25.0	27.5	25.0	26.5	27.0	25.5	26.5
8	23.0	20.5	22.0	24.5	23.5	24.0	29.0	25.5	27.0	26.0	24.5	25.5
9	25.0	21.5	23.0	23.5	22.5	23.0	29.5	26.0	27.5	25.0	23.0	24.0
10	24.5	22.5	23.5	25.0	22.0	23.5	29.5	26.5	28.0	25.0	23.0	24.0
11	24.0	21.0	22.5	24.5	23.0	23.0	28.0	26.0	27.0	25.5	23.0	24.5
12	23.5	20.5	22.0	22.5	22.0	22.5	26.0	24.5	25.0	25.0	23.5	24.5
13	24.0	21.0	22.5	25.0	22.0	23.5	25.0	23.0	24.5	25.0	23.0	24.0
14	24.0	22.0	23.0	24.5	23.0	24.0	25.0	23.0	24.0	23.5	20.0	21.5
15	24.5	22.5	23.5	25.5	24.0	24.5	24.5	22.5	23.5	20.0	18.5	19.0
16	25.0	22.5	24.0	26.5	24.0	25.0	23.5	21.0	22.5	19.5	18.0	19.0
17	25.5	23.0	24.0	27.0	24.5	26.0	24.5	21.5	23.0	21.0	19.0	20.0
18	26.5	23.5	24.5	27.0	25.0	26.0	25.5	23.0	24.5	20.5	19.5	20.0
19	27.5	24.0	25.5	26.5	25.0	25.5	27.0	24.5	25.5	22.0	20.0	21.0
20	26.5	24.5	25.0	25.5	24.5	25.0	27.0	25.5	26.0	21.0	20.5	21.0
21	26.0	24.0	25.0	25.0	23.5	24.5	27.0	25.0	26.5	23.0	20.5	22.0
22	27.0	24.0	25.5	25.5	23.5	24.5	28.0	26.0	27.0	22.0	19.5	20.5
23	27.0	25.0	26.0	26.0	24.5	25.0	27.0	26.0	26.5	19.5	18.5	19.0
24	26.0	23.5	24.5	25.5	24.5	25.0	27.5	25.5	26.5	19.0	18.0	18.5
25	24.5	22.0	23.5	25.5	24.5	25.0	27.0	24.5	26.0	19.0	17.5	18.0
26	24.0	22.0	23.0	25.0	24.0	24.0	24.5	22.5	23.5	20.0	18.0	19.0
27	25.0	22.0	23.5	25.5	23.5	24.5	24.5	23.5	23.5	20.5	19.0	19.5
28	26.0	23.0	24.5	25.5	24.5	25.0	24.0	23.0	23.5	20.0	18.5	19.0
29	25.5	23.5	24.5	27.5	24.5	26.0	24.5	23.5	24.0	19.0	18.0	18.5
30	26.0	24.0	25.0	27.0	25.0	26.0	24.5	23.0	24.0	20.0	18.5	19.0
31	---	---	---	26.5	24.0	25.5	24.5	23.0	23.5	---	---	---
MONTH	27.5	14.5	23.0	28.0	22.0	25.0	29.5	19.0	25.5	27.5	17.5	22.0

03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN

LOCATION.--35°51'25", long 86°24'43", Rutherford County, Hydrologic Unit 05130203, on right bank at upstream abutment of Manson Pike bridge, 900 ft (274 m) downstream from Lytle Creek, 1.4 mi (2.3 km) northwest of courthouse in Murfreesboro, and at mile 16.1 (25.9 km).

DRAINAGE AREA.--165 mi² (427 km²), includes 15 mi² (39 km²) without surface drainage.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1973 to current year.

GAGE.--Water-stage recorder. Datum of gage is 542.29 ft (165.290 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those below 20 ft³/s (0.57 m³/s), which are fair.

AVERAGE DISCHARGE.--6 years, 308 ft³/s (8.72 m³/s), 25.35 in/yr (644 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,200 ft³/s (742 m³/s) Mar. 13, 1975, gage height, 23.22 ft (7.077 m); minimum, 0.42 ft³/s (0.012 m³/s) Sept. 9, 1973, gage height, 1.18 ft (0.360 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	0900	3540 100	7.13 2.173	Apr. 2	1400	6380 181	10.09 3.076
Dec. 9	0415	*10300 292	13.78 4.200	Apr. 12	1345	7060 200	10.82 3.298
Jan. 1	2000	9920 281	13.48 4.109	May 4	1130	5190 147	8.83 2.691
Jan. 7	1215	7100 201	10.86 3.310	May 23	2245	4640 131	8.26 2.518
Jan. 20	1115	5710 162	9.36 2.853	Sept. 14	0430	8700 246	12.43 3.789
Feb. 25	1145	6970 197	10.72 3.268	Sept. 21	1945	6180 175	9.87 3.008
Mar. 4	0715	5470 155	9.12 2.780	Sept. 28	0330	9360 265	13.00 3.962

Minimum discharge, 2.1 ft³/s (0.060 m³/s) Nov. 5, gage height, 1.37 ft (0.418 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	2.9	167	6370	203	404	246	63	173	14	23	158
2	8.9	2.7	131	2440	180	329	3120	57	180	12	30	122
3	7.7	2.7	118	810	170	320	2030	294	460	11	39	104
4	7.3	2.5	1690	520	167	2330	1430	2310	409	10	27	82
5	6.1	2.4	566	414	148	681	882	780	246	16	21	67
6	6.1	2.4	344	548	137	449	566	444	193	18	15	55
7	5.5	6.6	368	4970	203	344	449	316	180	22	13	47
8	5.2	5.5	1170	1630	227	294	393	242	140	26	11	39
9	4.8	4.2	6370	688	220	250	999	200	116	23	9.0	34
10	4.8	3.7	1080	475	193	393	531	167	99	18	7.5	30
11	4.2	3.9	628	373	177	409	454	143	161	15	6.4	25
12	3.3	3.9	465	320	227	294	3730	126	106	12	6.6	21
13	12	3.9	373	307	424	246	2310	111	83	10	6.1	705
14	10	3.9	311	303	348	246	894	99	68	9.2	5.3	4780
15	7.4	3.7	265	250	368	227	559	83	58	10	5.3	687
16	5.9	59	246	227	294	193	408	71	48	9.5	5.0	375
17	5.5	520	238	213	238	173	326	62	41	7.4	4.8	270
18	5.2	429	210	213	224	157	270	54	35	6.4	4.4	220
19	4.8	187	197	231	203	170	229	48	31	5.9	3.7	188
20	4.8	129	193	3060	210	378	200	44	27	6.1	16	161
21	4.6	99	1200	3070	635	261	180	97	30	6.1	55	2870
22	4.4	83	514	1170	486	217	165	91	28	15	24	1560
23	4.4	93	353	780	537	398	153	1690	28	13	20	590
24	3.7	143	286	1280	560	486	136	1610	39	11	19	379
25	3.7	129	242	635	3360	339	121	492	41	15	42	292
26	6.1	111	203	465	1260	269	113	316	30	12	662	242
27	6.1	151	173	404	723	235	103	235	24	8.3	338	1480
28	4.6	157	157	353	514	217	91	200	20	7.4	259	5340
29	3.7	134	145	298	---	187	78	170	18	8.3	332	1030
30	3.7	203	206	257	---	164	69	157	16	7.7	215	578
31	3.3	---	882	235	---	151	---	203	---	13	267	---
TOTAL	183.8	2681.9	19491	33309	12636	11211	21235	10975	3128	378.3	2492.1	22531
MEAN	5.93	89.4	629	1074	451	362	708	354	104	12.2	80.4	751
MAX	16	520	6370	6370	3360	2330	3730	2310	460	26	662	5340
MIN	3.3	2.4	118	213	137	151	69	44	16	5.9	3.7	21
CFSM	.04	.54	3.81	6.51	2.73	2.19	4.29	2.15	.63	.07	.49	4.55
IN.	.04	.60	4.39	7.51	2.85	2.53	4.79	2.47	.71	.09	.56	5.08

CAL YR 1978 TOTAL 78741.6 MEAN 216 MAX 6370 MIN 2.4 CFSM 1.31 IN 17.75
WTR YR 1979 TOTAL 140252.1 MEAN 384 MAX 6370 MIN 2.4 CFSM 2.33 IN 31.62

CUMBERLAND RIVER BASIN

03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1973 to current year.

pH: July 1973 to current year.

WATER TEMPERATURES: July 1973 to current year.

DISSOLVED OXYGEN: July 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since July 1973.

REMARKS.--Interruption in the record Oct. 1-5 was due to pump failure. Dissolved oxygen Oct. 5-31 was due to probe failure. pH Dec. 1-31 due to probe failure.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 479 micromhos Sept. 29, 1975; minimum, 103 micromhos Apr. 4, 1977, Dec. 9, 1978.

pH: Maximum, 8.8 units Sept. 9, 1978; minimum, 6.6 units May 15, 1975.

WATER TEMPERATURES: Maximum, 33.5°C July 8, 1977; minimum, 0.5°C Jan. 19, 1977.

DISSOLVED OXYGEN: Maximum, 14.8 mg/L Jan. 1, 2, 3, 1977; minimum, 1.3 mg/L Aug. 30, 1973.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 450 micromhos Nov. 26; minimum, 103 micromhos Dec. 9.

pH: Maximum, 8.3 units Oct. 21, Nov. 3, 11, 13; minimum, 7.1 units Sept 14.

WATER TEMPERATURES: Maximum, 32.0°C July 31, Aug. 8-10; minimum 2.5°C Feb. 10, 11.

DISSOLVED OXYGEN: Maximum, 14.1 mg/L Dec. 12; minimum 4.4 mg/L Aug. 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JUL 25...	1330	8.2	407	28.0	8	.18	--
AUG 28...	1145	155	264	24.0	40	17	87

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)
AUG 28...	1145	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 28...	.00	.00	.00	.00	.00	.00	0	.00	.00	.00

CUMBERLAND RIVER BASIN

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03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	370	362	367	449	445	447	274	120	175
2	---	---	---	373	365	370	449	443	447	280	154	228
3	---	---	---	375	368	371	445	415	440	326	283	307
4	---	---	---	373	367	370	412	190	269	345	326	337
5	---	---	---	377	369	372	349	257	310	361	346	351
6	352	337	340	377	371	374	368	166	268	355	329	349
7	349	344	347	380	367	374	386	222	341	326	136	186
8	355	349	353	380	363	371	375	200	335	279	191	235
9	358	353	356	364	356	360	234	103	157	322	280	305
10	364	356	360	363	358	360	315	240	284	339	324	332
11	369	356	362	367	360	362	345	317	333	345	338	341
12	369	357	361	369	364	366	363	345	353	350	345	347
13	377	295	345	375	367	372	369	362	365	363	348	352
14	342	314	333	382	375	379	373	368	371	357	349	352
15	343	311	336	384	378	381	378	373	375	351	347	349
16	388	343	348	386	282	336	387	378	380	351	346	349
17	380	342	351	368	308	342	384	379	381	358	351	354
18	355	349	352	308	273	283	389	382	385	361	358	359
19	357	349	353	325	283	303	392	386	389	371	358	360
20	357	348	350	364	328	347	394	356	390	358	150	231
21	365	352	357	392	368	381	377	234	290	216	185	199
22	371	357	364	425	392	404	343	255	305	287	222	260
23	370	362	365	419	403	408	375	344	363	312	288	301
24	364	356	361	434	419	427	389	378	383	316	257	280
25	365	357	361	442	435	438	395	389	393	314	267	292
26	387	358	370	450	419	444	398	395	397	336	318	329
27	374	366	369	444	430	441	402	399	401	343	335	339
28	369	362	366	445	441	444	405	401	402	348	343	345
29	368	362	365	447	441	445	406	403	404	350	344	347
30	369	361	365	449	445	447	405	391	396	353	350	351
31	371	364	368	---	---	---	393	280	348	356	352	354
MONTH	388	295	356	450	273	381	449	103	358	371	120	310

CUMBERLAND RIVER BASIN

03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	358	355	356	339	329	334	358	298	340	333	326	329
2	359	357	358	341	334	338	321	156	221	330	324	327
3	365	360	363	343	322	338	265	211	242	330	260	304
4	368	362	365	332	161	221	304	257	286	282	149	190
5	370	364	366	314	248	286	324	268	293	310	208	269
6	372	362	367	329	312	322	345	329	339	340	312	329
7	400	365	375	337	329	331	352	346	348	349	341	345
8	375	361	365	339	335	337	354	332	350	354	349	352
9	389	357	366	344	337	341	332	260	298	356	351	354
10	360	345	357	343	331	338	305	275	291	359	352	356
11	360	353	356	341	302	321	333	306	322	359	349	354
12	372	358	364	321	300	308	334	138	208	357	349	354
13	370	336	357	337	323	331	281	207	238	359	349	355
14	331	318	322	342	334	339	315	284	303	362	352	358
15	347	325	335	346	333	340	326	315	322	362	356	358
16	361	347	353	344	329	339	333	326	329	357	354	356
17	365	358	362	342	325	335	334	322	329	357	350	354
18	376	359	365	342	327	335	335	318	329	353	346	349
19	371	355	362	340	307	328	330	317	325	348	340	344
20	362	354	358	336	327	331	327	310	321	343	335	339
21	359	321	346	332	314	321	326	315	321	342	323	328
22	319	294	303	339	326	333	329	320	324	336	328	332
23	336	314	330	344	327	338	331	320	326	341	174	264
24	341	335	338	338	315	325	333	323	329	288	134	223
25	326	146	222	349	315	331	337	330	334	339	291	319
26	291	224	267	363	352	359	340	331	335	351	337	344
27	317	290	306	368	363	366	341	330	335	355	348	352
28	330	319	326	372	360	367	340	329	334	357	351	354
29	---	---	---	370	356	364	337	328	333	363	356	358
30	---	---	---	366	353	361	334	328	331	369	337	352
31	---	---	---	364	352	356	---	---	---	355	342	349
MONTH	400	146	343	372	161	333	358	138	311	369	134	331
	JUNE			JULY			AUGUST			SEPTEMBER		
1	356	341	350	329	320	325	308	302	305	359	344	353
2	352	323	334	328	319	324	313	302	306	352	344	349
3	341	282	308	327	316	322	314	304	310	368	353	361
4	329	288	316	329	317	323	315	311	313	379	368	373
5	338	322	327	327	314	319	327	310	316	384	378	381
6	354	337	345	319	310	315	325	308	317	385	380	383
7	364	352	358	319	309	314	316	305	311	386	379	383
8	369	363	365	313	301	307	313	302	308	385	374	380
9	373	364	368	309	304	306	314	303	309	378	368	372
10	369	357	364	326	299	308	314	302	308	374	362	366
11	366	360	363	326	311	321	312	304	309	368	360	363
12	366	358	363	324	306	315	313	307	310	365	358	362
13	364	355	359	317	304	309	315	306	310	364	125	292
14	361	349	356	328	306	318	315	306	311	240	108	171
15	348	333	340	334	306	322	313	308	310	316	244	285
16	334	327	331	329	310	319	312	302	308	350	317	335
17	329	323	326	315	302	310	314	302	308	367	351	359
18	328	322	325	314	301	308	316	302	309	374	365	370
19	328	322	325	313	304	309	311	298	306	375	372	374
20	329	321	326	313	307	311	310	289	302	378	369	376
21	329	324	326	319	305	311	313	290	300	366	136	237
22	327	322	324	324	302	312	316	305	310	280	144	218
23	331	290	321	319	302	309	320	291	304	340	284	316
24	316	295	308	318	303	309	324	243	275	363	340	352
25	326	319	324	320	290	304	271	176	252	373	362	368
26	331	325	328	302	286	295	270	201	218	376	371	374
27	332	326	328	303	297	300	243	208	226	376	143	330
28	333	323	328	305	298	301	281	246	261	261	134	191
29	329	320	325	312	301	307	299	237	272	332	267	305
30	328	319	324	316	300	309	345	302	324	355	333	346
31	---	---	---	306	299	303	352	334	343	---	---	---
MONTH	373	282	336	334	286	312	352	176	299	386	108	334

CUMBERLAND RIVER BASIN

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03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

PH (UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	8.0	7.4			---	---	7.9	7.8	7.8	7.7
2	---	---	8.0	7.4			---	---	7.9	7.9	7.9	7.7
3	---	---	8.3	7.4			---	---	7.9	7.8	7.8	7.7
4	---	---	8.1	7.4			---	---	8.0	7.8	7.7	7.3
5	---	---	8.0	7.4			7.9	7.8	8.0	7.9	7.7	7.5
6	7.6	7.4	8.0	7.5			8.0	7.9	8.0	7.9	7.8	7.7
7	7.5	7.4	7.7	7.6			7.9	7.6	8.1	7.9	7.9	7.7
8	7.7	7.4	8.0	7.6			7.8	7.7	8.1	7.9	7.8	7.7
9	7.6	7.4	7.8	7.5			8.0	7.8	8.1	8.0	7.9	7.7
10	7.7	7.4	8.0	7.4			7.9	7.8	8.1	8.0	7.8	7.7
11	7.9	7.5	8.3	7.4			8.0	7.9	8.1	8.0	7.8	7.7
12	8.1	7.5	8.1	7.6			8.0	7.8	8.1	7.9	7.9	7.7
13	7.8	7.5	8.3	7.5			8.1	8.0	8.0	7.6	8.0	7.8
14	7.5	7.3	8.0	7.6			8.0	7.9	7.9	7.8	8.0	7.8
15	7.6	7.3	8.0	7.6			8.0	7.9	7.9	7.8	8.1	7.8
16	7.7	7.3	7.7	7.5			8.0	7.9	7.9	7.8	8.1	7.9
17	7.9	7.3	7.7	7.3			8.0	7.9	8.1	7.9	8.1	7.8
18	7.9	7.4	7.6	7.3			8.1	8.0	8.1	7.9	8.0	7.8
19	8.1	7.4	7.5	7.3			8.1	8.0	8.1	7.9	8.0	7.7
20	8.2	7.4	7.9	7.4			8.0	7.6	8.1	7.9	7.9	7.6
21	8.3	7.4	7.8	7.5			7.7	7.6	8.0	7.7	7.8	7.6
22	8.2	7.5	7.8	7.5			7.8	7.7	7.7	7.6	7.8	7.6
23	8.1	7.5	7.8	7.7			7.9	7.8	7.7	7.7	7.8	7.7
24	8.0	7.5	8.0	7.7			7.8	7.7	7.7	7.7	7.7	7.6
25	7.9	7.4	8.0	7.7			7.8	7.7	7.7	7.4	7.8	7.6
26	7.7	7.5	8.0	7.9			7.9	7.8	7.6	7.5	8.0	7.8
27	7.8	7.4	8.1	7.9			7.8	7.8	7.8	7.6	7.9	7.8
28	7.8	7.3	8.0	7.8			7.9	7.8	7.8	7.7	8.0	7.8
29	8.0	7.3	8.1	8.0			7.8	7.5	---	---	7.9	7.8
30	8.2	7.3	8.0	7.6			7.9	7.8	---	---	7.9	7.7
31	8.0	7.4	---	---			7.9	7.8	---	---	7.9	7.7
MONTH	8.3	7.3	8.3	7.3			8.1	7.5	8.1	7.4	8.1	7.3
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.9	7.6	7.8	7.7	7.8	7.7	7.9	7.7	7.9	7.7	7.7	7.6
2	7.6	7.3	7.8	7.7	7.8	7.7	7.9	7.4	7.8	7.6	7.7	7.6
3	7.5	7.4	7.7	7.5	7.7	7.5	7.9	7.7	7.7	7.6	7.7	7.7
4	7.6	7.5	7.5	7.2	7.7	7.5	7.9	7.7	7.8	7.6	7.8	7.7
5	7.7	7.5	7.6	7.3	7.7	7.6	7.9	7.6	7.9	7.6	7.8	7.7
6	7.9	7.7	7.7	7.6	7.7	7.6	8.0	7.6	8.1	7.7	7.9	7.7
7	7.9	7.7	7.7	7.6	7.8	7.6	7.7	7.6	8.0	7.8	8.0	7.7
8	7.8	7.7	7.7	7.6	7.8	7.7	7.6	7.4	7.9	7.4	7.9	7.7
9	7.7	7.6	7.7	7.6	7.8	7.8	7.5	7.4	7.9	7.7	7.8	7.7
10	7.7	7.6	7.7	7.6	7.8	7.7	7.7	7.4	7.8	7.6	7.9	7.7
11	7.9	7.7	7.7	7.6	7.9	7.7	7.7	7.5	7.8	7.5	7.9	7.7
12	7.8	7.3	7.7	7.6	7.9	7.9	7.7	7.5	7.7	7.5	7.9	7.7
13	7.5	7.4	7.7	7.6	7.9	7.8	7.9	7.4	7.7	7.5	7.8	7.3
14	7.7	7.5	7.8	7.6	7.9	7.8	8.0	7.7	7.7	7.5	7.3	7.1
15	7.8	7.6	7.8	7.8	7.9	7.7	7.9	7.7	7.6	7.4	7.5	7.3
16	7.9	7.6	7.8	7.7	7.8	7.7	7.9	7.6	7.7	7.4	7.6	7.5
17	7.9	7.7	7.9	7.7	7.8	7.6	7.9	7.7	7.7	7.4	7.7	7.6
18	7.9	7.7	7.9	7.7	7.7	7.6	7.9	7.7	7.7	7.5	7.7	7.7
19	7.9	7.7	8.0	7.8	7.9	7.5	7.8	7.6	7.8	7.5	7.8	7.7
20	7.9	7.7	7.9	7.7	7.9	7.7	7.8	7.6	7.7	7.4	7.8	7.7
21	7.9	7.6	7.7	7.6	7.8	7.6	7.7	7.5	7.8	7.6	7.7	7.2
22	7.8	7.6	7.7	7.6	7.8	7.6	7.8	7.6	8.0	7.7	7.5	7.2
23	7.8	7.6	7.6	7.2	7.9	7.5	7.9	7.6	8.0	7.6	7.6	7.5
24	7.8	7.6	7.5	7.2	7.6	7.5	7.9	7.6	7.8	7.6	7.7	7.6
25	7.7	7.6	7.7	7.5	7.6	7.5	7.9	7.5	7.5	7.3	7.7	7.7
26	7.7	7.7	7.8	7.7	7.8	7.6	7.7	7.5	7.4	7.2	7.8	7.7
27	7.8	7.4	7.7	7.7	7.9	7.7	7.8	7.5	7.4	7.3	7.7	7.3
28	7.8	7.7	7.8	7.7	7.9	7.4	7.8	7.5	7.5	7.4	7.4	7.2
29	7.8	7.4	7.8	7.7	8.0	7.4	7.9	7.6	7.5	7.4	7.6	7.4
30	7.8	7.7	7.8	7.7	7.9	7.7	7.8	7.5	7.6	7.5	7.6	7.5
31	---	---	7.8	7.7	---	---	7.9	7.5	7.7	7.6	---	---
MONTH	7.9	7.3	8.0	7.2	8.0	7.4	8.0	7.4	8.1	7.2	8.0	7.1

CUMBERLAND RIVER BASIN

03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	17.0	14.5	15.5	11.0	10.0	10.5	13.0	10.0	12.0
2	---	---	---	17.0	14.0	15.5	12.0	10.5	11.0	9.5	6.0	7.5
3	---	---	---	17.5	14.0	15.0	14.0	12.0	12.5	6.5	5.5	6.0
4	---	---	---	16.5	13.5	15.0	15.0	12.5	14.0	7.0	6.0	6.5
5	---	---	---	16.5	13.0	14.5	12.5	11.0	11.5	7.5	7.0	7.5
6	21.0	18.5	19.5	16.5	13.5	15.0	11.5	10.5	11.0	8.0	7.5	7.5
7	20.0	17.5	18.5	15.5	13.5	14.5	14.0	11.5	12.0	7.5	5.5	6.5
8	20.0	16.5	18.0	15.0	13.0	13.5	15.5	10.5	14.0	6.0	5.0	5.5
9	18.5	16.0	17.0	15.0	12.0	13.5	10.0	7.5	7.5	6.0	4.5	5.5
10	19.0	16.0	17.0	15.5	12.5	13.5	7.5	7.0	7.5	6.5	5.5	6.0
11	19.5	16.5	18.0	15.5	12.0	14.0	8.5	7.0	7.5	6.5	5.5	6.0
12	21.0	17.5	19.0	15.0	13.5	14.0	9.0	7.5	8.5	8.0	6.0	7.0
13	19.0	18.0	18.5	16.0	13.5	14.5	9.5	8.0	9.0	9.5	8.0	8.5
14	18.0	16.0	17.0	16.0	14.0	15.5	9.0	8.0	8.5	9.0	6.5	8.0
15	18.0	15.5	16.5	17.0	15.5	16.0	9.0	7.5	8.5	6.5	5.0	5.5
16	17.0	15.0	15.5	16.0	15.5	16.0	10.0	9.0	9.5	6.5	5.5	6.0
17	17.0	14.5	15.5	17.5	16.0	17.0	9.5	8.5	9.0	8.0	6.5	7.5
18	17.0	14.0	15.0	16.5	15.0	16.0	9.0	8.5	8.5	8.5	7.5	8.0
19	17.5	14.0	15.5	15.0	14.0	14.0	10.5	9.0	9.5	8.5	7.5	8.0
20	17.0	14.0	15.5	13.5	13.0	13.5	13.5	11.0	12.0	9.0	7.0	8.0
21	17.5	14.0	15.5	13.5	13.0	13.5	13.0	10.5	12.0	9.0	5.0	6.5
22	18.0	14.0	16.0	13.5	13.0	13.5	10.0	9.0	9.5	7.0	5.0	6.0
23	17.5	14.5	16.0	14.0	13.0	13.5	9.5	8.5	9.0	8.0	6.5	7.5
24	17.0	15.0	15.5	14.0	13.5	14.0	9.5	9.0	9.5	8.0	5.0	6.5
25	18.0	14.0	16.0	13.5	12.0	12.5	9.5	8.5	9.0	6.0	4.5	5.0
26	17.0	16.0	16.5	12.5	12.5	12.5	9.0	8.5	8.5	7.5	5.5	6.5
27	17.0	15.0	15.5	13.5	12.5	13.0	8.0	7.0	7.5	7.5	7.0	7.5
28	17.0	14.0	15.0	13.0	12.0	12.5	7.0	5.5	6.5	7.0	6.5	7.0
29	17.0	13.5	15.0	12.0	11.0	11.5	8.0	6.5	7.0	7.5	6.0	6.5
30	17.0	13.5	15.0	11.5	11.0	11.0	9.0	8.0	8.5	7.5	6.5	7.0
31	17.0	14.0	15.5	---	---	---	12.5	9.5	11.0	7.5	6.0	7.0
MONTH	21.0	13.5	16.5	17.5	11.0	14.0	15.5	5.5	9.5	13.0	4.5	7.0
FEBRUARY			MARCH			APRIL			MAY			
1	6.0	5.0	5.5	12.0	11.0	11.5	18.5	17.5	18.0	20.0	18.0	19.0
2	5.5	4.0	5.0	13.5	10.5	12.0	18.0	16.0	17.0	19.5	19.0	19.5
3	6.5	5.5	6.0	14.0	13.0	13.5	16.5	13.5	14.5	19.5	18.0	19.0
4	7.5	6.5	7.0	15.0	14.0	14.5	15.5	14.0	14.5	19.0	17.5	18.0
5	7.0	6.0	6.0	14.0	12.0	13.0	16.0	14.0	15.0	17.5	16.0	16.5
6	6.0	4.5	5.0	13.0	10.5	11.5	15.5	13.5	14.5	18.5	15.5	17.0
7	4.5	3.5	4.0	13.0	11.0	12.0	16.0	13.0	14.5	20.5	17.0	19.0
8	5.5	4.0	4.5	12.0	10.5	11.0	15.5	14.5	15.0	21.0	19.5	20.0
9	5.0	3.5	4.0	12.0	9.0	10.5	14.5	12.0	13.5	21.5	20.0	21.0
10	3.5	2.5	3.0	11.5	10.0	11.0	13.5	11.5	12.5	23.0	21.0	22.0
11	4.5	2.5	3.5	10.5	8.5	9.5	17.0	12.5	15.0	23.5	22.0	23.0
12	5.5	4.5	5.0	12.5	8.5	10.5	17.0	16.0	16.5	23.5	21.5	22.5
13	6.5	5.0	5.5	13.0	10.5	12.0	15.5	14.5	15.0	21.5	19.5	20.0
14	9.0	6.0	7.0	14.0	12.0	13.0	16.5	13.5	15.0	20.5	19.0	19.5
15	11.5	9.0	10.5	12.5	11.0	12.0	17.5	15.0	16.0	21.5	20.0	21.0
16	11.0	8.5	10.0	12.5	10.0	11.5	17.5	15.0	16.5	21.5	20.5	21.0
17	8.0	6.0	7.0	14.0	11.0	12.5	18.5	15.0	16.5	22.5	20.0	21.0
18	6.0	5.0	5.5	15.5	13.0	14.5	18.5	15.5	17.0	23.0	20.5	22.0
19	6.5	5.0	6.0	16.0	15.0	15.5	18.0	16.0	17.0	23.5	21.5	22.5
20	7.0	5.0	6.0	17.0	15.0	16.0	19.5	16.5	18.0	24.0	22.0	23.0
21	10.0	7.0	8.5	18.5	16.0	17.0	19.5	18.0	19.0	23.0	22.5	22.5
22	13.0	10.0	11.5	18.5	17.0	18.0	19.0	18.5	18.5	22.5	22.0	22.0
23	14.5	13.0	14.0	18.5	17.0	17.5	19.0	18.0	18.5	22.0	19.5	20.5
24	14.5	13.5	14.5	17.0	12.5	14.5	18.5	18.5	18.5	19.5	17.0	18.0
25	13.5	9.5	11.5	12.5	9.5	10.5	18.5	18.5	18.5	16.5	15.5	16.0
26	9.5	7.5	8.0	12.0	8.5	10.5	18.5	18.0	18.5	18.0	15.0	16.5
27	9.5	7.5	8.5	11.5	11.0	11.5	18.5	17.0	18.0	17.0	16.5	17.0
28	11.0	9.0	10.0	14.5	11.0	13.0	18.5	17.5	18.0	19.5	17.0	18.0
29	---	---	---	16.0	14.0	15.0	19.0	17.5	18.0	21.0	18.0	19.5
30	---	---	---	17.5	15.5	16.5	20.0	17.5	18.5	21.5	20.0	21.0
31	---	---	---	18.0	17.0	17.5	---	---	---	21.5	20.5	21.0
MONTH	14.5	2.5	7.0	18.5	8.5	13.0	20.0	11.5	16.5	24.0	15.0	20.0

CUMBERLAND RIVER BASIN

103

03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	23.0	20.5	21.5	28.0	25.0	26.5	30.0	28.0	29.0	25.0	23.5	24.5
2	24.0	21.5	23.0	27.0	25.5	26.0	29.0	26.5	28.5	25.0	24.0	24.5
3	23.5	20.5	22.0	29.5	25.5	27.5	29.0	27.5	28.0	25.5	24.5	25.0
4	22.5	19.5	21.0	29.5	26.5	28.0	29.0	26.5	28.0	26.5	25.0	26.0
5	23.0	20.5	21.5	28.0	26.5	27.0	29.5	27.0	28.5	27.5	25.5	26.5
6	22.5	21.5	21.5	28.0	25.5	26.5	30.5	27.5	29.0	27.5	26.0	26.5
7	23.0	20.5	22.0	26.5	26.0	26.5	31.0	28.0	29.5	27.5	25.5	26.0
8	24.5	22.5	23.5	26.0	25.0	25.5	32.0	26.5	30.0	26.0	24.5	25.5
9	26.0	24.0	25.0	25.5	24.5	25.0	32.0	28.5	30.0	25.5	24.0	24.5
10	26.0	25.0	25.5	26.5	24.0	25.0	32.0	28.5	30.5	25.0	23.0	24.0
11	24.5	22.5	23.5	25.0	24.5	25.0	30.5	28.0	29.5	24.5	23.0	24.0
12	23.5	22.0	23.0	25.0	24.0	24.5	29.0	26.5	27.5	25.5	23.0	24.0
13	24.5	23.0	23.5	28.5	24.0	26.0	30.0	25.5	27.5	24.5	22.0	23.5
14	25.5	23.5	24.5	29.0	25.5	27.0	29.0	25.5	27.0	22.0	20.0	21.0
15	25.5	24.0	25.0	29.5	26.5	27.5	26.5	25.0	26.0	20.0	19.0	19.5
16	26.0	24.5	25.5	28.5	26.5	27.5	28.0	24.0	25.5	20.5	18.5	19.5
17	27.0	24.5	25.5	29.5	27.0	28.0	28.5	23.5	26.0	20.5	19.0	20.0
18	27.5	25.0	26.0	29.5	27.0	28.0	29.0	24.5	27.0	20.5	20.0	20.5
19	28.0	25.5	27.0	29.0	26.5	27.5	30.0	25.5	27.5	21.0	20.0	20.5
20	28.0	26.0	27.0	28.0	26.5	27.0	29.5	26.0	27.0	21.0	20.5	20.5
21	27.5	25.5	26.5	29.0	26.5	27.0	28.0	25.5	26.5	23.0	20.5	21.5
22	28.5	25.5	27.0	29.0	26.5	28.0	28.0	26.0	27.0	22.5	20.0	21.0
23	29.0	26.0	27.0	29.0	26.5	28.0	27.5	26.0	27.0	20.0	18.5	19.5
24	27.0	25.0	26.0	29.0	26.5	28.0	28.0	26.0	27.0	19.0	18.5	19.0
25	25.5	24.0	24.5	28.5	27.0	27.5	26.5	24.5	26.0	19.0	18.0	18.5
26	26.0	23.5	24.5	27.5	27.0	27.0	25.5	23.5	24.0	20.0	18.0	19.0
27	26.5	23.5	25.0	29.5	26.5	28.0	25.0	22.5	23.5	20.0	19.0	19.5
28	27.0	24.5	25.5	28.5	27.0	27.5	25.0	23.5	24.0	20.0	19.0	19.5
29	27.0	25.0	26.0	30.5	27.0	28.5	24.5	22.5	24.0	20.5	19.0	19.5
30	28.0	25.0	26.5	30.0	27.5	28.5	24.5	23.5	24.0	20.5	19.0	20.0
31	---	---	---	32.0	27.5	29.5	24.5	23.0	23.5	---	---	---
MONTH	29.0	19.5	24.5	32.0	24.0	27.0	32.0	22.5	27.0	27.5	18.0	22.0

CUMBERLAND RIVER BASIN

03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1				9.5	7.1	7.9	10.6	10.4	10.5	10.2	9.5	9.7
2				9.2	7.1	7.8	10.6	10.3	10.4	12.1	10.4	11.6
3				9.1	7.0	7.6	10.3	9.3	9.8	12.3	12.1	12.2
4				9.0	6.9	7.6	9.8	8.7	9.3	12.3	11.8	12.1
5				8.8	6.9	7.6	10.4	9.8	10.2	11.9	11.6	11.7
6				8.7	6.7	7.5	10.7	10.4	10.5	11.6	11.4	11.5
7				8.1	6.6	7.5	10.3	9.7	10.1	12.0	11.2	11.6
8				8.8	7.6	8.0	10.0	9.0	9.4	12.4	11.9	12.3
9				8.9	7.4	7.9	11.6	9.9	10.8	12.6	12.2	12.4
10				9.1	7.3	8.0	11.6	11.5	11.5	12.3	12.1	12.2
11				9.6	7.6	8.3	11.4	11.2	11.3	12.3	12.0	12.2
12				9.6	7.9	8.4	14.1	11.1	12.6	12.0	11.5	11.9
13				9.4	7.5	8.2	13.4	13.1	13.3	11.4	11.0	11.2
14				9.1	7.4	8.1	13.1	12.8	13.0	12.0	11.0	11.6
15				8.7	7.2	7.7	12.8	12.5	12.7	12.6	12.1	12.4
16				8.3	7.4	7.7	12.1	11.6	11.8	12.4	12.1	12.2
17				8.4	7.5	8.0	11.9	11.4	11.7	12.0	11.6	11.8
18				8.7	8.5	8.6	11.6	11.5	11.6	11.8	11.5	11.6
19				9.3	8.8	9.1	13.1	10.8	11.5	11.6	11.3	11.4
20				9.4	9.3	9.4	11.6	10.4	11.0	11.3	10.9	11.2
21				9.5	9.3	9.4	11.3	10.3	10.9	12.3	10.9	11.6
22				9.5	9.2	9.4	11.7	11.3	11.6	12.3	11.8	12.1
23				9.3	9.1	9.2	11.7	11.5	11.6	11.8	11.2	11.6
24				9.6	9.1	9.3	11.4	11.1	11.2	12.2	11.2	11.7
25				9.9	9.6	9.8	11.5	11.0	11.3	12.4	12.0	12.2
26				9.9	9.5	9.7	11.7	11.3	11.5	12.0	11.5	11.9
27				9.6	9.5	9.5	12.1	11.6	11.8	11.4	11.3	11.3
28				10.1	9.6	9.8	13.0	11.9	12.0	11.8	11.3	11.6
29				10.2	10.1	10.1	12.0	11.7	11.8	11.8	11.1	11.4
30				10.6	10.2	10.4	11.7	11.1	11.4	11.4	11.0	11.2
31				---	---	---	11.1	10.2	10.7	11.6	11.0	11.2
MONTH				10.6	6.6	8.6	14.1	8.7	11.3	12.6	9.5	11.7
FEBRUARY			MARCH			APRIL			MAY			
1	12.1	11.5	11.8	11.5	10.9	11.2	9.7	9.0	9.2	9.0	8.2	8.7
2	12.2	12.0	12.1	11.0	10.2	10.8	9.4	8.7	9.1	8.8	8.1	8.5
3	12.2	11.7	11.9	10.3	9.6	9.9	10.3	9.2	9.9	8.3	7.8	8.1
4	12.1	11.6	11.8	9.8	9.3	9.6	9.8	9.6	9.7	8.6	7.8	8.3
5	12.5	11.9	12.1	10.2	9.8	10.1	9.9	9.5	9.7	9.1	8.7	9.0
6	12.6	12.2	12.3	10.7	10.2	10.5	10.4	9.6	10.0	9.2	8.6	9.0
7	12.9	12.2	12.5	10.5	10.1	10.4	10.3	9.5	10.0	8.8	8.3	8.6
8	13.0	12.4	12.7	10.6	10.3	10.4	9.6	9.2	9.4	8.4	8.1	8.2
9	13.4	12.4	12.9	11.0	10.6	10.8	10.0	9.1	9.7	8.2	7.9	8.1
10	13.6	12.9	13.2	10.8	10.3	10.5	10.3	9.8	10.1	8.0	7.7	7.8
11	13.5	12.9	13.2	11.2	10.8	11.0	9.8	8.8	9.5	7.8	7.5	7.6
12	13.3	12.4	12.7	11.1	10.6	11.0	8.7	8.0	8.4	7.6	7.3	7.5
13	12.9	12.2	12.5	11.3	10.8	11.0	9.3	8.7	9.1	8.1	7.5	7.8
14	12.2	11.3	11.9	11.5	10.5	10.9	9.7	9.0	9.5	8.4	8.0	8.2
15	11.2	10.5	10.8	11.8	10.7	11.2	9.5	8.9	9.2	8.3	7.8	8.1
16	11.4	10.4	10.9	11.9	11.0	11.4	9.5	8.9	9.2	8.4	7.9	8.1
17	12.6	11.2	11.9	11.6	11.0	11.2	9.6	9.0	9.3	8.5	8.0	8.2
18	12.8	11.8	12.3	11.3	10.4	10.7	9.7	8.9	9.2	8.6	8.0	8.3
19	13.0	11.9	12.4	10.9	9.8	10.1	9.8	8.7	9.2	8.7	7.9	8.2
20	12.9	11.8	12.3	10.2	9.5	9.9	9.6	8.7	9.1	8.3	7.5	7.9
21	11.9	10.6	11.1	9.7	9.2	9.4	9.2	8.4	8.8	7.6	7.0	7.3
22	10.5	9.7	10.2	9.5	8.9	9.2	8.9	8.3	8.6	7.7	7.3	7.5
23	9.6	8.7	9.1	9.6	8.9	9.1	8.9	8.4	8.6	8.3	7.6	8.0
24	10.6	9.3	9.7	10.3	9.3	9.8	8.9	8.3	8.5	9.0	7.9	8.6
25	10.7	9.4	10.0	11.3	10.4	11.0	8.7	8.3	8.5	9.4	9.0	9.2
26	11.5	9.8	10.7	11.8	11.2	11.5	8.6	8.2	8.4	9.4	9.0	9.3
27	12.3	11.3	11.7	11.3	10.8	11.0	9.0	8.6	8.7	9.0	8.8	8.9
28	12.1	11.4	11.8	11.2	10.8	11.0	9.1	8.6	8.8	8.8	8.7	8.7
29	---	---	---	10.7	10.0	10.3	9.3	8.7	9.0	8.7	8.5	8.6
30	---	---	---	10.3	9.6	9.9	9.3	8.5	9.0	8.5	7.8	8.1
31	---	---	---	10.1	9.2	9.5	---	---	---	8.4	8.1	8.2
MONTH	13.6	8.7	11.7	11.9	8.9	10.5	10.4	8.0	9.2	9.4	7.0	8.3

CUMBERLAND RIVER BASIN

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03428070 WEST FORK STONES RIVER AT MANSON PIKE, AT MURFREESBORO, TN--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.3	7.9	8.1	7.7	6.5	7.0	6.7	5.7	6.0	7.1	6.9	7.0
2	8.1	6.8	7.7	7.6	6.4	6.8	6.3	5.5	5.8	7.1	6.9	7.0
3	8.1	6.8	7.8	7.7	6.2	6.9	6.1	5.4	5.6	7.1	6.8	7.0
4	8.3	8.1	8.2	7.8	6.1	6.7	6.2	5.4	5.8	7.1	6.7	6.9
5	8.2	7.9	8.1	7.6	6.2	6.7	6.8	5.4	5.9	7.3	6.8	7.0
6	8.0	7.7	7.9	8.2	6.2	7.0	7.3	5.5	6.2	7.5	6.8	7.1
7	8.0	7.7	7.9	7.1	6.3	6.6	7.1	5.7	6.3	7.9	6.8	7.3
8	7.8	7.4	7.6	6.6	5.9	6.1	7.2	5.4	6.2	7.8	7.0	7.3
9	7.5	7.3	7.4	6.9	5.9	6.2	7.1	5.2	6.0	8.0	7.1	7.5
10	7.4	7.0	7.3	7.9	6.0	6.8	7.1	4.8	5.8	8.2	7.3	7.6
11	8.2	7.2	7.8	7.4	5.9	6.8	6.8	4.8	5.5	8.5	7.3	7.7
12	8.2	8.0	8.1	6.9	5.8	6.4	6.7	4.8	5.5	8.7	7.2	7.7
13	8.2	7.7	8.0	7.9	6.1	6.8	7.0	4.8	5.7	7.3	6.6	7.0
14	8.1	7.6	7.9	8.4	6.3	7.1	7.3	4.7	5.7	8.2	6.6	7.6
15	8.2	7.5	7.9	8.3	6.2	6.9	6.3	4.7	5.3	8.5	8.3	8.4
16	8.0	7.4	7.7	8.3	6.0	7.0	7.9	4.7	6.0	8.6	8.3	8.5
17	7.9	7.3	7.6	8.3	5.9	7.0	8.0	4.9	6.1	8.4	8.2	8.3
18	7.9	7.2	7.6	7.7	5.8	6.6	8.0	4.9	6.1	8.2	8.2	8.2
19	8.7	6.7	7.3	8.0	5.7	6.5	8.3	4.8	6.1	8.2	8.2	8.2
20	7.6	6.5	7.0	7.3	5.5	6.2	7.8	4.4	5.9	8.2	7.6	7.9
21	7.1	6.3	6.6	7.8	5.2	6.0	6.7	6.0	6.4	7.7	6.4	7.1
22	7.1	6.2	6.6	7.2	5.4	6.3	6.9	6.0	6.4	8.0	6.7	7.6
23	7.4	5.7	6.7	7.3	5.8	6.5	7.0	5.6	6.1	8.4	8.0	8.2
24	6.4	5.9	6.1	7.6	6.1	6.7	6.7	5.4	5.9	8.4	8.1	8.3
25	6.9	6.0	6.5	7.3	5.2	6.2	6.3	5.4	5.8	8.4	8.3	8.4
26	7.6	6.6	7.0	6.1	5.0	5.3	7.1	5.5	6.8	8.4	7.7	8.1
27	7.9	6.9	7.3	6.8	4.7	5.5	7.2	6.6	6.9	7.8	7.0	7.5
28	8.1	6.9	7.4	6.7	4.8	5.7	7.0	6.5	6.7	7.8	6.8	7.4
29	8.3	6.9	7.4	7.3	4.9	5.9	7.2	6.9	7.1	8.1	7.8	8.0
30	8.0	6.6	7.2	7.0	4.9	5.7	7.1	6.9	7.0	8.1	7.8	8.0
31	---	---	---	7.0	4.9	5.8	7.4	7.1	7.3	---	---	---
MONTH	8.7	5.7	7.5	8.4	4.7	6.4	8.3	4.4	6.1	8.7	6.4	7.7

CUMBERLAND RIVER BASIN

03428200 WEST FORK STONES RIVER AT MURFREESBORO, TN

LOCATION.--Lat 35°54'10", long 86°25'48", Rutherford County, Hydrologic Unit 05130203, on left bank at Murfreesboro waste treatment plant outfall, 3,000 ft (914 m) downstream from Sinking Creek, 4.5 mi (7.2 km) northwest of the courthouse in Murfreesboro, and at mile 10.7 (17.2 km).

DRAINAGE AREA.--177 mi² (458 km²), includes 17 mi² (44 km²) without surface drainage.

PERIOD OF RECORD.--July 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 514.95 ft (156.957 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--7 years, 365 ft³/s (10.34 m³/s), 28.00 in/yr (711 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,000 ft³/s (878 m³/s) Mar. 13, 1975, gage height, 23.80 ft (7.254 m); minimum, 4.2 ft³/s (0.119 m³/s) Aug. 9, 10, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,700 ft³/s (105 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	Unknown	*15800 447	20.02 6.102	Apr. 12	1600	6680 189	14.45 4.404
Jan. 1	2215	10900 309	17.70 5.395	May 4	1245	4630 131	11.54 3.517
Jan. 7	1415	6960 197	14.82 4.517	May 24	0015	4220 120	10.84 3.304
Jan. 20	1330	5230 148	12.47 3.801	Sept. 14	0700	9670 274	16.98 5.176
Feb. 25	1415	6810 193	14.62 4.456	Sept. 21	2130	6130 174	13.73 4.185
Mar. 4	0900	6150 174	13.75 4.191	Sept. 28	0615	10000 283	17.18 5.236
Apr. 2	1615	5840 165	13.33 4.063				

Minimum discharge, 4.7 ft³/s (0.133 m³/s) Aug. 20, gage height, 1.52 ft (0.463 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	9.9	192	6500	355	600	254	81	236	26	35	236
2	17	11	152	2500	316	490	2980	74	236	24	50	173
3	15	11	136	840	286	480	2220	340	550	23	56	147
4	15	11	1170	580	279	2530	1640	2460	583	20	46	115
5	13	9.9	743	420	286	670	1080	964	371	26	32	92
6	12	9.6	458	560	236	500	701	583	273	26	28	79
7	12	15	477	5000	345	440	534	439	236	29	24	67
8	9.6	20	1250	2110	387	380	453	355	187	43	19	53
9	9.6	15	7000	911	381	580	1040	273	156	40	17	46
10	11	14	1150	682	345	600	670	218	136	30	15	42
11	11	14	660	539	316	470	539	183	208	37	14	34
12	10	13	500	477	355	410	3540	152	143	27	13	31
13	15	12	400	453	664	360	2520	136	115	26	13	550
14	27	12	330	448	635	300	1090	121	94	21	12	5530
15	16	12	280	381	658	250	720	102	82	21	9.9	959
16	14	55	260	345	572	241	534	87	70	26	11	550
17	14	594	250	308	498	208	448	76	60	21	9.6	420
18	13	640	250	316	482	183	381	68	53	17	11	340
19	13	235	230	324	463	197	324	61	48	18	8.7	279
20	13	152	224	2760	472	458	266	58	44	17	7.5	224
21	12	118	1330	3260	886	345	230	100	46	18	70	2720
22	10	100	658	1520	807	266	202	115	47	22	30	2170
23	10	118	462	1030	841	434	183	1430	39	28	31	826
24	11	164	381	1530	898	623	164	1920	58	24	29	550
25	11	152	323	873	3550	438	148	640	65	37	34	448
26	12	128	254	689	1930	355	136	425	50	50	775	376
27	16	183	202	600	1290	293	128	308	40	29	583	1070
28	14	183	178	545	1100	266	111	241	34	22	365	6070
29	12	156	160	468	---	224	97	202	30	20	513	1380
30	11	236	241	420	---	192	90	187	30	19	324	812
31	11	---	968	392	---	173	---	266	---	24	420	---
TOTAL	417.2	3403.4	21269	37781	19633	13956	23423	12665	4320	811	3605.7	26389
MEAN	13.5	113	686	1219	701	450	781	409	144	26.2	116	880
MAX	27	640	7000	6500	3550	2530	3540	2460	583	50	775	6070
MIN	9.6	9.6	136	308	236	173	90	58	30	17	7.5	31
CFSM	.08	.64	3.88	6.89	3.96	2.54	4.41	2.31	.81	.15	.66	4.97
IN.	.09	.72	4.47	7.94	4.13	2.93	4.92	2.66	.91	.17	.76	5.55

CAL YR 1978 TOTAL 82205.6 MEAN 225 MAX 7000 MIN 9.6 CFSM 1.27 IN 17.28
WTR YR 1979 TOTAL 167673.3 MEAN 459 MAX 7000 MIN 7.5 CFSM 2.59 IN 35.24

CUMBERLAND RIVER BASIN

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03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN

LOCATION.--Lat 35°56'25", long 86°27'54", Rutherford County, Hydrologic Unit 05130203, near right bank at county bridge on Sulphur Springs Road, 400 ft (122 m) upstream from Nice's Mill dam, 1.6 mi (2.6 km) downstream from Overall Creek, 4.2 mi (6.8 km) southeast of Smyrna, and at mile 6.4 (10.3 km).

DRAINAGE AREA.--237 mi² (614 km²), includes 43 mi² (111 km²) without surface drainage.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft (152.400 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--14 years, 458 ft³/s (12.97 m³/s), 26.24 in/yr (666 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,800 ft³/s (1,810 m³/s) Mar. 13, 1975, gage height, 19.18 ft (5.846 m) from rating curve extended above 14,000 ft³/s (396 m³/s) on basis of area-velocity study at gage height 17.11 ft (5.215 m) and flood routing from Murfreesboro gage and Overall Creek at gage heights 16.65 ft (5.075 m) and 17.39 ft (5.300 m); minimum, 2.2 ft³/s (0.062 m³/s) Nov. 6-8, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 10,000 ft³/s (283 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1115	*15600 442	13.74 4.188	Sept. 14	0745	12100 343	12.06 3.676
Jan. 2	0015	12000 340	12.00 3.658	Sept. 28	0745	10800 306	11.13 3.392

Minimum discharge, 15 ft³/s (0.42 m³/s) Aug. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	20	290	7600	405	864	445	161	281	50	45	213
2	46	18	224	5030	348	717	4550	153	269	47	56	168
3	39	20	221	1750	321	639	3440	477	709	47	68	145
4	39	20	2090	1200	299	2790	2490	3950	917	43	64	123
5	35	20	1090	977	271	1250	1730	1730	539	43	51	107
6	27	23	698	946	250	886	1150	1070	391	48	44	93
7	27	35	717	6670	308	706	893	797	321	54	40	81
8	23	44	1570	3340	355	594	751	626	261	72	34	72
9	21	37	10100	1560	339	497	1540	498	222	73	32	64
10	25	31	2300	1140	299	563	1010	416	196	59	28	60
11	29	23	1390	906	273	784	784	340	236	69	27	55
12	29	25	1040	773	294	560	5150	288	192	56	24	48
13	37	25	839	708	691	462	3940	253	159	51	23	718
14	62	21	692	684	650	432	1820	228	139	45	23	7870
15	48	23	585	578	809	403	1230	204	124	44	20	1580
16	41	64	512	501	635	336	945	181	110	45	19	932
17	37	665	473	459	493	297	777	164	99	40	19	679
18	35	898	412	446	443	268	653	150	91	37	18	520
19	33	346	369	457	390	281	549	138	84	34	18	418
20	31	226	337	3680	378	655	471	131	77	33	16	343
21	25	179	1740	4700	1000	504	414	155	77	47	60	3810
22	25	154	1010	2250	996	410	365	181	81	40	41	3570
23	25	172	718	1500	1090	726	329	1270	74	44	41	1300
24	25	272	581	2080	1240	1050	291	2280	85	40	39	894
25	27	239	492	1280	4170	749	261	781	91	48	40	688
26	31	204	402	984	2290	588	241	499	74	76	617	550
27	41	337	333	847	1420	492	229	357	67	54	522	1070
28	37	325	288	752	1080	443	207	291	62	44	270	7270
29	31	256	257	632	---	379	188	251	57	39	481	1980
30	27	310	356	540	---	327	174	232	55	36	269	1170
31	21	---	1360	472	---	295	---	296	---	38	361	---
TOTAL	1031	5032	33486	55442	21537	19947	37017	18548	6140	1496	3410	36591
MEAN	33.3	168	1080	1788	769	643	1234	598	205	48.3	110	1220
MAX	62	898	10100	7600	4170	2790	5150	3950	917	76	617	7870
MIN	21	18	221	446	250	268	174	131	55	33	16	48
CFSM	.14	.71	4.56	7.54	3.25	2.71	5.21	2.52	.87	.20	.46	5.15
IN.	.16	.79	5.26	8.70	3.38	3.13	5.81	2.91	.96	.23	.54	5.74

CAL YR 1978	TOTAL	139347	MEAN 382	MAX 10100	MIN 18	CFSM 1.61	IN 21.87
WTR YR 1979	TOTAL	239677	MEAN 657	MAX 10100	MIN 16	CFSM 2.77	IN 37.62

CUMBERLAND RIVER BASIN

03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to current year.

WATER TEMPERATURE: March 1974 to current year.

INSTRUMENTATION.--Water-temperature recorder March 1974 to September 1975, water quality monitor October 1975 to current year.

REMARKS.--Interruptions in the record Dec. 5-13, were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 610 micromhos Oct. 22, 1978; minimum, 124 micromhos Mar. 12, 1977.

WATER TEMPERATURES: Maximum, 30.0°C July 12, 1976; minimum, 3.5°C Feb. 10, 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 610 micromhos Oct. 22; minimum, 153 micromhos Sept. 13.

WATER TEMPERATURES: Maximum, 27.5°C Aug. 9; minimum, 3.5°C Feb. 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
JUL 25...	1215	36	410	24.0	9	.87
SEP 17...	1400	672	400	18.5	18	33

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	450	425	434	496	485	492	481	478	479	376	229	291
2	481	432	452	497	491	494	484	475	479	290	228	262
3	469	457	460	508	459	483	472	449	466	309	290	301
4	477	454	464	507	497	501	453	448	451	326	310	319
5	477	456	464	513	494	499	---	---	---	333	326	329
6	483	460	462	499	493	496	---	---	---	336	328	334
7	466	462	465	501	494	497	---	---	---	324	225	261
8	465	462	464	502	496	499	---	---	---	311	262	286
9	470	466	467	510	500	505	---	---	---	347	313	333
10	479	469	473	518	508	514	---	---	---	358	347	352
11	484	478	481	526	514	519	---	---	---	369	359	363
12	490	483	485	523	515	518	---	---	---	374	368	371
13	493	485	489	521	507	511	---	---	---	377	373	375
14	494	484	487	520	506	513	392	390	391	379	373	376
15	497	491	495	520	506	514	392	389	391	375	371	373
16	489	483	485	511	501	505	395	392	393	376	373	375
17	504	486	494	512	414	452	396	390	393	382	375	378
18	513	504	509	424	403	411	395	391	392	383	378	381
19	529	510	515	411	402	406	400	393	397	382	378	380
20	533	511	519	419	403	410	407	399	404	382	256	321
21	574	514	540	441	421	431	402	345	376	294	283	290
22	610	575	594	449	440	444	369	345	356	355	295	328
23	557	471	503	459	448	453	387	370	378	375	356	366
24	477	472	474	466	459	463	395	387	391	375	346	362
25	489	478	482	477	463	468	399	393	397	371	346	356
26	498	488	493	472	469	471	401	396	399	386	372	379
27	497	492	494	479	472	476	401	398	400	390	386	389
28	502	495	498	480	472	475	401	398	398	391	390	390
29	503	498	501	476	466	469	401	398	399	394	390	393
30	502	494	498	484	471	478	402	398	401	397	393	395
31	509	492	501	---	---	---	398	381	394	399	396	398
MONTH	610	425	488	526	402	479	---	---	---	399	225	349

CUMBERLAND RIVER BASIN

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03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	399	396	398	374	369	371	390	369	385	307	304	306
2	403	396	400	378	372	375	368	228	294	311	305	309
3	408	402	406	379	375	377	303	252	289	306	276	296
4	410	406	408	375	249	302	328	298	316	277	168	206
5	406	403	405	347	293	327	333	322	326	255	199	230
6	409	405	407	360	347	354	352	334	343	272	254	264
7	407	404	405	362	359	361	356	349	353	285	270	275
8	427	405	416	365	361	364	357	353	355	304	289	298
9	409	405	407	368	362	365	352	323	339	310	302	308
10	421	405	411	367	356	364	330	319	324	317	306	312
11	409	405	407	360	350	356	347	293	342	331	312	321
12	413	406	411	349	345	347	347	188	261	339	314	331
13	415	309	412	364	350	357	268	208	243	364	330	344
14	409	395	401	368	363	366	296	269	285	375	327	351
15	407	397	404	368	363	366	305	295	299	385	322	353
16	408	403	406	371	365	368	305	301	302	375	328	348
17	408	406	407	371	367	369	307	304	305	343	335	338
18	406	405	405	373	365	369	308	304	306	334	314	325
19	410	404	407	371	362	367	310	303	306	357	329	344
20	412	405	408	370	355	364	309	303	307	353	314	338
21	408	391	403	377	369	374	309	302	304	384	350	370
22	389	383	387	374	368	371	303	301	302	400	383	396
23	385	380	382	378	371	374	303	301	302	404	200	364
24	383	380	381	373	364	369	305	301	303	234	193	222
25	379	238	308	363	360	361	307	303	306	260	233	249
26	342	277	319	379	361	370	307	304	305	267	258	262
27	360	342	352	404	380	393	306	301	304	271	263	267
28	370	359	364	434	405	418	305	302	304	285	269	278
29	---	---	---	412	393	400	304	300	302	309	285	295
30	---	---	---	394	390	392	310	301	306	348	298	320
31	---	---	---	393	390	391	---	---	---	355	346	351
MONTH	427	238	394	434	249	368	390	188	311	404	168	309
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	358	339	344	373	365	369	427	419	424	403	382	394
2	366	343	359	389	367	376	427	420	423	421	405	413
3	366	350	357	381	370	375	424	417	421	416	409	411
4	371	340	355	376	371	372	417	401	408	412	399	407
5	338	319	329	380	375	378	395	388	391	416	405	412
6	403	332	367	379	375	378	399	389	394	423	414	419
7	438	402	422	385	359	378	397	389	391	425	418	422
8	441	385	405	361	339	353	403	391	394	422	412	418
9	357	348	352	349	331	341	405	394	400	419	410	414
10	357	350	353	355	348	351	409	402	406	420	413	416
11	360	343	351	368	354	360	414	407	410	415	406	411
12	361	345	349	370	364	367	422	415	419	415	408	411
13	370	355	361	375	369	371	422	418	420	431	153	385
14	377	360	368	386	375	379	425	418	423	259	187	215
15	405	371	389	397	386	390	426	421	423	326	262	295
16	389	370	378	404	396	398	421	412	417	376	327	354
17	462	391	428	408	400	406	415	410	414	401	378	390
18	477	421	448	400	393	397	420	413	416	475	401	431
19	549	440	499	397	385	389	429	422	424	539	478	510
20	552	446	485	410	389	395	443	430	436	589	542	565
21	468	398	425	410	394	404	475	426	447	609	319	538
22	486	435	469	395	379	388	422	385	397	291	179	242
23	491	407	439	402	378	388	392	385	388	344	295	325
24	477	428	452	403	396	400	399	391	394	368	347	359
25	461	434	446	398	391	395	393	374	382	384	368	377
26	512	459	482	409	366	388	387	272	308	411	385	398
27	503	378	431	382	364	374	337	268	298	422	365	415
28	358	343	351	399	381	387	417	340	375	320	220	252
29	374	357	362	408	398	403	508	422	463	348	290	324
30	376	369	371	420	410	414	520	331	336	374	349	362
31	---	---	---	425	412	419	382	348	369	---	---	---
MONTH	552	319	398	425	331	383	520	268	400	609	153	390

CUMBERLAND RIVER BASIN

03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	21.5	21.0	21.5	16.0	15.5	16.0	12.5	11.5	12.0	14.0	11.5	13.5
2	21.5	21.0	21.0	16.5	15.5	16.0	13.5	12.0	12.5	11.0	8.5	9.0
3	21.0	20.5	20.5	17.5	16.0	17.0	15.5	13.5	14.5	8.5	8.0	8.0
4	20.5	20.0	20.0	17.5	15.5	16.0	15.5	15.0	15.5	9.5	8.0	8.5
5	20.0	19.5	20.0	16.0	15.0	15.5	---	---	---	9.5	9.0	9.5
6	19.5	18.5	18.5	16.0	14.5	15.5	---	---	---	10.0	9.5	9.5
7	18.0	17.5	18.0	15.5	14.5	15.0	---	---	---	9.5	7.0	8.0
8	17.5	17.0	17.5	15.0	14.0	14.5	---	---	---	7.5	7.0	7.5
9	17.0	16.5	17.0	14.5	13.5	14.0	---	---	---	8.0	7.0	7.5
10	17.0	16.0	16.5	15.0	13.5	14.0	---	---	---	8.5	7.5	8.0
11	17.5	17.0	17.0	14.5	13.5	14.0	---	---	---	9.0	7.5	8.5
12	19.0	17.5	18.0	15.5	14.5	15.0	---	---	---	10.0	8.5	9.0
13	19.0	18.0	18.5	16.5	15.0	15.5	---	---	---	11.5	10.0	11.0
14	18.0	17.5	18.0	17.0	15.5	16.5	11.0	10.0	10.5	11.0	9.0	10.0
15	17.0	16.5	17.0	17.5	16.5	17.0	11.0	9.0	10.0	8.5	7.5	8.0
16	16.5	16.0	16.5	17.5	17.0	17.0	11.5	10.5	11.0	9.0	8.0	8.0
17	16.0	15.5	16.0	18.0	17.0	17.5	11.0	10.0	10.5	10.0	9.0	9.5
18	16.0	15.5	15.5	17.0	16.0	16.5	10.5	9.5	10.0	10.0	9.0	10.0
19	15.5	15.0	15.5	16.0	14.5	15.0	12.5	10.5	11.5	10.0	9.5	9.5
20	16.0	15.5	15.5	15.0	14.0	14.5	14.5	12.5	14.0	10.0	8.5	9.5
21	16.0	15.5	16.0	14.5	14.5	14.5	14.5	12.0	13.0	9.5	7.0	8.5
22	16.5	16.0	16.0	14.5	14.0	14.5	11.5	10.5	11.0	8.5	7.0	8.0
23	16.5	16.0	16.0	15.0	14.5	14.5	11.0	10.0	10.5	10.0	8.0	9.0
24	16.5	16.0	16.5	15.5	14.5	15.0	11.0	10.5	11.0	10.0	7.5	8.5
25	16.5	16.0	16.5	14.5	13.5	13.5	11.5	10.5	10.5	8.0	7.0	7.5
26	17.0	16.5	17.0	14.0	13.5	14.0	10.5	9.5	10.0	9.0	7.5	8.5
27	16.5	16.0	16.5	15.0	14.0	14.5	9.5	8.5	9.0	9.0	9.0	9.0
28	16.0	15.5	15.5	15.0	13.5	14.0	9.0	7.5	8.5	9.0	8.5	8.5
29	15.5	15.0	15.5	13.5	12.5	12.5	9.5	8.0	9.0	8.5	8.0	8.0
30	15.5	15.0	15.0	13.0	12.5	13.0	11.0	9.5	10.5	8.5	7.5	8.0
31	15.5	15.0	15.5	---	---	---	13.5	11.0	12.0	8.5	8.0	8.0
MONTH	21.5	15.0	17.0	18.0	12.5	15.0	---	---	---	14.0	7.0	9.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	7.5	6.5	7.0	12.5	11.5	12.0	17.0	16.5	17.0	19.5	17.0	18.0
2	7.0	6.0	6.5	13.5	11.5	12.5	17.5	16.5	17.0	19.0	17.5	18.0
3	8.0	7.0	7.5	14.0	13.0	13.5	17.0	14.5	15.5	19.5	18.0	18.5
4	8.5	8.0	8.0	15.0	14.0	14.5	16.0	14.5	15.5	18.5	17.5	18.0
5	8.0	7.0	7.0	14.5	13.0	13.5	16.5	15.0	15.5	17.5	16.5	17.0
6	7.0	6.5	7.0	13.5	12.0	12.5	16.0	14.5	15.5	18.0	16.0	17.0
7	6.5	6.0	6.0	13.5	12.0	13.0	16.5	14.0	15.0	19.5	17.0	18.5
8	6.5	5.0	6.0	13.0	11.5	12.0	16.0	15.5	15.5	20.0	18.5	19.5
9	6.5	5.0	5.5	13.0	10.5	11.5	15.5	14.0	14.5	21.0	18.5	19.5
10	5.0	3.5	4.5	12.5	11.5	12.0	14.0	13.0	13.5	22.0	19.0	20.5
11	6.0	4.0	5.0	11.5	10.5	11.0	17.5	14.0	16.0	22.0	20.0	21.0
12	6.5	6.0	6.5	12.5	10.5	11.5	17.5	16.5	17.0	21.0	19.5	20.5
13	8.0	5.5	6.5	13.0	11.5	12.5	16.5	15.5	16.0	19.0	18.5	19.0
14	9.5	7.0	8.0	14.0	12.5	13.0	17.0	14.5	16.0	19.5	18.0	18.5
15	11.5	9.5	10.5	13.5	12.0	12.5	18.0	15.5	16.5	20.0	18.5	19.0
16	11.5	9.5	10.5	13.0	11.5	12.5	17.5	15.5	16.5	20.0	18.5	19.0
17	9.0	8.0	8.5	14.0	12.0	13.0	18.0	15.5	17.0	20.0	18.5	19.0
18	8.0	7.0	7.5	15.0	13.5	14.0	18.5	16.0	17.5	20.5	19.0	19.5
19	8.0	6.5	7.5	15.0	14.5	15.0	18.0	16.0	17.0	20.5	19.5	20.0
20	8.0	6.5	7.5	16.0	15.0	15.5	19.0	16.5	17.5	20.5	20.0	20.0
21	10.5	8.5	9.5	17.0	16.0	16.5	19.0	17.5	18.5	21.0	20.0	20.5
22	12.5	10.0	11.0	17.0	16.5	17.0	18.5	18.0	18.0	21.0	20.5	20.5
23	14.0	12.5	13.5	17.0	16.5	16.5	19.0	18.0	18.5	21.5	20.0	21.0
24	14.5	14.0	14.0	16.5	14.0	15.5	18.5	18.0	18.0	20.0	18.0	19.0
25	13.5	11.0	12.5	14.0	12.5	13.0	18.5	18.0	18.0	17.5	17.0	17.0
26	10.5	9.0	9.5	13.0	11.5	12.5	18.5	17.5	18.0	18.0	16.0	17.0
27	10.5	8.5	9.5	13.0	12.5	12.5	19.0	16.5	17.5	17.5	17.5	17.5
28	12.0	10.0	11.0	14.5	12.5	13.5	18.5	17.0	17.5	19.0	17.5	18.0
29	---	---	---	15.5	14.5	15.0	18.5	16.5	17.5	20.5	18.5	19.0
30	---	---	---	16.0	15.0	15.5	19.5	16.5	18.0	20.5	20.0	20.0
31	---	---	---	16.5	16.0	16.5	---	---	---	21.0	20.0	20.5
MONTH	14.5	3.5	8.5	17.0	10.5	13.5	19.5	13.0	16.5	22.0	16.0	19.0

03428500 WEST FORK STONES RIVER NEAR SMYRNA, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	22.0	20.5	21.0	24.0	22.5	23.0	25.0	24.5	25.0	25.0	23.0	24.0
2	22.5	21.0	22.0	23.5	22.0	22.5	26.0	25.0	25.5	24.5	23.5	24.0
3	22.5	20.5	21.5	23.5	22.0	22.5	27.0	25.5	26.0	25.5	24.0	24.5
4	21.0	19.5	20.0	23.5	22.5	23.0	27.0	26.0	26.5	26.0	24.0	25.0
5	21.0	19.5	20.5	23.5	23.0	23.0	26.5	25.5	26.0	26.0	24.0	25.0
6	21.0	20.0	20.5	23.5	22.5	23.0	26.5	26.0	26.0	25.5	24.0	25.0
7	21.5	20.0	20.5	24.0	22.0	22.5	27.0	26.0	26.5	25.5	24.0	24.5
8	22.0	21.0	21.5	22.5	22.0	22.0	27.0	26.5	26.5	25.0	23.0	23.5
9	24.0	22.5	23.5	22.0	21.5	21.5	27.5	26.5	27.0	23.5	22.0	22.5
10	24.5	23.0	23.5	22.5	21.5	22.0	27.0	26.5	26.5	23.0	21.5	22.0
11	23.5	21.5	22.5	22.5	21.5	21.5	26.5	26.0	26.5	23.5	21.5	22.0
12	23.0	21.5	22.0	22.0	21.5	21.5	26.0	25.0	25.5	23.0	22.0	22.5
13	24.0	21.5	22.5	22.0	21.0	21.5	25.0	24.0	24.5	23.5	22.0	22.5
14	24.0	22.0	23.0	23.0	22.0	22.0	24.5	23.5	24.0	22.0	20.0	21.0
15	24.0	22.0	23.0	23.5	22.5	22.5	24.0	23.0	23.5	20.0	18.5	19.5
16	24.0	22.5	23.0	23.5	22.5	23.0	23.0	22.0	22.5	19.5	18.0	18.5
17	24.0	22.5	23.0	24.0	23.0	23.5	23.0	22.0	22.5	20.0	18.5	19.0
18	24.5	23.0	23.5	24.0	23.0	23.5	23.5	22.5	23.0	19.5	19.0	19.5
19	24.5	23.5	24.0	24.0	23.0	23.5	24.0	23.0	23.5	20.5	19.0	19.5
20	24.5	23.5	24.0	23.0	22.5	23.0	25.0	23.5	24.0	20.0	19.0	19.5
21	24.0	23.5	23.5	22.5	22.0	22.5	26.5	23.0	24.5	22.5	19.5	21.0
22	25.0	23.5	24.0	23.0	22.5	22.5	26.5	25.5	26.0	22.5	20.0	21.0
23	25.0	23.5	24.0	24.0	22.5	23.0	25.5	25.0	25.5	20.0	18.5	19.0
24	24.5	23.5	23.5	24.0	23.5	24.0	25.5	25.0	25.0	19.0	18.0	18.5
25	23.5	21.5	22.5	24.0	23.5	24.0	25.0	24.5	25.0	18.5	18.0	18.5
26	23.0	21.5	22.5	24.5	24.0	24.0	25.0	24.0	24.5	19.5	18.0	18.5
27	23.5	22.0	22.5	24.0	23.0	23.5	24.5	23.5	24.0	20.0	19.0	19.0
28	23.5	22.5	23.0	24.0	23.5	24.0	24.5	23.5	24.0	20.0	19.5	20.0
29	23.0	22.5	23.0	24.5	23.5	24.0	24.5	23.0	24.0	20.0	19.0	19.5
30	24.0	22.5	23.0	24.5	24.0	24.0	24.0	23.5	23.5	20.5	19.0	19.5
31	---	---	---	25.0	24.0	24.5	24.5	23.0	24.0	---	---	---
MONTH	25.0	19.5	22.5	25.0	21.0	23.0	27.5	22.0	25.0	26.0	18.0	21.5

CUMBERLAND RIVER BASIN

03431517 CUMMINGS BRANCH AT LICKTON, TN

LOCATION.--Lat 36°18'25", long 86°48'00", Davidson County, Hydrologic Unit 05130202, on right downstream wing-wall of bridge, on Shaw Road, 900 ft (274 m) above confluence with Shaw Branch, 0.8 mi (1.3 km) northeast of Lickton, and at mile 0.2 (0.3 km).

DRAINAGE AREA.--2.40 mi² (6.22 km²).

PERIOD OF RECORD.--December 1975 to current year.

GAGE.--Water-stage recorder and V-notch wier. Datum of gage is 532.25 ft (162.230 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 881 ft³/s (24.9 m³/s) Sept. 13, 1978; gage height, 5.21 ft (1.588 m); minimum daily, 0.01 ft³/s (0.000 m³/s) Sept. 19-21, 23-30, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.83 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 3	2330	135 3.82	3.27 .997	Apr. 2	0115	138 3.91	3.29 1.003
Dec. 7	2305	224 6.34	3.68 1.122	Apr. 12	0210	189 5.35	3.54 1.079
Dec. 8	1605	456 12.9	4.39 1.338	Sept. 13	2015	*881 24.9	5.21 1.588
Jan. 1	0315	144 4.08	3.32 1.012				

Minimum daily discharge, 0.02 ft³/s (0.001 m³/s) Oct. 2-12, 23-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.03	.27	73	3.4	7.8	11	2.5	1.8	.20	.66	.84
2	.02	.03	.22	25	2.9	6.4	56	2.4	1.3	.16	1.1	2.8
3	.02	.03	28	14	2.7	11	23	7.5	11	.16	.72	2.1
4	.02	.03	28	11	2.5	14	18	34	9.7	.18	.44	1.0
5	.02	.03	8.1	9.0	2.0	11	14	16	6.4	.18	.33	.61
6	.02	.03	5.2	7.8	1.8	8.4	11	10	5.0	.16	.25	.40
7	.02	.04	35	20	2.0	7.2	9.3	7.2	4.0	.25	.20	.27
8	.02	.04	149	15	1.8	6.2	9.0	5.0	3.5	1.8	.16	.20
9	.02	.04	44	11	1.5	4.8	12	4.2	3.1	1.4	.14	.16
10	.02	.04	17	9.0	1.4	4.4	10	3.5	2.4	.66	.14	.13
11	.02	.04	12	7.5	1.3	4.2	9.0	3.1	1.8	.44	.14	.13
12	.02	.04	7.8	6.7	1.5	3.9	52	2.7	1.4	1.0	.14	.13
13	.18	.04	6.2	6.4	1.8	3.4	23	2.4	1.2	1.3	.14	11
14	.22	.04	5.5	6.9	2.4	3.2	16	2.0	.97	.72	.14	32
15	.10	.04	4.6	5.9	5.0	2.9	12	1.6	.78	.57	.13	11
16	.06	.16	3.9	5.7	5.5	2.5	10	1.4	.61	.66	.13	6.2
17	.04	1.2	3.2	5.5	4.6	2.3	8.4	1.0	.52	.44	.13	4.4
18	.03	.72	2.8	5.2	4.2	2.2	7.2	.90	.48	.33	.13	3.5
19	.03	.27	2.5	5.2	3.9	9.0	6.2	.78	.40	.25	.13	2.8
20	.03	.18	4.4	26	3.4	7.8	5.5	.78	.36	.22	.11	2.3
21	.03	.13	14	28	6.4	4.8	5.0	1.0	.48	.22	.13	22
22	.03	.11	9.3	17	7.8	5.9	4.4	.90	.48	.18	.20	15
23	.02	.97	6.9	14	12	28	4.4	2.3	.36	.16	.13	9.7
24	.02	.90	6.2	14	11	22	4.0	2.5	.44	.18	.13	6.7
25	.02	.44	5.2	11	23	15	3.9	2.0	.40	.22	.18	5.2
26	.04	.40	4.4	8.7	19	11	3.9	1.4	.33	.84	.97	4.2
27	.05	1.1	3.7	7.8	12	10	3.7	1.0	.25	.84	.84	3.5
28	.05	.72	3.2	6.4	9.7	9.0	3.4	.90	.22	2.1	.40	4.4
29	.04	.48	2.8	5.2	---	7.8	3.1	.72	.20	2.0	.27	4.0
30	.04	.33	3.4	4.6	---	6.9	2.8	1.0	.25	.90	.52	3.5
31	.04	---	13	4.2	---	6.7	---	2.1	---	.57	.72	---
TOTAL	1.32	8.65	439.79	396.7	156.5	249.7	361.2	124.78	60.13	19.29	9.95	160.17
MEAN	.043	.29	14.2	12.8	5.59	8.05	12.0	4.03	2.00	.62	.32	5.34
MAX	.22	1.2	149	73	23	28	56	34	11	2.1	1.1	32
MIN	.02	.03	.22	4.2	1.3	2.2	2.8	.72	.20	.16	.11	.13
CFSM	.02	.12	5.92	5.33	2.33	3.35	5.00	1.68	.83	.26	.13	2.23
IN.	.02	.13	6.81	6.15	2.42	3.87	5.60	1.93	.93	.30	.15	2.48

CAL YR 1978 TOTAL 1237.35 MEAN 3.39 MAX 149 MIN .01 CFSM 1.41 IN 19.17
WTR YR 1979 TOTAL 1988.18 MEAN 5.45 MAX 149 MIN .02 CFSM 2.27 IN 30.80

CUMBERLAND RIVER BASIN

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03431700 RICHLAND CREEK AT CHARLOTTE AVENUE, AT NASHVILLE, TN

LOCATION.--Lat 36°09'04", long 86°51'16", Davidson County, Hydrologic Unit 05130202, near left bank on downstream end of pier of Charlotte Avenue bridge on U. S. Highway 70, 3.7 mi (6.0 km) upstream from mouth and 4.0 mi (6.4 km) southwest of the State Capitol in Nashville, and at mile 3.6 (5.8 km).

DRAINAGE AREA.--24.3 mi² (62.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 409.56 ft (124.834 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--15 years, 36.2 ft³/s (1.025 m³/s), 20.23 in/yr (514 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,470 ft³/s (268 m³/s) Sept. 13, 1979, gage height, 15.13 ft (4.612 m); minimum daily, 0.14 ft³/s (0.004 m³/s) Sept. 16, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	0050	2710 76.7	8.36 2.540	May 4	0200	4350 123	10.63 3.240
Dec. 8	0405	6160 174	12.68 3.865	July 19	1950	2760 78.2	8.44 2.572
Apr. 1	1615	2050 58.1	7.29 2.222	July 21	1625	2900 82.1	8.65 2.636
Apr. 12	0330	3170 89.8	9.04 2.755	Sept. 13	Unknown	*9470 268	15.13 4.612

Minimum daily discharge, 0.47 ft³/s (0.013 m³/s) Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	1.4	7.0	750	27	85	448	6.7	23	1.9	18	15
2	1.6	1.5	5.9	250	22	61	782	7.5	18	1.8	14	35
3	1.5	1.5	681	100	25	127	251	168	65	1.8	11	30
4	2.4	1.4	495	65	20	143	209	990	32	5.0	21	15
5	1.4	1.2	108	55	17	95	143	189	23	6.7	16	10
6	1.1	1.5	56	50	16	69	108	129	18	1.7	11	8.0
7	1.1	2.0	176	150	17	58	80	90	15	5.2	8.8	6.0
8	.96	3.5	2380	100	14	47	130	61	15	11	6.7	4.0
9	1.0	2.7	700	75	13	34	164	41	14	4.8	4.3	3.0
10	1.1	2.4	200	60	11	58	102	30	12	3.2	3.7	3.0
11	.66	2.0	130	55	12	40	76	26	10	2.6	7.5	3.0
12	.47	1.9	80	49	26	32	831	26	9.2	12	7.0	15
13	36	2.4	60	46	33	26	260	20	7.2	5.0	3.9	1800
14	7.5	2.3	50	41	46	21	162	16	5.9	3.7	3.0	600
15	3.4	2.4	40	30	59	17	130	14	5.0	51	3.0	100
16	2.5	54	35	26	43	14	104	13	4.3	12	2.8	80
17	2.0	80	30	23	32	13	80	12	3.9	6.2	2.3	60
18	1.8	18	25	20	30	11	58	10	3.4	3.5	2.1	45
19	1.6	10	20	30	28	56	46	10	2.9	379	2.1	30
20	1.5	7.5	50	311	25	41	37	20	2.8	116	1.6	25
21	1.4	5.7	100	277	95	32	29	20	14	304	6.2	300
22	1.4	5.5	80	162	59	73	25	15	4.3	102	27	150
23	1.4	29	60	141	76	257	27	60	10	34	5.2	100
24	1.4	18	45	154	63	143	20	90	7.8	22	3.2	80
25	1.3	10	35	106	461	108	20	54	4.1	67	13	65
26	4.3	16	30	85	218	76	16	30	3.2	49	33	50
27	4.3	21	25	76	147	78	13	28	2.8	27	17	40
28	2.2	12	20	59	114	59	12	29	2.4	22	9.0	60
29	1.8	10	15	46	---	46	11	20	2.3	15	7.0	50
30	2.1	8.5	35	40	---	37	8.5	25	2.1	14	8.0	40
31	1.8	---	110	33	---	100	---	45	---	12	10	---
TOTAL	98.69	335.3	5883.9	3465	1749	2057	4382.5	2295.2	342.6	1302.1	288.4	3822.0
MEAN	3.18	11.2	190	112	62.5	66.4	146	74.0	11.4	42.0	9.30	127
MAX	36	80	2380	750	461	257	831	990	65	379	33	1800
MIN	.47	1.2	5.9	20	11	11	8.5	6.7	2.1	1.7	1.6	3.0
CFSM	.13	.46	7.82	4.61	2.57	2.73	6.01	3.05	.47	1.73	.38	5.23
IN.	.15	.51	9.01	5.30	2.68	3.15	6.71	3.51	.52	1.99	.44	5.85

CAL YR 1978 TOTAL 12424.80 MEAN 34.0 MAX 2380 MIN .28 CFSM 1.40 IN 19.02
WTR YR 1979 TOTAL 26021.69 MEAN 71.3 MAX 2380 MIN .47 CFSM 2.93 IN 39.83

NOTE.--No gage-height record Dec. 8 to Jan. 12; Aug. 28 to Sept 30.

03431700 RICHLAND CREEK AT CHARLOTTE AVENUE, AT NASHVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT						
02...	1205	1.5	340	19.0	--	--
NOV						
06...	1254	1.9	580	15.0	--	--
FEB						
06...	1110	15	--	5.0	--	--
MAR						
13...	1045	26	480	11.0	--	--
APR						
17...	1105	61	440	14.0	--	--
MAY						
10...	1000	31	480	18.0	--	--
JUN						
12...	1350	9.0	480	21.0	--	--
19...	1120	2.7	480	23.5	--	--
JUL						
13...	1300	6.2	480	23.5	--	--
26...	0930	44	440	26.0	28	3.4
AUG						
09...	1115	4.0	520	26.5	--	--
29...	1130	6.9	540	24.0	10	.19

CUMBERLAND RIVER BASIN

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03431800 SYCAMORE CREEK NEAR ASHLAND CITY, TN

LOCATION.--Lat 36°19'12", long 87°03'04", Cheatham County, Hydrologic Unit 05130202, near right bank on downstream end of pier of bridge on State Highway 49, at Sycamore, 3.2 mi (5.1 km) north of Ashland City, and 4.4 mi (7.1 km) upstream from Spring Creek, and at mile 8.6 (13.8 km).

DRAINAGE AREA.--97.2 mi² (251.7 km²).

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 400 ft (122 m) (from topographic map).

REMARKS.--Records good. Records of periodic water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--18 years, 144 ft³/s (4.078 m³/s), 20.12 in/yr (511 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft³/s (476 m³/s) Mar. 12, 1975, gage height, 13.20 ft (4.023 m); minimum, 8.3 ft³/s (0.24 m³/s) Oct. 6, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 8	2200	*14500 411	12.77 3.892	Apr. 12	0345	6090 172	10.34 3.152
Dec. 30	1445	5820 165	10.21 3.112	May 4	0915	4260 121	9.21 2.807
Apr. 2	1145	8010 227	11.14 3.395	Sept. 14		Unknown	Unknown

Minimum daily discharge, 16 ft³/s (0.453 m³/s) Oct. 7-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	20	30	406	98	311	1350	99	82	47	44	114
2	23	19	28	254	87	233	5060	95	74	46	54	203
3	20	19	122	197	96	374	909	619	627	46	46	125
4	23	20	846	169	94	896	572	2170	285	46	42	80
5	20	25	149	415	81	444	400	603	155	53	39	65
6	17	24	82	418	78	303	293	337	116	48	37	50
7	16	26	909	355	89	238	227	233	94	57	36	45
8	16	23	3030	300	75	197	207	171	86	71	35	40
9	16	22	910	230	74	156	466	144	82	71	34	35
10	16	22	370	189	74	171	319	122	72	57	28	30
11	16	24	235	151	76	153	247	108	66	52	27	30
12	16	24	200	137	83	133	2150	102	62	68	29	30
13	20	24	181	175	125	123	856	92	60	80	27	700
14	29	24	147	268	155	122	492	85	58	60	25	3200
15	23	25	128	181	210	102	340	78	56	54	25	377
16	19	37	113	160	160	92	254	72	54	68	27	233
17	18	75	98	151	140	89	214	69	54	56	25	179
18	18	61	94	139	120	85	181	67	52	50	24	149
19	18	37	92	147	110	222	158	66	51	48	24	133
20	18	31	534	1410	180	391	144	71	50	51	24	122
21	18	28	335	1040	320	259	110	94	58	47	33	1060
22	17	28	218	534	600	224	127	81	56	46	151	541
23	18	44	171	394	1000	1400	133	140	52	45	50	254
24	18	54	146	560	1600	791	130	162	59	53	45	164
25	18	38	120	351	1100	418	135	114	54	119	158	123
26	21	37	105	256	750	275	137	92	51	201	175	104
27	25	56	95	227	470	249	139	83	49	116	104	92
28	24	47	91	195	391	236	122	78	48	70	116	101
29	21	38	220	153	---	201	111	72	48	67	110	91
30	20	34	3340	132	---	173	105	72	48	45	382	80
31	20	---	963	122	---	247	---	85	---	48	207	---
TOTAL	611	986	14102	9816	8436	9308	16088	6476	2759	1986	2183	8550
MEAN	19.7	32.9	455	317	301	300	536	209	92.0	64.1	70.4	285
MAX	29	75	3340	1410	1600	1400	5060	2170	627	201	382	3200
MIN	16	19	28	122	74	85	105	66	48	45	24	30
CFSM	.20	.34	4.68	3.26	3.10	3.09	5.51	2.15	.95	.66	.72	2.93
IN.	.23	.38	5.40	3.76	3.23	3.56	6.16	2.48	1.06	.76	.84	3.27

CAL YR 1978	TOTAL	54122	MEAN 148	MAX 3340	MIN 13	CFSM 1.52	IN 20.71
WTR YR 1979	TOTAL	81301	MEAN 223	MAX 5060	MIN 16	CFSM 2.29	IN 31.11

CUMBERLAND RIVER BASIN

03432350 HARPETH RIVER AT FRANKLIN, TN

LOCATION.--Lat 35°55'14", long 86°51'56", Williamson County, Hydrologic Unit 05130204, on left bank 15 ft (5 m) downstream from left downstream end of State Highway 96 bridge, 0.4 mi (0.6 km) southeast of the courthouse in Franklin, and at mile 88.1 (141.8 km).

DRAINAGE AREA.--191 mi² (495 km²), includes 15 mi² (39 km²) without surface drainage.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 604.42 ft (184.227 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--5 years, 364 ft³/s (10.31 m³/s), 25.88 in/yr (657 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft³/s (572 m³/s), Mar. 13, 1975, gage height, 33.65 ft (10.257 m); minimum, 1.2 ft³/s (0.034 m³/s) July 23, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,900 ft³/s (82.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	0315	4550 129	18.43 5.617	Apr. 2	1900	6480 184	21.49 6.550
Dec. 9	0530	6290 178	21.16 6.450	Apr. 12	2245	6810 193	22.06 6.724
Jan. 2	0100	8720 247	24.93 7.599	May 4	1445	*10100 286	26.54 8.089
Jan. 8	0030	8120 230	24.16 7.364	May 23	2045	3490 98.8	15.70 4.785
Jan. 21	1330	4160 118	17.55 5.349	Sept. 14	1300	9280 263	25.59 7.800
Feb. 25	1230	3020 85.5	14.43 4.398	Sept. 22	0430	7340 208	22.94 6.992

Minimum daily discharge, 1.9 ft³/s (0.054 m³/s) Nov. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	4.1	106	6040	309	652	1240	104	233	16	47	88
2	9.5	4.5	89	6040	274	570	5210	97	173	14	64	148
3	8.3	4.0	972	1190	269	625	3810	546	597	13	57	112
4	7.6	3.5	4010	795	261	1070	1920	8310	435	12	56	83
5	6.4	2.6	2130	636	231	681	1280	2800	307	9.9	69	69
6	5.2	1.9	448	639	209	532	855	965	251	9.2	49	60
7	4.4	2.8	445	5240	215	448	648	655	200	20	43	53
8	3.6	2.8	1330	5110	192	415	541	493	164	33	36	44
9	2.9	5.4	4040	1130	186	334	1070	395	145	53	33	36
10	2.5	4.1	1370	789	170	385	650	322	131	26	30	27
11	2.1	3.8	688	606	162	415	511	251	114	18	28	20
12	27	3.6	550	520	172	348	3990	212	102	19	26	17
13	3.3	3.3	491	489	305	298	4030	185	93	18	24	1250
14	3.3	3.0	393	469	413	274	1220	159	84	15	23	8150
15	10	2.9	336	382	648	236	822	139	79	21	21	2660
16	9.2	19	298	344	486	209	613	125	73	48	20	580
17	6.9	267	269	324	374	190	500	113	69	20	19	391
18	5.1	314	238	320	334	176	423	104	64	15	18	299
19	4.3	126	222	366	287	193	365	97	60	12	17	249
20	4.0	83	233	2670	269	397	320	94	194	8.1	16	211
21	3.5	60	1040	3430	842	301	280	181	100	252	15	3220
22	3.5	47	597	1680	766	296	249	122	68	216	14	4990
23	3.3	71	441	1090	991	1110	239	1240	62	81	21	947
24	3.5	179	366	1400	1050	1100	219	1160	55	68	23	596
25	3.5	128	316	882	2270	780	204	520	54	67	56	435
26	4.9	96	246	686	1640	580	190	357	33	110	222	356
27	4.9	227	203	604	1050	439	174	262	26	78	200	359
28	5.8	200	181	534	824	393	148	209	23	69	224	2090
29	9.5	135	169	448	---	330	134	170	20	67	263	991
30	9.5	120	401	401	---	280	115	168	18	59	140	604
31	5.4	---	1060	365	---	261	---	372	---	53	105	---
TOTAL	192.9	2124.3	23678	45619	15199	14318	31970	20927	4027	1520.2	1979	29135
MEAN	6.22	70.8	764	1472	543	462	1066	675	134	49.0	63.8	971
MAX	27	314	4040	6040	2270	1110	5210	8310	597	252	263	8150
MIN	2.1	1.9	89	320	162	176	115	94	18	8.1	14	17
CFSM	.03	.37	4.00	7.71	2.84	2.42	5.58	3.53	.70	.26	.33	5.08
IN.	.04	.41	4.61	8.88	2.96	2.79	6.23	4.08	.78	.30	.39	5.67

CAL YR 1978 TOTAL 88452.5 MEAN 242 MAX 4790 MIN 1.3 CFSM 1.27 IN 17.23
WTR YR 1979 TOTAL 190689.4 MEAN 522 MAX 8310 MIN 1.9 CFSM 2.73 IN 37.14

CUMBERLAND RIVER BASIN

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03433500 HARPETH RIVER AT BELLEVUE, TN

LOCATION.--Lat 36°03'16", long 86°55'42", Davidson County, Hydrologic Unit 05130204, on right bank 45 ft (14 m) upstream from bridge on State Highway 100, 0.1 mi (0.2 km) downstream from Little Harpeth River, 0.9 mi (1.4 km) southeast of Bellevue, and at mile 62.1 (99.9 km).

DRAINAGE AREA.--408 mi² (1,057 km²), includes 15 mi² (39 km²) without surface drainage.

PERIOD OF RECORD.--April 1920 to current year. Monthly discharge only November 1929 to December 1931, published in WSP 1306.

REVISED RECORDS.--WSP 953: 1920-30, 1932-35. WSP 1386: 1948. WSP 1556: Drainage area. WSP 1910: 1960.

GAGE.--Water-stage recorder. Datum of gage is 541.04 ft (164.909 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Apr. 11, 1920, to Oct. 31, 1929, Jan. 1, 1932, to Sept. 30, 1933, non-recording gage at site 2.8 mi (4.5 km) downstream at datum 7.85 ft (2.393 m) lower.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--59 years, 579 ft³/s (16.40 m³/s), 19.27 in/yr (489 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/s (1,130 m³/s) Feb. 13, 1948, gage height, 24.34 ft (7.419 m) from floodmark; no flow Oct. 5-10, 1922.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Feb. 13, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 7,500 ft³/s (212 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	0500	12800 362	17.15 5.227	Apr. 3	0215	11400 323	16.33 4.977
Dec. 9	1500	12400 351	16.95 5.166	Apr. 13	0215	9810 278	15.18 4.627
Jan. 2	0815	13000 368	17.26 5.261	May 4	1700	*27400 776	21.87 6.666
Jan. 8	0815	11900 337	16.68 5.084	Sept. 14	2245	14600 413	18.04 5.499
Jan. 21		Unknown	Unknown	Sept. 22	0845	8360 237	13.86 4.225

Minimum discharge 12.0 ft³/s (0.340 m³/s) Oct. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	23	202	8890	550	1250	2830	270	498	97	130	167
2	40	22	177	12100	520	1020	9470	244	390	87	135	205
3	30	19	2050	3450	490	1070	8810	801	714	83	136	298
4	32	18	11800	1600	460	2230	3790	20600	1420	78	164	205
5	27	19	2210	1240	420	1520	2600	12000	781	74	176	155
6	27	21	1070	1090	408	1130	1600	2200	567	68	144	125
7	22	26	1010	7080	412	945	1180	1420	470	63	112	104
8	18	27	7230	10700	381	903	985	1080	403	87	97	90
9	16	40	12000	2140	349	757	1710	867	349	202	85	78
10	15	37	6660	1650	310	796	1220	723	298	164	76	68
11	15	35	1680	1300	306	867	914	598	270	125	70	61
12	13	31	1150	1100	319	752	6820	542	237	110	66	52
13	21	28	940	1000	447	668	7740	479	214	128	63	1890
14	23	27	806	900	619	603	2580	408	190	136	56	13100
15	27	26	684	750	1030	537	1630	353	173	115	48	8890
16	27	57	603	700	914	475	1220	310	161	130	43	1370
17	30	196	542	650	718	438	1010	274	152	130	41	935
18	28	540	475	625	640	408	851	248	133	120	39	723
19	24	291	438	2000	567	430	733	230	122	110	38	630
20	22	178	479	5400	522	651	651	224	115	380	36	522
21	19	118	1710	9900	1080	646	582	367	950	200	33	3330
22	18	91	1240	4300	1420	630	537	315	466	420	31	7580
23	18	101	877	3500	1270	1960	513	1000	274	300	29	2140
24	17	256	728	2500	1750	2410	484	2830	255	200	27	1120
25	15	268	619	2000	5210	1540	456	1060	255	190	44	872
26	14	195	517	1500	4320	1150	434	742	199	700	372	728
27	14	268	438	1300	2280	940	425	567	149	350	588	662
28	14	370	381	1100	1600	846	372	484	128	230	294	1850
29	15	266	345	900	---	728	327	408	115	200	438	1600
30	18	226	484	860	---	635	294	358	107	180	302	995
31	21	---	1480	650	---	635	---	527	---	150	206	---
TOTAL	658	3820	61025	92875	29312	29570	62768	52529	10555	5607	4119	50545
MEAN	21.2	127	1969	2996	1047	954	2092	1694	352	181	133	1685
MAX	40	540	12000	12100	5210	2410	9470	20600	1420	700	588	13100
MIN	13	18	177	625	306	408	294	224	107	63	27	52
CFSM	.05	.31	4.83	7.34	2.57	2.34	5.13	4.15	.86	.44	.33	4.13
IN.	.06	.35	5.56	8.47	2.67	2.70	5.72	4.79	.96	.51	.38	4.61

CAL YR 1978 TOTAL 200802 MEAN 550 MAX 12000 MIN 11 CFSM 1.35 IN 18.31
WTR YR 1979 TOTAL 403383 MEAN 1105 MAX 20600 MIN '3 CFSM 2.71 IN 36.78

03434500 HARPETH RIVER NEAR KINGSTON SPRINGS, TN

LOCATION.--Lat 36°07'19", long 87°05'56", Cheatham County, Hydrologic Unit 05130204, on right bank 400 ft (122 m) upstream from bridge on U. S. Highway 70, 1.7 mi (2.7 km) northeast of Kingston Springs, 3.0 mi (4.8 km) downstream from Turnbull Creek, and at mile 32.4 (52.1 km).

DRAINAGE AREA.--681 mi² (1,764 km²), includes 15 mi² (39 km²) without surface drainage.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1924 to current year. Prior to July 1925 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 953: 1927, 1933, 1935-36. WSP 1033: 1927(M), 1932-33(M), 1935(M), 1937(M). WSP 1706: 1945(P). WSP 2110: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 448.04 ft (136.563 m) National Geodetic Vertical Datum of 1929. July 8, 1925, to Jan. 22, 1939, nonrecording gage at site 150 ft (46 m) downstream at same datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--55 years, 981 ft³/s (27.78 m³/s), 19.57 in/yr (497 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,000 ft³/s (1,700 m³/s) Jan. 7, 1946, gage height, 32.20 ft (9.815 m) from high-water mark in gage house; minimum, 12 ft³/s (0.34 m³/s) Sept. 18, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Jan. 7, 1946. Flood of March 1902 reached a stage about 3 ft (0.91 m) lower than that of Jan. 7, 1946.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,000 ft³/s (283 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	0815	20900 592	20.96 6.389	Apr. 2	1445	20400 578	20.73 6.319
Dec. 9	0115	33600 952	25.73 7.843	Apr. 12	1345	21300 603	21.15 6.447
Jan. 1	1830	18000 510	19.29 5.880	May 4	1100	*42400 1200	28.13 8.574
Jan. 7	2230	12200 346	14.92 4.548	Sept. 14	0630	29100 824	24.36 7.425
Jan. 21	1000	10200 289	13.13 4.002				

Minimum discharge, 68 ft³/s (1.93 m³/s) Oct. 1, 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	86	309	12600	1020	2520	4990	421	807	221	239	275
2	105	84	277	13100	868	1980	16700	385	657	211	306	557
3	85	85	1950	8200	826	2100	12600	1730	858	209	262	501
4	107	84	16300	3170	803	4930	7100	25500	2330	201	250	405
5	99	83	7180	2390	731	3520	4940	22900	1340	198	291	306
6	86	81	2280	1990	674	2470	3380	6670	877	184	251	254
7	80	82	3600	7340	685	1950	2550	3140	682	192	219	223
8	78	95	20400	11800	648	1670	2150	2250	615	279	193	200
9	75	98	21100	7060	596	1420	3870	1650	632	386	181	184
10	72	90	11300	3170	538	1350	3150	1290	481	336	168	172
11	70	97	3760	2360	525	1510	2220	1030	452	273	176	163
12	68	98	2540	1890	565	1320	14200	888	397	324	184	155
13	123	97	1900	1730	715	1140	11300	817	355	371	163	2010
14	172	94	1480	1700	1000	1000	5920	668	325	332	150	20500
15	112	92	1200	1380	1810	882	3460	580	301	283	142	12400
16	90	123	1020	1160	1840	766	2570	510	280	349	141	3650
17	86	333	894	1070	1370	705	2020	453	266	291	138	1730
18	85	634	768	1030	1160	660	1620	415	256	258	136	1170
19	83	530	700	1040	999	694	1340	384	243	227	133	868
20	83	314	716	5650	882	1090	1140	406	232	602	129	732
21	82	233	3010	9540	1600	1210	976	887	906	348	128	3700
22	78	196	2680	7070	2840	1090	863	623	1180	734	175	8730
23	75	218	1720	4080	2990	3550	837	2260	489	535	146	5230
24	72	286	1330	4310	3390	5190	774	5330	393	358	138	2250
25	72	397	1090	3570	7210	3280	732	2490	345	333	301	1520
26	77	339	887	2640	7970	2350	697	1470	311	1340	451	1150
27	99	349	730	2230	4540	1860	669	1030	281	596	817	913
28	98	457	633	1990	3230	1640	597	842	261	405	538	1620
29	85	445	581	1620	---	1390	520	671	246	351	473	2840
30	92	351	614	1370	---	1180	471	601	235	323	497	1490
31	90	---	1680	1210	---	1190	---	651	---	265	344	---
TOTAL	2789	6551	114629	129460	52025	57607	114356	88942	17033	11315	7860	75898
MEAN	90.0	218	3698	4176	1858	1858	3812	2869	568	365	254	2530
MAX	172	634	21100	13100	7970	5190	16700	25500	2330	1340	817	20500
MIN	68	81	277	1030	525	660	471	384	232	184	128	155
CFSM	.13	.32	5.43	6.13	2.73	2.73	5.60	4.21	.83	.54	.37	3.72
IN.	.15	.36	6.26	7.07	2.84	3.15	6.25	4.86	.93	.62	.43	4.15

CAL YR 1978 TOTAL 385522 MEAN 1056 MAX 21100 MIN 58 CFSM 1.55 IN 21.06
WTR YR 1979 TOTAL 678465 MEAN 1859 MAX 25500 MIN 68 CFSM 2.73 IN 37.06

CUMBERLAND RIVER BASIN

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03434500 HARPETH RIVER NEAR KINGSTON SPRINGS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 26...	1130	74	280	16.0	--	--	--
NOV 28...	1130	508	295	12.0	--	--	--
DEC 27...	1400	682	330	6.0	--	--	--
FEB 26...	1315	8370	220	7.0	--	--	--
JUN 28...	1030	260	280	23.5	--	--	--
JUL 27...	1230	577	270	25.0	89	139	93
AUG 24...	1030	136	270	24.5	--	--	--

03435000 CUMBERLAND RIVER BELOW CHEATHAM DAM, TN

LOCATION.--Lat 36°19'26", long 87°13'32", Cheatham County, Hydrologic Unit 05130205, on downstream end of lower lock wall at Cheatham Dam, 2.0 mi (3.2 km) southwest of Neptune, 3.0 mi (4.8 km) upstream from Half Pone Creek, 9.7 mi (15.6 km) west of Ashland City, and at mile 148.4 (238.8 km).

DRAINAGE AREA.--14,163 mi² (36,682 km²).

PERIOD OF RECORD.--October 1954 to current year.

REVISED RECORDS.--WSP 1726: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 350.00 ft (106.680 m) National Geodetic Vertical Datum of 1929. Prior to May 5, 1966, at National Geodetic Vertical Datum. Auxiliary water-stage recorder 15.3 mi (24.6 km) downstream from base gage at same datum. Prior to June 3, 1966, auxiliary water-stage recorder and non-recording gage on upper lock wall at former dam B, at site 8.1 mi (13.0 km) downstream from base gage at datum 1.76 ft (0.536 m) lower.

REMARKS.--Records good. Flow regulated by eight lakes or reservoirs above station (see p.129). Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--25 years 24,000 ft³/s (679.9 m³/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 204,000 ft³/s (5,780 m³/s) Mar. 15, 1975; maximum gage height, 48.39 ft (14.749 m) Mar. 1, 1962; minimum daily discharge, 700 ft³/s (19.8 m³/s) Oct. 29, 1969; minimum gage height, 1.55 ft (0.472 m) Nov. 26, 1973.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1793, 53.5 ft (16.31 m); Jan. 25, 1937, from profile by Corps of Engineers, discharge, about 200,000 ft³/s (5,660 m³/s) on Jan. 24, 1937. Flood of Jan. 1, 1927, reached a stage of 51.7 ft (15.76 m), from profile, discharge about 205,000 ft³/s (5,810 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 153,000 ft³/s (4,330 m³/s) Dec. 9; maximum gage height, 40.44 ft (12.326 m) Dec. 9; minimum daily, 1,870 ft³/s (52.96 m³/s) Nov. 15; minimum gage height, 3.39 ft (1.033 m) Dec. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3530	5610	14200	93600	52200	60800	36100	14300	23000	3100	19100	23700
2	5150	4400	12200	118000	47100	60600	105000	15000	26800	5370	19300	21700
3	6330	3690	11800	110000	46000	61700	118000	17000	19200	11100	17100	8810
4	5450	2370	94200	79000	45500	68500	106000	76300	16800	10700	22300	11900
5	4410	2520	96200	61900	36200	70900	88500	107000	20900	11000	11100	16400
6	4410	5650	38400	62600	46500	66800	69300	99600	22900	11400	9830	19200
7	3100	5740	34100	76800	48300	61800	60100	44600	22900	9110	14200	21200
8	2750	9680	109000	104000	44900	59400	55600	29400	18800	12900	16900	18300
9	4670	9890	149000	99800	27000	57800	60900	33500	18100	22700	17300	14700
10	7150	9970	138000	77700	34100	55700	64700	33000	19100	22500	15600	11000
11	5140	3200	126000	56600	42000	54800	60200	34500	14300	13600	16600	14700
12	5850	2280	95900	57900	33100	48700	96600	32000	19800	14000	17500	17500
13	7750	2570	47900	58500	20700	47500	111000	29500	20100	14900	8800	28200
14	6620	1890	47400	56500	23900	44500	107000	20200	19600	17600	13000	95200
15	3580	1870	47100	49700	33500	49900	75600	15300	16900	15100	20000	89300
16	3720	2490	42000	49300	37100	48000	50700	15700	13500	10100	17400	52900
17	6300	9680	45300	48200	37700	44500	36800	22400	14000	13700	13400	25400
18	13300	15100	44900	39500	46700	44900	42400	20200	13900	17400	21400	20800
19	13000	9560	44300	42400	37700	38000	42500	17700	12300	18000	14300	23300
20	11900	8460	45900	56400	30000	27300	41300	6480	15000	17100	11600	25900
21	4160	7770	54700	93900	32000	32400	48100	9750	17900	13300	16800	39900
22	3800	4690	54500	104000	26000	25300	53300	14100	20900	6290	17900	77900
23	5350	2480	52700	96300	36400	43100	53600	21500	16600	4640	16600	74300
24	4490	9820	51300	74600	31600	42000	56500	37600	7600	13400	20700	35800
25	4670	9520	40900	64300	44600	42900	54000	35700	4620	15700	14000	28500
26	6770	11900	26300	62000	73000	33900	44600	22000	5800	19700	25100	27600
27	4100	7650	28200	65700	56700	25200	41300	15500	8170	18600	30900	23000
28	2360	10400	34900	62000	60700	24800	30600	15600	14000	21700	25600	34900
29	2250	14000	38400	60600	---	24600	24500	11300	17200	22200	20800	55100
30	4390	11300	45200	60700	---	24900	13300	15500	14600	17800	18900	51700
31	4940	---	46500	57700	---	27100	---	21300	---	17300	21700	---
TOTAL	171390	206150	1757400	2200200	1131200	1418300	1848100	903530	495290	442010	545730	1008810
MEAN	5529	6872	56690	70970	40400	45750	61600	29150	16510	14260	17600	33630
MAX	13300	15100	149000	118000	73000	70900	118000	107000	26800	22700	30900	95200
MIN	2250	1870	11800	39500	20700	24600	13300	6480	4620	3100	8800	8810
CAL YR 1978	TOTAL	8489770	MEAN	23260	MAX	149000	MIN	1350				
WTR YR 1979	TOTAL	12128110	MEAN	33230	MAX	149000	MIN	1870				

CUMBERLAND RIVER BASIN

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03435770 SULPHUR FORK RED RIVER ABOVE SPRINGFIELD, TN

LOCATION.--Lat 36°30'47", long 86°51'44", Robertson County, Hydrologic Unit 05130206, on left bank 150 ft (46 m) downstream from new bridge on State Highway 49, 1.2 mi (1.9 km) downstream from Beaver Dam Creek, 1.3 mi (2.1 km) northeast of Springfield, and at mile 30.8 (49.6 km).

DRAINAGE AREA.--65.6 mi² (169.9 km²), includes 9.0 mi² (23.3 km²) without surface drainage.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1975 to current year.

GAGE.--Water-stage recorder. Datum of gage is 538.17 ft (164.034 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,380 ft³/s (181 m³/s) Dec. 8, 1978, gage height, 14.14 ft (4.310 m); minimum, 3.1 ft³/s (0.088 m³/s) Sept. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s (51.0 m³/s), and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 8	1815	*6380 181	14.14 4.310	Apr. 12	0915	4120 117	12.12 3.694
Jan. 1	1115	2730 77.3	10.23 3.118	May 4	0600	2170 61.4	9.14 2.786
Mar. 23	1130	1840 52.1	8.33 2.539	Sept. 14	0215	5720 162	13.61 4.148

Minimum discharge, 5.4 ft³/s (0.153 m³/s) Oct. 2, 3, 4, 6, 7-12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	7.8	16	1680	127	248	950	99	48	20	26	47
2	7.1	5.9	12	621	116	204	3700	94	43	19	25	55
3	5.4	5.9	63	327	118	294	980	362	135	19	22	42
4	7.8	6.5	478	232	113	506	500	1140	123	16	19	32
5	7.1	7.1	132	196	103	290	320	473	80	14	16	26
6	5.9	7.1	87	174	98	229	220	300	64	14	14	24
7	5.4	8.5	619	343	105	200	200	225	52	43	12	22
8	5.4	7.8	4010	282	92	179	180	176	45	40	10	20
9	5.4	7.8	1460	198	87	156	340	144	43	36	9.2	16
10	5.4	7.1	574	170	86	165	270	125	39	26	9.2	12
11	5.4	7.8	375	148	83	152	210	107	32	20	9.2	10
12	5.4	7.1	281	140	88	142	1950	94	31	27	9.2	8.5
13	7.1	7.1	229	195	113	136	745	82	29	35	9.2	893
14	21	7.1	197	278	134	135	458	70	28	24	8.5	2200
15	9.2	7.1	178	210	280	119	316	64	23	24	7.8	476
16	7.1	22	165	180	219	110	246	52	24	22	7.8	290
17	7.1	39	151	170	173	106	209	48	27	16	7.8	215
18	7.1	25	141	160	161	103	184	46	24	14	7.8	178
19	7.1	16	138	155	142	170	167	44	22	12	7.1	157
20	7.1	9.2	163	720	133	241	156	43	22	10	8.5	143
21	7.1	7.8	384	595	246	185	145	44	22	42	9.2	769
22	7.1	7.1	230	470	285	211	138	45	23	48	24	580
23	7.1	22	195	360	769	887	139	67	32	27	10	314
24	7.1	25	179	540	476	540	136	82	45	22	16	216
25	7.8	19	160	380	794	370	134	59	28	90	83	189
26	14	20	145	300	607	290	134	47	24	178	77	163
27	21	38	133	260	392	240	133	44	22	121	41	148
28	21	27	125	235	295	220	121	43	20	59	26	170
29	19	22	118	180	---	210	113	40	19	46	24	150
30	14	20	128	160	---	200	107	40	32	37	163	136
31	14	---	299	140	---	200	---	85	---	32	138	---
TOTAL	296.7	426.8	11565	10199	6435	7438	13601	4384	1201	1153	856.5	7701.5
MEAN	9.57	14.2	373	329	230	240	453	141	40.0	37.2	27.6	257
MAX	21	39	4010	1680	794	887	3700	1140	135	178	163	2200
MIN	5.4	5.9	12	140	83	103	107	40	19	10	7.1	8.5
CFSM	.15	.22	5.69	5.02	3.51	3.66	6.91	2.15	.61	.57	.42	3.92
IN.	.17	.24	6.56	5.78	3.65	4.22	7.71	2.49	.68	.65	.49	4.37

CAL YR 1978	TOTAL	36690.4	MEAN 101	MAX 4010	MIN 4.0	CFSM 1.54	IN 20.81
WTR YR 1979	TOTAL	65257.5	MEAN 179	MAX 4010	MIN 5.4	CFSM 2.73	IN 37.01

CUMBERLAND RIVER BASIN

03435770 SULPHUR FORK RED RIVER ABOVE SPRINGFIELD, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT						
02...	1030	7.0	280	15.5	--	--
NOV						
01...	0925	6.5	--	11.0	--	--
DEC						
01...	1400	16	350	8.5	--	--
08...	1400	3010	140	11.0	--	--
JAN						
12...	1115	138	260	5.5	--	--
FEB						
28...	1100	275	220	8.5	--	--
MAY						
16...	0930	49	270	16.5	--	--
JUN						
28...	1110	18	315	21.5	--	--
AUG						
01...	1100	25	330	23.0	43	3.0
SEP						
17...	1655	206	280	17.0	25	14

03436000 SULPHUR FORK RED RIVER NEAR ADAMS, TN

LOCATION.--Lat 36°30'55", long 85°03'32", Robertson County, Hydrologic Unit 05130206, on left bank 600 ft (183 m) downstream from county highway bridge, 2.8 mi (4.5 km) downstream from Millers Creek, 4.1 mi (6.6 km) south-west of Cedar Hill, 4.6 mi (7.4 km) south of Adams, and at mile 10.2 (16.4 km).

DRAINAGE AREA.--186 mi² (482 km²) includes 21 mi² (54 km²) without surface drainage.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to current year. Prior to January 1939 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 1910: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 424.36 ft (129.345 m) Sandy Hook datum. Jan. 20, 1939, to Nov. 25, 1940, nonrecording gage at site 600 ft (183 m) upstream at same datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--41 years, 249 ft³/s (7.052 m³/s), 18.18 in/yr (462 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,400 ft³/s (1,000 m³/s) Mar. 12, 1975, gage height, 30.86 ft (9.406 m), from floodmarks; minimum, 1.8 ft³/s (0.051 m³/s) Sept. 27, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1934 reached a stage of 25.1 ft (7.65 m), from floodmarks, discharge not determined. Flood in January 1937 reached a stage of about 22.6 ft (6.89 m), discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft³/s (96.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	0045	*16100 456	23.67 7.215	Apr. 13	2215	11100 314	19.92 6.072
Jan. 1	1530	6640 183	15.38 4.688	May 4	2230	4910 139	12.84 3.914
Mar. 23	1730	4070 115	11.59 3.533	Sept. 14	0915	10200 289	19.13 5.831
Apr. 2	1215	12100 343	20.75 6.325				

Minimum daily discharge, 15 ft³/s (0.425 m³/s) Oct. 23-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	16	49	4870	372	860	1640	206	200	60	75	236
2	26	17	44	2250	331	727	10100	187	150	55	115	256
3	25	18	112	1170	325	770	2610	290	450	55	85	193
4	26	17	1290	864	312	1580	1600	2580	300	50	73	135
5	24	17	435	696	293	995	1110	2340	235	45	65	109
6	21	17	268	578	269	809	832	1100	200	45	59	93
7	19	18	1560	878	276	717	653	781	165	150	56	82
8	17	19	9950	953	255	621	588	568	135	100	53	71
9	16	20	8370	696	234	521	945	443	120	75	51	63
10	16	18	1840	565	208	521	699	358	105	65	48	58
11	16	18	1190	461	210	480	599	290	100	55	47	56
12	17	18	903	415	218	429	573	256	90	70	51	53
13	18	17	732	513	293	398	5050	224	80	90	48	1250
14	26	18	571	789	345	398	4450	191	75	70	45	6850
15	31	20	473	541	761	355	1660	165	70	60	45	1220
16	27	26	410	464	705	318	1110	144	70	55	44	721
17	20	109	353	432	531	302	878	124	80	50	42	477
18	18	103	310	407	468	293	734	122	70	45	40	364
19	16	52	287	409	404	394	606	114	65	40	38	292
20	16	38	295	2200	359	780	512	112	65	35	37	243
21	16	33	970	2010	574	611	446	115	65	100	55	2040
22	16	30	653	1320	743	601	391	117	65	150	67	1600
23	15	42	490	1080	2250	2530	349	149	80	100	61	885
24	15	67	419	1400	1610	1870	339	204	150	70	48	583
25	15	52	355	1020	2540	1080	322	147	80	150	54	413
26	16	51	291	853	2230	821	321	130	65	700	350	321
27	22	125	241	783	1360	735	311	125	60	300	176	273
28	25	99	216	717	1020	697	305	120	55	200	102	276
29	20	70	197	592	---	605	256	115	55	150	88	246
30	19	57	199	526	---	536	225	110	125	125	665	209
31	18	---	398	462	---	541	---	300	---	100	683	---
TOTAL	618	1222	33871	30914	19496	22895	40214	12227	3625	3415	3466	19668
MEAN	19.9	40.7	1093	997	696	739	1340	394	121	110	112	656
MAX	31	125	9950	4870	2540	2530	10100	2580	450	700	683	6850
MIN	15	16	44	407	208	293	225	110	55	35	37	53
CFSM	.11	.22	5.88	5.36	3.74	3.97	7.20	2.12	.65	.59	.60	3.53
IN.	.12	.24	6.77	6.18	3.90	4.58	8.04	2.45	.72	.68	.69	3.93

CAL YR 1978 TOTAL 106774 MEAN 293 MAX 9950 MIN 14 CFSM 1.58 IN 21.35
WTR YR 1979 TOTAL 191631 MEAN 525 MAX 10100 MIN 15 CFSM 2.82 IN 38.33

CUMBERLAND RIVER BASIN

03436000 SULPHUR FORK RED RIVER NEAR ADAMS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--1964, October 1975 to current year.

03436000 - SULPHUR FORK RED RIVER NEAR ADAMS, TENN

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT						
02...	1230	25	420	17.5	--	--
NOV						
01...	1135	16	--	12.0	--	--
DEC						
01...	1245	47	415	9.0	--	--
APR						
11...	1230	602	225	14.5	--	--
MAY						
16...	1130	143	325	17.5	--	--
JUN						
28...	1420	57	360	23.0	--	--
AUG						
01...	1345	76	395	26.0	40	8.3
SEP						
18...	1000	383	315	17.5	24	25

CUMBERLAND RIVER BASIN

03436100 RED RIVER AT PORT ROYAL, TN

LOCATION.--Lat 36°33'17", long 87°08'31", Montgomery County, Hydrologic Unit 05130206, on left bank at county road bridge at Port Royal, 250 ft (76 m) downstream from Sulphur Fork, and at mile 25.5 (41.0 km).

DRAINAGE AREA.--935 mi² (2,422 km²), includes 437 mi² (1,132 km²) without surface drainage.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 376.25 ft (114.681 m) National Geodetic Vertical Datum of 1929. July 13, 1961, to Oct. 9, 1963, nonrecording gage and crest-stage gage at same site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--18 years, 1,346 ft³/s (38.12 m³/s), 19.55 in/yr (497 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,300 ft³/s (1,710 m³/s) Mar. 13, 1975, gage height, 48.26 ft (14.710 m); minimum, 54 ft³/s (1.53 m³/s) Sept. 17, 18, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 23, 1937, reached a stage of 44.4 ft (13.53 m), from flood profile of Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 11,000 ft³/s (312 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1300	*41400 1170	42.14 12.844	Apr. 12	2315	25900 733	35.28 10.753
Jan. 1		Unknown	Unknown	May 4	2230	12000 340	25.03 7.629
Feb. 26	0300	13100 371	26.10 7.955	Sept. 14	1930	24200 685	34.31 10.958
Apr. 2	2300	32600 923	38.70 11.796	Sept. 22		Unknown	Unknown

Minimum daily discharge, 87 ft³/s (2.464 m³/s) Oct. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	98	366	16000	1880	4390	4470	1460	1000	639	901	1210
2	131	95	327	11200	1680	3670	25400	1370	910	598	859	1140
3	127	95	561	6600	1610	3320	27600	3260	830	567	772	1160
4	129	95	5920	4700	1540	5360	12500	9980	790	551	713	915
5	121	95	4990	3100	1440	4700	7410	8860	1000	547	673	764
6	108	96	1970	2700	1360	3660	5320	5070	857	537	653	674
7	105	101	4220	3800	1360	3190	4320	3700	766	552	627	616
8	100	98	16700	4900	1270	2900	3770	2940	731	780	593	577
9	96	96	38900	4000	1190	2560	5210	2480	770	1320	559	528
10	95	95	14600	3200	1080	2390	5000	2160	700	926	546	500
11	98	95	7770	2600	1060	2420	3850	1950	651	726	535	482
12	98	95	5890	2200	1060	2150	15700	1800	611	694	519	467
13	105	95	4530	2400	1160	1990	21500	1620	572	802	495	1210
14	115	98	3580	3100	1280	1890	9690	1490	547	819	480	17700
15	115	106	3070	3800	2060	1740	5930	1370	530	813	468	21000
16	110	117	2690	2800	3240	1590	4560	1250	517	1070	457	6450
17	108	209	2420	2300	2520	1490	3740	1140	506	728	449	3500
18	101	306	2190	2250	2110	1440	3230	1080	498	637	440	2760
19	98	303	2050	2150	1870	1560	2860	1030	487	591	433	2310
20	96	217	2030	4900	1690	3070	2600	996	471	556	425	2000
21	95	171	3550	11000	1860	2940	2390	976	498	542	440	5800
22	95	150	3340	7200	3080	2540	2220	960	510	1820	512	12000
23	93	154	2640	5000	7270	5790	2130	951	530	1290	685	11100
24	88	192	2370	6700	11200	9450	2070	1030	2750	916	501	6900
25	87	184	2170	7300	10500	5600	2000	960	1420	1000	507	4500
26	95	209	1940	5000	11700	4000	2010	910	998	2050	822	3000
27	108	884	1770	4200	7180	3240	1920	870	824	3020	936	2300
28	112	972	1620	3500	5250	2920	1810	840	723	1760	848	2100
29	106	561	1540	3000	---	2590	1660	810	668	1450	733	2400
30	108	431	1460	2600	---	2320	1580	800	643	1190	1050	2100
31	104	---	1340	2400	---	2210	---	1200	---	1010	2120	---
TOTAL	3276	6513	148514	146600	90500	99080	194450	65313	23308	30501	20751	118163
MEAN	106	217	4791	4729	3232	3196	6482	2107	777	984	669	3939
MAX	131	972	38900	16000	11700	9450	27600	9980	2750	3020	2120	21000
MIN	87	95	327	2150	1060	1440	1580	800	471	537	425	467
CFSM	.11	.23	5.12	5.06	3.46	3.42	6.93	2.25	.83	1.05	.72	4.21
IN.	.13	.26	5.91	5.83	3.60	3.94	7.74	2.60	.93	1.21	.83	4.70
CAL YR 1978	TOTAL	514523	MEAN	1410	MAX	38900	MIN 87	CFSM 1.51	IN 20.47			
WTR YR 1979	TOTAL	946969	MEAN	2594	MAX	38900	MIN 87	CFSM 2.77	IN 37.68			

NOTE.--No gage-height record Dec. 1 to Jan. 31.

CUMBERLAND RIVER BASIN

03436100 RED RIVER AT PORT ROYAL, TN -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
02...	1430	140	410	19.0	--	--	--
NOV							
01...	1410	91	--	12.0	--	--	--
DEC							
01...	1130	360	395	8.5	--	--	--
FEB							
28...	1430	5760	--	9.0	--	--	--
APR							
11...	1545	4020	260	15.0	--	--	--
MAY							
16...	1400	1230	305	20.5	--	--	--
AUG							
01...	1700	876	380	26.0	101	239	97
SEP							
16...	1320	5490	290	17.5	236	3500	86
18...	1130	--	--	17.5	--	--	--

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)
SEP											
18...	1130	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
SEP										
18...	.00	.00	.00	.00	.00	.00	0	.00	.00	.00

CUMBERLAND RIVER BASIN

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03436700 YELLOW CREEK NEAR SHILOH, TN

LOCATION.--Lat 36°20'55", long 87°32'20", Montgomery County, Hydrologic Unit 05130205, on left bank on downstream end of pier of bridge on State Highway 13, 2.6 mi (4.2 km) west of Shiloh, 3.0 mi (4.8 km) downstream from Leatherwood Creek, 9.0 mi (14.5 km) east of Erin, and at mile 9.0 (14.5 km).

DRAINAGE AREA.--124 mi² (321 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1957 to current year.

REVISED RECORDS.--WSP 1706: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 390.13 ft (118.912 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 14, 1957, nonrecording gage at same site and datum.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--22 years, 188 ft³/s (5.324 m³/s), 20.59 in/yr (523 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft³/s (416 m³/s) Apr. 2, 1979, gage height, 17.15 ft (5.227 m); minimum, 16 ft³/s (0.45 m³/s) Aug. 21, 1962.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 8	2245	11500 326	15.84 4.828	May 4	1030	4170 118	10.97 3.344
Jan. 1	1330	4870 138	11.61 3.539	Sept. 14	0530	5880 167	12.58 3.834
Apr. 2	0900	*14700 416	17.15 5.227	Sept. 21	1600	7760 220	13.86 4.225
Apr. 12	0845	6260 177	12.96 3.950				

Minimum discharge, 27 ft³/s (0.76 m³/s) Oct. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	28	38	2910	152	458	1200	180	199	73	52	89
2	30	28	37	1200	145	397	10900	177	168	72	56	120
3	29	28	50	626	138	506	3000	554	294	72	53	94
4	30	29	323	413	131	1040	1500	2280	362	71	53	88
5	29	30	211	303	117	660	900	1040	272	71	53	78
6	28	30	150	251	110	479	620	583	210	70	52	75
7	28	33	441	281	114	360	495	405	170	70	49	70
8	28	32	4910	271	109	340	442	314	148	84	48	65
9	28	31	3960	231	110	320	420	256	128	94	46	62
10	28	32	966	220	114	315	450	215	116	88	46	59
11	28	31	542	195	114	310	470	189	111	77	65	57
12	28	31	361	185	110	275	3240	183	106	101	63	55
13	31	29	298	210	107	265	1120	154	100	116	56	1050
14	32	28	249	230	124	250	660	136	97	93	52	2790
15	30	30	222	320	180	235	506	139	95	86	49	538
16	29	32	216	280	179	220	399	129	92	79	48	397
17	29	43	207	235	160	210	296	119	90	72	46	195
18	29	45	205	210	152	230	255	117	87	68	44	145
19	28	38	205	450	141	380	228	118	85	65	43	120
20	28	34	207	1100	135	560	225	140	83	62	43	116
21	28	33	548	2400	160	740	229	172	95	62	52	3180
22	28	32	444	1250	212	1080	221	142	89	61	56	1770
23	28	40	340	820	759	1600	219	223	84	61	49	778
24	28	42	292	680	714	942	212	358	88	62	49	491
25	28	38	250	770	1280	561	208	281	84	63	52	353
26	31	39	220	580	928	480	208	216	79	63	74	296
27	31	48	214	400	674	420	206	178	76	63	72	255
28	30	46	212	305	551	400	199	228	74	61	65	225
29	29	43	211	230	---	385	198	185	74	57	62	195
30	29	40	211	190	---	380	191	160	75	56	60	171
31	29	---	226	170	---	450	---	212	---	53	56	---
TOTAL	899	1043	16966	17916	7920	15248	29417	9783	3831	2246	1664	13977
MEAN	29.0	34.8	547	578	283	492	981	316	128	72.5	53.7	466
MAX	32	48	4910	2910	1280	1600	10900	2280	362	116	74	3180
MIN	28	28	37	170	107	210	191	117	74	53	43	55
CFSM	.23	.28	4.41	4.66	2.28	3.97	7.91	2.55	1.03	.59	.43	3.76
IN.	.27	.31	5.09	5.37	2.38	4.57	8.83	2.93	1.15	.67	.50	4.19

CAL YR 1978	TOTAL	70669	MEAN 194	MAX 4910	MIN 28	CFSM 1.57	IN 21.20
WTR YR 1979	TOTAL	120910	MEAN 331	MAX 10900	MIN 28	CFSM 2.67	IN 36.27

CUMBERLAND RIVER BASIN

03436700 YELLOW CREEK NEAR SHILOH, TN -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 04...	1400	30	280	18.5	--	--
NOV 01...	0930	28	285	14.5	--	--
DEC 07...	1235	260	245	12.0	--	--
MAR 02...	1130	404	190	10.0	--	--
APR 04...	1300	1490	--	14.5	--	--
JUN 29...	1330	73	265	21.0	--	--
AUG 02...	1200	56	280	23.0	10	1.5
SEP 18...	1600	139	255	18.5	22	8.3

RESERVOIRS IN CUMBERLAND RIVER BASIN, TN

03413500 LAKE CUMBERLAND.--Lat 36°52'09", long 85°08'45", Russell County, Hydrologic Unit 05130103, in pylon of Wolf Creek Dam on Cumberland River and 10 mi (16 km) southwest of Jamestown, Ky. DRAINAGE AREA, 5,789 mi² (14,994 km²). PERIOD OF RECORD, April 1950 to current year. Prior to October 1954, published as Wolf Creek Reservoir. April to June 1950, published in WSP 1726. GAGE, water-stage recorder. Datum of gage is Sandy Hook datum. Prior to Dec. 6, 1950, nonrecording gage at same site at datum 545.0 ft (166.12 m) higher.

Reservoir is formed by earth embankment and concrete gravity dam surmounted by 10 taintor gates 37 ft (11 m) high by 50 ft (15 m) wide. Final closure of dam made Aug. 7, 1950. Total capacity at elevation 760.00 ft (231.648 m) top of gates, is 3,070,000 cfs-days (7,512 hm³), of which 1,056,000 cfs-days (2,584 hm³) above elevation 723.00 ft (220.370 m), crest of spillway, are reserved for flood control and 1,080,000 cfs-days (2,643 hm³) between elevation 673.00 ft (205.130 m), minimum power pool, and 723.00 ft (220.370 m) are used for power production. Figures given herein represent total contents, of which 934,000 cfs-days (2,285 hm³) below elevation 673.00 ft (205.130 m) is dead storage. Reservoir is used for flood control, power, navigation, and recreation. Records furnished by Corps of Engineers.

Revisions.--WSP 1556: Drainage area.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 2,673,800 cfs-days (6,543 hm³) Apr. 15, 1962, elevation, 747.12 ft (227.722 m); minimum, after first filling, 934,400 cfs-days (2,286 hm³) Jan. 1, 1956, elevation, 673.01 ft (205.133 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 2,122,900 cfs-days (5,195 hm³) June 11, elevation, 727.25 ft (221.666 m); minimum, 1,162,500 cfs-days (2,845 hm³) Nov. 15, elevation, 685.10 ft (208.818 m).

03416500 DALE HOLLOW LAKE.--Lat 36°32'19", long 85°27'05", Clay County, Hydrologic Unit 05130105, at Dale Hollow Dam on Obey River, 3 mi (5 km) east of Celina, and 7.3 mi (11.7 km) upstream from mouth. DRAINAGE AREA, 936 mi² (2,424 km²). PERIOD OF RECORD, August 1943 to current year. Prior to October 1965, published as Dale Hollow Reservoir. GAGE, water-stage recorder. Datum of gage is Sandy Hook datum. Prior to June 25, 1946, nonrecording gage at same site and datum.

Reservoir is formed by concrete gravity dam. Spillway is equipped with six taintor gates, each 12 ft (4 m) high by 60 ft (18 m) wide. Closure of dam was made Aug. 30, 1943; water in reservoir first reached minimum pool elevation May 7, 1944. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 663.0 ft (202.08 m), top of gates, is 859,800 cfs-days (2,104 hm³) of which 177,500 cfs-days (434.3 hm³) between elevations 663.0 ft (202.08 m) and 651.00 ft (198.425 m), crest of spillway, are reserved for flood control, and 250,200 cfs-days (612.2 hm³) between elevations 651.00 ft (198.425 m) and 631.00 ft (192.329 m), ordinary minimum pool, are used for power production. Contents of 432,100 cfs-days (1,057 hm³) below elevation 631.00 ft (192.329 m) is dead storage. Reservoir is used for flood control, navigation, and power. Records furnished by Corps of Engineers. Revisions.--WSP 1306: 1944. WSP 2110: Drainage area.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 828,600 cfs-days (2,028 hm³) Mar. 15, 1975, elevation, 660.98 ft (201.467 m); minimum, after first filling, 428,000 cfs-days (1,047 hm³) Sept. 11, 1944, elevation, 630.63 ft (192.216 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 713,600 cfs-days (1,746 hm³) Apr. 15, elevation, 653.22 ft (199.101 m); minimum, 458,700 cfs-days (1,122 hm³) Nov. 6, elevation, 633.37 ft (193.051 m).

03418400 CORDELL HULL RESERVOIR.--Lat 36°17'23", long 85°56'39", Smith County, Hydrologic Unit 05130108, at Cordell Hull Dam on Cumberland River, 2.7 mi (4.3 km) north of Carthage, and at mile 313.5 (504.4 km). DRAINAGE AREA, 8,095 mi² (20,966 km²). PERIOD OF RECORD, October 1972 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete gravity dam with earth embankment. Spillway is equipped with 5 taintor gates, each 41 ft (12 m) high and 45 ft (14 m) wide. Closure of dam was made Oct. 4, 1967; water in reservoir first reached ordinary minimum pool Mar. 13, 1973. Total capacity at elevation 508.0 ft (154.84 m), maximum surcharge pool, is 156,700 cfs-days (383.4 hm³), of which 53,400 cfs-days (130.7 hm³) is controlled storage between elevations 508.0 ft (154.84 m) and 499.0 ft (152.10 m), ordinary minimum pool. Contents of 5,000 cfs-days (12.24 hm³) between elevation of 499.0 ft (152.10 m) and 500.0 ft (152.40 m) full winter pool, is available for power production. Contents of 48,400 cfs-days (118.4 hm³) above 500.0 ft (152.40 m) is available for flood control during the winter, and 26,100 cfs-days (63.87 hm³) above 504.0 ft (153.62 m), full pool during spring to fall season, is available for flood control the rest of the year. Contents of 103,300 cfs-days (252.8 hm³) below elevation 499.0 ft (152.10 m) is dead storage. Reservoir is used for navigation, power, and flood control. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 156,700 cfs-days (383.4 hm³) Mar. 13, 1975, elevation, 508.00 ft (154.838 m); minimum, after first filling to ordinary minimum pool, 96,700 cfs-days (236.6 hm³) Apr. 18, 1974, elevation, 497.65 ft (151.684 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 138,100 cfs-days (337.9 hm³) June 22, elevation, 505.20 ft (153.985 m); minimum, 103,300 cfs-days (252.8 hm³) Dec. 1, elevation, 499.00 ft (152.095 m).

03422000 GREAT FALLS LAKE.--Lat 35°48'21", long 85°38'09", Warren County, Hydrologic Unit 05130108, at penstock inlet on Collins River, 700 ft (213 m) southwest of powerhouse of Tennessee Valley Authority, 1.5 mi (2.4 km) northwest of Rock Island, 1.8 mi (2.9 km) upstream from mouth of Collins River, and 2.0 mi (3.2 km) upstream from Great Falls Dam on Caney Fork. DRAINAGE AREA, 1,677 mi² (4,343 km²). PERIOD OF RECORD, January 1917 to current year. GAGE, remote indicator gage. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete gravity dam. Spillway is equipped with 18 taintor gates, each 14 ft (4 m) high by 25 ft (8 m) wide. Closure of dam was made in 1916; dam redesigned and crest raised 35 ft (11 m) in 1925. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 804.9 ft (245.33 m) top of gates, is 25,400 cfs-days (62.15 hm³), of which 23,900 cfs-days (58.48 hm³) are controlled storage above elevation 762.0 ft (232.26 m), minimum pool. Contents of 1,500 cfs-days (3.671 hm³) below elevation 762.0 ft (232.26 m) is dead storage. Reservoir is used primarily for power. Records furnished by Tennessee Valley Authority. Revisions.--WSP 2110: Drainage area.

EXTREMES FOR PERIOD OF RECORD: Maximum midnight elevation, 817.48 ft (249.168 m) Mar. 23, 1929, contents not determined; minimum midnight contents, 1,700 cfs-days (4.160 hm³) Aug. 19, 1918, elevation, 756.3 ft (230.52 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 27,000 cfs-days (66.07 hm³) July 26, elevation, 806.28 ft (245.754 m); minimum, 9,700 cfs-days (23.74 hm³) Oct. 19, elevation, 784.85 ft (239.222 m).

CUMBERLAND RIVER BASIN

RESERVOIRS IN CUMBERLAND RIVER BASIN, TN--CONTINUED

03424000 CENTER HILL LAKE.--Lat 36°05'48", long 85°49'38", DeKalb County, Hydrologic Unit 05130108, at Center Hill Dam on Caney Fork, 10 mi (16 km) north of Smithville, 14 mi (23 km) southeast of Carthage, and at mile 26.6 (42.8 km). DRAINAGE AREA, 2,174 mi² (5,631 km²). PERIOD OF RECORD, October 1948 to current year. Prior to October 1965, published as Center Hill Reservoir. GAGE, water-stage recorder. Datum of gage is Sandy Hook datum. Prior to Mar. 14, 1949, nonrecording gage at site 1,320 ft (402 m) upstream at same datum.

Reservoir is formed by earth embankment and concrete gravity dam. Spillway is equipped with eight taintor gates, each 37 ft (11 m) high by 50 ft (15 m) wide. Closure of dam was made Nov. 27, 1948; water in reservoir first reached minimum pool elevation Jan. 11, 1949. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 685.0 ft (208.79 m), top of gates, is 1,054,800 cfs-days (2,581 hm³), of which 384,500 cfs-days (940.9 hm³) between 685.0 ft (208.79 m) and 648.0 ft (197.51 m), crest of spillway, are reserved for flood control, and 248,000 cfs-days (606.9 hm³) between elevations 648.0 ft (197.51 m) and 618.0 ft (188.37 m), ordinary minimum pool, are used for power production. Contents of 422,300 cfs-days (1,033 hm³) below 618.0 ft (188.37 m) is dead storage. Reservoir is used for flood control, navigation, and power. Records furnished by Corps of Engineers. Revisions.--WSP 1910: Drainage area.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 1,004,400 cfs-days (2,458 hm³) Feb. 10, 1950, elevation, 680.6 ft (207.45 m); minimum, after first filling, 171,000 cfs-days (418.4 hm³) Dec. 1, 2, 1949, elevation 576.1 ft (175.60 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 716,100 cfs-days (1,752 hm³), Apr. 16, elevation, 652.90 ft (199.004 m); minimum, 482,300 cfs-days (1,180 hm³) Nov. 15, elevation, 625.90 ft (190.774 m).

03426300 OLD HICKORY LAKE.--Lat 36°17'50", long 86°39'20", Sumner County, Hydrologic Unit 05130201, at Old Hickory Dam on Cumberland River, 2.0 mi (3.2 km) west of Hendersonville, 10 mi (16 km) northeast of the State capitol in Nashville, and at mile 216.2 (347.9 km). DRAINAGE AREA, 11,673 mi² (30,233 km²). PERIOD OF RECORD, June 1954 to current year. GAGE, water-stage recorder. Datum of gage is 408.5 ft (124.51 m) National Geodetic Vertical Datum of 1929; gage readings have been reduced to elevations NGVD. Prior to Apr. 4, 1957, nonrecording gage at same site and datum.

Reservoir is formed by concrete gravity dam with earth embankment. Spillway is equipped with six taintor gates, each 41 ft (12 m) high and 45 ft (14 m) wide. Closure of dam was made in June 1954 and water in reservoir was raised sufficiently to maintain navigation through the lock. Water in reservoir first reached ordinary minimum pool elevation Dec. 30, 1956. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 450.0 ft (137.16 m), maximum surcharge pool, 274,600 cfs-days (671.9 hm³) of which 63,000 cfs-days (154.2 hm³) between elevations 450.0 ft (137.16 m) and 445.0 ft (135.64 m), normal pool, are induced surcharge storage provided to compensate for loss of natural valley storage incurred by construction of the project, and 31,800 cfs-days (77.82 hm³) between elevations 445.0 ft (135.64 m) and 442.0 ft (134.72 m), ordinary minimum pool, are used for power production. Contents of 179,800 cfs-days (440.0 hm³) below elevation 442.0 ft (134.72 m), is dead storage. Reservoir is used for navigation and power. Records furnished by Corps of Engineers. Revisions.--WSP 2110: Drainage area.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 276,200 cfs-days (675.9 hm³) Mar. 13, 1975, elevation, 450.11 ft (137.194 m); minimum, after first filling to ordinary minimum pool, 179,400 cfs-days (439.0 hm³) Oct. 22, 1957, Oct. 28, 1969, elevation, 441.96 ft (134.709 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 244,100 cfs-days (597.3 hm³), Sept. 14, elevation, 447.70 ft (136.459 m); minimum, 188,100 cfs-days (460.3 hm³) Mar. 19, elevation, 442.82 ft (134.972 m).

03430050 J. PERCY PRIEST RESERVOIR.--Lat 36°09'23", long 86°37'07", Davidson County, Hydrologic Unit 05130203, on upstream face of J. Percy Priest Dam on Stones River, 2.6 mi (4.2 km) east of Donelson, and 6.8 mi (10.9 km) above mouth. DRAINAGE AREA, 892 mi² (2,310 km²). PERIOD OF RECORD, September 1967 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Dec. 15, 1967, nonrecording gage at same site and datum.

Reservoir is formed by concrete gravity dam with earth embankments. Spillway is equipped with four taintor gates, each 41 ft (12 m) high by 45 ft (14 m) wide. Closure of dam was made Sept. 18, 1967; water in reservoir first reached ordinary minimum pool May 15, 1968. Revised capacity table used after Sept. 30, 1970. Total capacity at elevation 504.5 ft (153.77 m), maximum controlled pool, is 328,700 cfs-days (804.3 hm³) of which 193,600 cfs-days (473.7 hm³) is controlled storage between elevations 504.5 ft (153.77 m) and 480.0 ft (146.30 m), ordinary minimum pool. Contents of 17,200 cfs-days (42.09 hm³) between elevations 480.0 ft (146.30 m) and 483.0 ft (147.22 m), full winter pool, is available for power production. Contents of 176,400 cfs-days (431.7 hm³) above 483.0 ft (147.22 m) is available for flood control during the winter, and 131,100 cfs-days (320.8 hm³) above 490.0 ft (149.35 m), full pool during spring-to-fall season, is available for flood control the rest of the year. Contents of 135,100 cfs-days (330.6 hm³) below elevation 480.0 ft (146.30 m) is dead storage. Reservoir is used for flood control, power, recreation, and wildlife. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 316,400 cfs-days (774.2 hm³) Mar. 15, 1975, elevation, 503.41 ft (153.439 m); minimum, after first filling to ordinary minimum pool, 109,500 cfs-days (267.9 hm³) Dec. 5, 1968, elevation, 474.75 ft (144.704 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 249,200 cfs-days (609.8 hm³) Sept. 15, elevation, 496.58 ft (151.358 m); minimum, 142,300 cfs-days (348.2 hm³) Feb. 20, elevation, 481.29 ft (146.697 m).

03434900 CHEATHAM LAKE.--Lat 36°18'56", long 87°13'10", Cheatham County, Hydrologic Unit 05130202, at Cheatham Dam on Cumberland River, 9.4 mi (15 km) west of Ashland City, 16 mi (26 km) southeast of the courthouse in Clarksville, and at mile 148.7 (239.3 km). DRAINAGE AREA, 14,159 mi² (36,672 km²).

Reservoir is formed by concrete gravity dam. Spillway is equipped with seven semi-submersible taintor gates, each 27 ft (8 m) high by 60 ft (18 m) wide. Total capacity at elevation 385.0 ft (117.35 m), normal pool, is 52,200 cfs-days (127.7 hm³), of which 9,800 cfs-days (23.98 hm³) are controlled storage. Records of contents not published herein.

RESERVOIRS IN CUMBERLAND RIVER BASIN, TN--CONTINUED

03438210 LAKE BARKLEY.--Lat 37°01'17", long 88°13'16", Lyon County, Hydrologic Unit 05130205, in powerhouse of Barkley Dam on Cumberland River, 1.4 mi (2.3 km) northeast of Grand Rivers, Ky., and at mile 30.6 (49.2 km). DRAINAGE AREA, 17,598 mi² (45,579 km²). PERIOD OF RECORD, July 1964 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929, (levels by Corps of Engineers). Prior to Jan. 1, 1966, nonrecording gage, 1,200 ft (370 m) upstream from Barkley Dam at same datum.

Reservoir is formed by concrete gravity dam with earth embankments. Spillway is equipped with 12 taintor gates each 50 ft (15 m) high by 55 ft (17 m) wide. Construction cofferdam was closed and limited storage began July 1, 1964; reservoir reached ordinary minimum pool elevation of 354.0 ft (107.90 m) Feb. 16, 1966. Total level pool capacity at elevation 375.0 ft (114.30 m), top of gates, is 1,049,600 cfs-days (2,568 hm³), of which 742,000 cfs-days (1,816 hm³) is controlled storage above 354.0 ft (107.90 m), ordinary minimum pool. Contents of 130,500 cfs-days (319.3 hm³) between ordinary minimum pool elevation, 354.0 ft (107.90 m), and full pool elevation, 359.0 ft (109.42 m), is available for power during the spring-to-fall season. Minimum pool elevation in advance of floods is 346.0 ft (105.46 m), contents 171,000 cfs-days (418.4 hm³). Reservoir is used for navigation, flood control, power, and recreation. Barkley-Kentucky Canal opened June 13, 1966, for navigation and power use. Canal is 1.75 mi (2.82 km) long and interconnects Lake Barkley and Kentucky Lake at a point 2.2 mi (3.5 km) upstream from Barkley Dam. For daily discharges through the canal, see station 03438190, Kentucky reports. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, level pool storage, 790,700 cfs-days (1,935 hm³) Mar. 28, 1973, elevation, 369.10 ft (112.502 m); minimum since reaching permanent pool elevation of 354.0 ft (107.90 m), level pool storage, 290,000 cfs-days (709.6 hm³) Dec. 20, 1976, elevation, 353.20 ft (107.655 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 759,600 cfs-days (1,859 hm³) Apr. 19; maximum elevation, 368.03 ft (112.176 m) Apr. 19; minimum contents, 316,900 cfs-days (775.5 hm³) Dec. 1; minimum elevation, 353.84 ft (107.850 m) Feb. 8.

CUMBERLAND RIVER BASIN

RESERVOIRS IN CUMBERLAND RIVER BASIN, TN--CONTINUED

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	Elevation (feet)	Contents (cfs- days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs- days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs- days)	Change in contents (cfs-days)
03413500 LAKE CUMBERLAND				03416500 DALE HOLLOW LAKE			03418400 CORDELL HULL RESERVOIR		
Sept. 30.....	691.65	1294500	-	634.02	466100	-	503.50	127600	-
Oct. 31.....	686.40	1188300	-106200	633.42	459200	-6900	502.20	120100	-7500
Nov. 30.....	687.10	1202200	+13900	633.85	464200	+5000	499.80	107300	-12800
Dec. 31.....	704.70	1576200	+374000	643.66	583700	+119500	500.80	112500	+5200
CAL YR 1978			-40800			+85600			+3100
Jan. 31.....	717.25	1870800	+294600	648.54	648400	+64700	499.60	106300	-6200
Feb. 28.....	725.20	2070000	+199200	650.15	670500	+22100	499.30	104800	-1500
Mar. 31.....	719.30	1921200	-148800	650.22	671500	+1000	500.10	108800	+4000
Apr. 30.....	719.80	1933600	+12400	649.87	666600	-4900	503.60	128200	+19400
May 31.....	723.25	2020200	+86600	650.46	674800	+8200	503.90	130000	+1800
June 30.....	722.90	2011300	-8900	649.00	654600	-20200	504.00	130600	+600
July 31.....	720.95	1962300	-49000	650.30	672600	+18000	504.00	130600	0
Aug. 31.....	711.70	1737600	-224700	646.60	622300	-50300	504.20	131900	+1300
Sept. 30.....	708.75	1668700	-68900	645.27	604700	-17600	504.00	130600	-1300
WTR YR 1979			+374200			+138600			+3000
03422000 GREAT FALLS LAKE				03424000 CENTER HILL LAKE			03426300 OLD HICKORY LAKE		
Sept. 30.....	795.30	16800	-	629.70	512500	-	444.28	203600	-
Oct. 31.....	785.30	10000	-6800	628.20	500500	-12000	444.19	202600	-1000
Nov. 30.....	786.95	11000	+1000	626.70	488600	-11900	444.95	211000	+8400
Dec. 31.....	802.74	23300	+12300	638.40	585000	+96400	445.17	213500	+2500
CAL YR 1978			-2700			-48100			+13200
Jan. 31.....	805.56	26200	+2900	644.10	634900	+49900	444.65	207700	-5800
Feb. 28.....	805.68	26300	+100	647.40	664800	+29900	444.90	210500	+2800
Mar. 31.....	805.12	25700	-600	644.30	636700	-28100	444.57	206800	-3700
Apr. 30.....	795.03	16600	-9100	646.20	653800	+17100	444.54	206400	-400
May 31.....	805.10	25600	+9000	647.40	664800	+11000	444.85	209900	+3500
June 30.....	790.00	13000	-12600	644.40	637600	-27200	444.47	205700	-4200
July 31.....	802.54	23100	+10100	647.40	664800	+27200	444.20	202700	-3000
Aug. 31.....	800.30	21000	-2100	642.00	616300	-48500	444.61	207200	+4500
Sept. 30.....	804.10	24600	+3600	644.40	637600	+21300	444.16	202300	-4900
WTR YR 1979			+7800			+125100			-1300
03430050 J. PERCY PRIEST LAKE				03438210 LAKE BARKLEY‡					
Sept. 30.....	489.87	196700	-	355.31	341500	-			
Oct. 31.....	487.27	178800	-17900	354.79	327600	-13900			
Nov. 30.....	483.89	157600	-21200	354.40	318200	-9400			
Dec. 31.....	483.27	153900	-3700	354.52	348000	+29800			
CAL YR 1978			+12100			+30000			
Jan. 31.....	485.00	164400	+10500	354.32	354700	+6700			
Feb. 28.....	485.60	168100	+3700	355.75	403100	+48400			
Mar. 31.....	484.68	162400	-5700	356.52	384800	-18300			
Apr. 30.....	490.02	197800	+35400	359.13	444400	+59600			
May 31.....	490.81	203500	+5700	359.24	450600	+6200			
June 30.....	489.97	197400	-6100	358.10	414100	-36500			
July 31.....	489.44	193600	-3800	357.27	395800	-18300			
Aug. 31.....	491.10	205700	+12100	356.10	365400	-30400			
Sept. 30.....	494.40	231000	+25300	359.15	467800	+102400			
WTR YR 1979			+34300			+126300			

‡ Contents based on backwater profile.

03455000 FRENCH BROAD RIVER NEAR NEWPORT, TN

LOCATION.--Lat 35°58'54", long 83°09'40", Cocke County, Hydrologic Unit 06010105, on left bank, 200 ft (60 m) upstream from bridge on U. S. Highway 411, 1.0 mi (1.6 km) northeast of Newport city limits, 3.7 mi (6.0 km) upstream from Pigeon River, and at mile 77.5 (124.7 km).

DRAINAGE AREA.--1,858 mi² (4,812 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September to December 1900, February to August 1901, October to November 1901, November 1902 to December 1905, September to December 1907, October 1920 to current year. Monthly discharge only October to November 1920, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1933-34. WSP 823: Drainage area. WSP 893: 1928(M). WSP 1306: 1900-1908. WSP 1336: 1903(M), 1921-22(M), 1923, 1925(M), 1927(M), 1928, 1932. WSP 1706: 1901(M).

GAGE.--Water-stage recorder. Datum of gage is 1,011.61 ft (308.339 m) National Geodetic Vertical Datum of 1929. See WSP 1910 for history of changes prior to Mar. 31, 1934.

REMARKS.--Records good. Diurnal fluctuation during low flow caused by powerplants above station.

AVERAGE DISCHARGE.--61 years (water years 1904-05, 1921-79), 2,998 ft³/s (84.90 m³/s), 21.91 in/yr (557 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,300 ft³/s (2,160 m³/s) Aug. 30, 1940, gage height, 19.25 ft (5.867 m); minimum, 208 ft³/s (5.89 m³/s) Oct. 23, 1952, gage height, 0.97 ft (0.296 m); minimum daily, 240 ft³/s (6.80 m³/s) Sept. 9, 1925; minimum gage height, 0.91 ft (0.277 m) Sept. 20, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--From reports of Tennessee Valley Authority, the flood of Mar. 7, 1867, gage height, 24 ft (7.3 m), present datum, discharge, estimated, 110,000 ft³/s (3,120 m³/s), has not been exceeded since that date. From the same reports, other outstanding floods occurred Feb. 28, 1902, gage height, 23.0 ft (7.01 m) present datum, discharge, estimated, 101,000 ft³/s (2,860 m³/s); and July 17, 1916, gage height, 22.5 ft (6.86 m), present datum, discharge, estimated, 97,000 ft³/s (2,750 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft³/s (453 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 26	0030	19900 564	9.27 2.826	Apr. 3	2100	17800 504	8.62 2.627
Mar. 6	1500	*25700 728	10.93 3.331	Apr. 14	0130	16100 456	8.10 2.469
Mar. 24	1900	18500 524	8.84 2.694				

Minimum discharge, 619 ft³/s (17.5 m³/s) Oct. 3, gage height, 1.28 ft (0.390 m); minimum daily, 733 ft³/s (20.8 m³/s) Oct. 25, 31, Nov. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	823	733	1680	2580	3040	9540	4420	4480	4350	2260	2610	2140
2	941	752	1460	8070	2660	7020	4220	4170	4130	2060	2580	2720
3	1050	772	1110	8370	2910	5930	8620	3950	4320	1900	2390	3070
4	1030	793	1240	6110	2780	10900	14100	3930	5250	1820	2140	2740
5	941	793	3710	4270	2680	23900	12400	4000	4360	3330	2100	3510
6	963	762	5280	3320	2520	24800	9580	4160	3800	2490	1940	6850
7	1010	762	3630	3070	2400	18600	7550	4350	3520	2140	1860	4900
8	844	803	2600	4390	2480	12000	6230	3800	3840	3280	1810	3300
9	900	813	4540	5940	2530	9240	6180	3640	5260	3330	1760	2900
10	900	803	6230	5230	2160	7630	6590	4530	5530	4230	1720	2400
11	900	783	4840	3890	2050	7020	5810	5970	4350	4520	1760	2310
12	850	772	3400	3320	2210	6070	5390	5660	3820	3850	2110	2090
13	850	762	2710	3100	2380	5430	10900	5840	3350	4130	2080	1790
14	950	752	2170	3230	2420	5190	15100	6420	3050	4260	1710	3290
15	900	772	2100	3050	2510	5300	12600	5840	2830	3360	1500	5820
16	850	793	1830	2600	4400	4830	10700	4940	2640	2970	1390	4140
17	850	813	1830	2530	4550	4430	8560	4310	3100	2610	1310	3010
18	823	834	1800	2400	3750	4180	6710	3920	3370	2370	1200	2600
19	793	1420	1670	2380	3240	3980	5730	3710	2840	2060	1360	2420
20	783	1640	1680	2500	3070	3810	5220	3550	2720	2320	1310	2250
21	793	1090	1960	11300	3070	3660	4880	3850	2670	6850	1340	2320
22	783	1070	2250	12100	3910	3580	4600	4140	2680	10700	1580	9570
23	752	1020	2020	9580	4880	3470	4370	4800	2710	7560	1940	9090
24	743	1350	1940	8350	8670	14900	4170	5480	2780	5800	2030	7850
25	733	1090	2550	6900	15300	15700	4020	6690	2990	4270	2830	7380
26	772	1100	2620	5240	18400	12200	4460	7140	2630	4010	2450	5490
27	783	1030	2170	4340	14800	9240	7580	5440	2360	3840	3880	3830
28	762	1010	1880	3990	12200	6810	6990	4800	2200	4140	3410	4200
29	772	1360	1570	3620	---	5530	5810	4370	2110	4370	2610	6830
30	762	1940	1530	3230	---	5030	4860	3940	2180	3290	2310	7880
31	733	---	1650	3140	---	4670	---	3850	---	2790	2190	---
TOTAL	26339	29187	77650	152140	137970	264590	218350	145670	101740	116910	63210	130690
MEAN	850	973	2505	4908	4928	8535	7278	4699	3391	3771	2039	4356
MAX	1050	1940	6230	12100	18400	24800	15100	7140	5530	10700	3880	9570
MIN	733	733	1110	2380	2050	3470	4020	3550	2110	1820	1200	1790
CFSM	.46	.52	1.35	2.64	2.65	4.59	3.92	2.53	1.83	2.03	1.10	2.34
IN.	.53	.58	1.55	3.05	2.76	5.30	4.37	2.92	2.04	2.34	1.27	2.62

CAL YR 1978	TOTAL	1078151	MEAN	2954	MAX	33800	MIN	733	CFSM	1.59	IN	21.59
WTR YR 1979	TOTAL	1464446	MEAN	4012	MAX	24800	MIN	733	CFSM	2.16	IN	29.32

TENNESSEE RIVER BASIN

03455000 FRENCH BROAD RIVER NEAR NEWPORT, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1946-47, 1960-61, 1969-70, 1974-75, current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- NUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	HARD- NESS (MG/L AS CACO3)	ALKA- LITY (MG/L AS CACO3)
APR 18...	1100	6690	50	5.8	17.3	14	11	10.1	1.9	16	5
JUN 20...	1000	2690	67	6.6	23.0	10	7	8.0	1.2	12	14
AUG 08...	1045	1800	88	7.1	26.5	19	3	8.1	2.1	22	19

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
APR 18...	8.0	3.0	20	.03	361	13	.38	.02	.06	.040
JUN 20...	10	3.0	70	.10	508	13	.34	.04	.09	.050
AUG 08...	20	4.0	70	.10	340	3	.20	.02	.10	.060

DATE	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PR)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
APR 18...	.06	<1	40	100	12	<10	<.2	30	1.8	--
JUN 20...	.05	<1	<10	180	<10	20	<.2	10	3.6	--
AUG 08...	.02	<1	30	180	<10	<10	<.2	30	--	3.6

03461200 COSBY CREEK ABOVE COSBY, TN

LOCATION.--Lat 35°46'58", long 83°13'03", Cocke County, Hydrologic Unit 06010106, in Great Smoky Mountains National Park on left retaining wall of creek, 400 ft (120 m) downstream from Crying Creek, 600 ft (180 m) upstream from bridge on State Highway 32, 3,600 ft (1,100 m) upstream from Stillhouse Branch, 2.4 mi (3.9 km) southeast of Cosby, and at mile 10.7 (17.2 km).

DRAINAGE AREA.--10.1 mi² (26.2 km²).

PERIOD OF RECORD.--Annual maximum, water years 1959-66 (1959-65 published as "near Cosby"); October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,644.07 ft (501.113 m) National Geodetic Vertical Datum of 1929. Oct. 15, 1958, to Sept. 30, 1966, crest-stage gage at site 600 ft (180 m) downstream, at datum 1.08 ft (0.329 m) lower (gage heights adjusted to present datum in WSP 2110). Oct. 1, 1966 to June 13, 1977, water-stage recorder at site 600 ft (180 m) downstream at present datum.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--13 years, 28.9 ft³/s (0.818 m³/s), 38.48 in/yr (977 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,720 ft³/s (48.7 m³/s) Mar. 16, 1973, gage height, 4.11 ft (1.253 m) former site; about 17.1 ft (5.21 m) present site; minimum, 1.4 ft³/s (0.040 m³/s), Sept. 30, Oct. 1, 2, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 20	2315	498 14.1	15.56 4.743	Apr. 3	1145	265 7.50	14.76 4.499
Mar. 4	1030	*989 28.0	16.36 4.987				

Minimum discharge, 3.1 ft³/s (0.088 m³/s) Oct. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	3.3	19	28	23	54	27	18	42	13	15	8.7
2	4.6	3.3	14	77	22	52	29	16	49	12	14	7.8
3	4.1	3.3	12	52	20	50	118	16	59	11	13	13
4	4.6	3.3	25	40	19	403	107	18	94	11	12	12
5	4.1	3.5	48	31	17	185	79	17	71	30	11	57
6	3.9	3.3	29	29	17	114	62	16	56	17	11	57
7	3.6	3.6	20	47	18	86	52	15	46	25	10	32
8	3.6	4.5	16	81	16	69	45	14	44	25	9.4	24
9	3.5	4.0	122	55	16	56	57	14	41	22	9.0	19
10	3.5	3.9	64	43	17	53	52	13	34	29	8.5	15
11	3.3	3.9	38	35	16	51	45	12	56	23	11	13
12	3.3	3.7	27	31	15	43	47	31	41	21	17	11
13	3.9	3.7	22	27	16	40	118	41	34	19	16	10
14	6.3	3.7	19	25	15	61	100	43	28	17	12	9.8
15	4.8	3.7	16	21	21	64	77	35	25	17	11	10
16	4.1	4.1	16	19	67	56	61	28	22	16	10	9.6
17	3.9	4.1	15	19	58	49	51	24	26	14	9.5	9.1
18	3.9	4.9	14	18	46	43	43	20	21	13	8.8	8.9
19	3.7	4.6	14	18	38	38	37	18	19	13	8.3	8.6
20	3.6	4.5	14	147	33	34	32	17	18	45	7.6	8.1
21	3.6	4.5	59	193	37	31	28	36	17	98	7.4	59
22	3.5	4.3	41	99	47	29	25	33	16	89	12	84
23	3.5	9.1	31	69	73	34	23	34	17	63	9.3	53
24	3.5	12	31	62	114	69	21	76	19	45	8.5	37
25	3.5	8.9	41	49	128	56	20	162	22	35	8.8	27
26	3.5	7.8	35	42	103	46	20	114	18	30	8.5	21
27	3.7	7.6	30	38	75	40	29	88	16	26	8.0	18
28	3.7	8.1	26	34	61	37	22	89	14	24	7.6	18
29	3.5	24	23	29	---	35	20	69	14	21	7.0	29
30	3.5	33	21	26	---	32	19	56	14	19	10	24
31	3.5	---	20	25	---	29	---	47	---	17	13	---
TOTAL	121.2	196.2	922	1509	1148	2039	1466	1230	993	860	324.2	713.6
MEAN	3.91	6.54	29.7	48.7	41.0	65.8	48.9	39.7	33.1	27.7	10.5	23.8
MAX	6.3	33	122	193	128	403	118	162	94	98	17	84
MIN	3.3	3.3	12	18	15	29	19	12	14	11	7.0	7.8
CF5M	.39	.65	2.94	4.82	4.06	6.52	4.84	3.93	3.28	2.74	1.04	2.36
IN.	.45	.72	3.40	5.56	4.23	7.51	5.40	4.53	3.66	3.17	1.19	2.63

CAL YR 1978	TOTAL	9462.2	MEAN 25.9	MAX 170	MIN 3.3	CF5M 2.56	IN 34.85
WTR YR 1979	TOTAL	11522.2	MEAN 31.6	MAX 403	MIN 3.3	CF5M 3.13	IN 42.43

TENNESSEE RIVER BASIN

03461500 PIGEON RIVER AT NEWPORT, TN

LOCATION.--Lat 35°57'38", long 83°10'28", Cocke County, Hydrologic Unit 06010106, on left bank 100 ft (30 m) upstream from bridge on U. S. Highway 25 and 70 at Newport, 0.6 mi (1.0 km) downstream from Morell Branch, and at mile 6.8 (10.9 km).

DRAINAGE AREA.--666 mi² (1,725 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1900 to September 1929, October 1944 to September 1946, August 1948 to current year. Monthly discharge only for some periods, published in WSP 1306. Published as "near Newport" 1945-46.

REVISED RECORDS.--WSP 1143: Drainage area. WSP 1306: 1901, 1904-10. WSP 1336: 1903, 1917(M), 1919-20(M), 1921, 1924(M), 1927-29(M), 1948-52 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 1,038.76 ft (316.614 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1929, nonrecording gage at present site at datum 2.00 ft (0.610 m) higher. May 8, 1945, to July 22, 1946, water-stage recorder at site 4.8 mi (7.7 km) downstream at datum 35.85 ft (10.927 m) lower. August 13, 1948, to Sept. 30, 1970, at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good. Considerable regulation by Lakes Junaluska, Logan, and Walters for periods of low flow, combined usable capacity of reservoirs about 12,500 cfs-days (30.59 hm³). The largest of these, Lake Walters, usable capacity, 10,400 cfs-days (25.45 hm³), was completed in 1929.

AVERAGE DISCHARGE.--62 years, 1,256 ft³/s (35.57 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft³/s (1,420 m³/s) Feb. 28, 1902, gage height, 23.4 ft (7.13 m), present datum, but due to removal of dam 1.3 mi (2.1 km) downstream in 1945, stage for this flood would be about 1.9 ft (0.58 m) lower under present conditions, from reports of Tennessee Valley Authority; minimum, 38 ft³/s (1.08 m³/s) Oct. 5, 1952, Sept. 13, 1954; minimum daily, 48 ft³/s (1.36 m³/s) Sept. 21, 28, 1953; minimum gage height, 1.68 ft (0.512 m), present datum, Sept. 13, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Mar. 7, 1867, and June 17, 1876, reached a stage of 23 ft (7.0 m), present datum, about 21.1 ft (6.43 m), present conditions, due to removal of mill dam in 1945, discharge, 48,000 ft³/s (1,360 m³/s), and flood of August 30, 1940, reached a stage of 19.3 ft (5.88 m), present datum, about 17.4 ft (5.30 m) present conditions, due to removal of mill dam in 1945, discharge, 36,000 ft³/s (1,020 m³/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,500 ft³/s (212 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Mar. 4	2115	*24900	705	13.96	4.255	Apr. 13	1500	9360	265	8.54	2.603

Minimum discharge, 61 ft³/s (1.73 m³/s) Oct. 13, gage height, 1.79 ft (0.546 m); minimum daily, 63 ft³/s (1.78 m³/s), Oct. 9-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	174	700	1170	1130	1600	2980	1350	1290	1470	338	1390	937
2	93	312	609	2660	1270	2850	1630	1540	1670	959	1240	1780
3	82	502	194	2890	554	2740	4020	1410	1570	1250	1220	1540
4	82	106	1090	2510	605	10200	4030	1540	2290	867	380	1670
5	82	81	2460	2240	1670	12100	3450	875	1780	749	396	2280
6	73	305	1030	2290	1380	5710	3410	728	1180	564	360	3110
7	69	424	821	1700	1420	4010	2900	1130	1110	328	789	1870
8	65	199	1150	3180	941	3430	2720	1070	1090	372	976	822
9	63	358	3060	2680	1150	2860	2860	1290	1230	456	1170	648
10	63	270	3110	2090	1030	2730	2830	1260	810	805	967	1360
11	63	296	1820	1810	351	2840	2720	1600	1430	969	426	1090
12	63	191	1070	1730	469	2720	2710	1660	836	1660	257	1060
13	67	117	854	1490	797	2650	6140	1740	990	2340	388	2300
14	95	214	972	1190	844	2770	6630	1610	1030	1200	198	2300
15	103	223	700	1560	547	2820	4360	1250	567	830	376	1500
16	187	283	321	1380	1790	2710	3550	1460	351	1020	452	487
17	143	306	468	990	1660	2150	3060	1010	272	1030	287	585
18	91	185	707	1000	1530	1510	2760	741	799	901	172	895
19	67	183	629	943	1490	1440	2630	958	1030	728	315	1150
20	65	157	1080	2020	1240	1560	2570	912	398	1620	606	1050
21	132	474	1250	5580	1610	1550	2530	1820	280	3180	451	1600
22	98	346	1090	3660	2280	1510	2490	1700	637	3400	284	3450
23	177	298	474	3040	2760	1810	2460	1360	689	2370	223	2730
24	118	271	1370	2970	3530	2850	2410	1380	374	1910	450	2350
25	275	205	1020	2810	3970	2830	2280	2560	396	1740	350	2150
26	288	194	511	2680	3770	2690	2390	2590	252	1480	781	2100
27	271	530	1170	2610	3730	2610	2400	1690	633	1480	1040	2080
28	250	341	1430	2560	3170	2550	2180	1230	871	1330	615	1970
29	227	1430	615	2480	---	1890	1410	1580	848	990	454	2160
30	254	1480	572	1690	---	1840	1250	1780	606	436	786	2260
31	722	---	912	1330	---	1570	---	1880	---	1190	1360	---
TOTAL	4602	10981	33729	68893	47158	96480	88130	44644	27489	38492	19159	51284
MEAN	148	366	1088	2222	1684	3112	2938	1440	916	1242	618	1709
MAX	722	1480	3110	5580	3970	12100	6630	2590	2290	3400	1390	3450
MIN	63	81	194	943	351	1440	1250	728	252	328	172	487
CAL YR 1978	TOTAL	406842	MEAN	1115	MAX	13200	MIN	63				
WTR YR 1979	TOTAL	531041	MEAN	1455	MAX	12100	MIN	63				

TENNESSEE RIVER BASIN

03461500 PIGEON RIVER AT NEWPORT, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974-75, current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIOCHEM 5 DAY (MG/L)	HARD- NESS (MG/L AS CAC03)
APR 18...	1155	2775	100	6.8	13.0	28	12	10.8	2.5	24
JUN 20...	1050	271	410	6.4	22.0	46	2	8.5	1.5	85
AUG 08...	1000	275	400	7.2	23.5	37	1	7.8	2.1	86

DATE	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 100 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
APR 18...	23	9.0	15	50	.07	375	9	.40	.01	.06
JUN 20...	32	20	100	280	.38	205	3	.52	.06	.09
AUG 08...	38	22	82	250	.34	186	2	--	--	--

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
APR 18...	.050	.06	<1	30	100	17	10	<.2	40	4.0
JUN 20...	.070	.07	<1	<10	220	<10	40	<.2	<10	8.7
AUG 08...	--	<.01	<1	<10	120	<10	10	<.2	<10	--

TENNESSEE RIVER BASIN

03465500 NOLICHUCKY RIVER AT EMBREEVILLE, TN

LOCATION.--Lat 36°10'35", long 82°27'27", Washington County, Hydrologic Unit 06010108, on left bank, at Embreeville, 1,000 ft (300 m) upstream from bridge on State Highway 81, 3 mi (5 km) northwest of Erwin, 5.2 mi (8.4 km) downstream from North Indian Creek, and at mile 89.0 (143.2 km).

DRAINAGE AREA.--805 mi² (2,085 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1900 to May 1901 (published as "near Chucky Valley"), October 1919 to current year. Monthly discharge only October 1919 to June 1920, published in WSP 1306.

REVISED RECORDS.--WSP 803: 1935(M). WSP 823: Drainage area. WSP 1336: 1921-24, 1931(M).

GAGE.--Water-stage recorder. Datum of gage is 1,519.30 ft (463.083 m) National Geodetic Vertical Datum of 1929. Sept. 1, 1900, to May 21, 1901, nonrecording gage at site 3 mi (5 km) downstream at different datum, destroyed by flood of May 21, 1901. July 1, 1920 to Sept. 30, 1931, nonrecording gage at bridge 2,000 ft (600 m) downstream at datum 6.33 ft (1.929 m) lower.

REMARKS.--Records good.

AVERAGE DISCHARGE.--60 years (water years 1920-79), 1,369 ft³/s (38.77 m³/s), 23.10 in/yr (587 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 110,000 ft³/s (3,120 m³/s) Nov. 6, 1977, gage height, 21.52 ft (6.559 m), from rating curve extended above 48,000 ft³/s (1,360 m³/s) on basis of contracted-opening and slope-area measurements of peak flow; minimum, 85 ft³/s (2.41 m³/s) Sept. 8, 9, 1925, gage height, 1.60 ft (0.488 m) site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 21, 1901, reached a stage of 24 ft (7.3 m), discharge, 120,000 ft³/s (3,400 m³/s), present site and datum, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,500 ft³/s (269 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	1100	13800 391	6.07 1.850	July 21	2200	12000 340	5.65 1.722
Jan. 21	0830	12100 343	5.66 1.725	Sept. 5	2030	14300 405	6.18 1.884
Feb. 25	2330	15900 450	6.54 1.993	Sept. 14	1030	13900 394	6.09 1.856
Mar. 5	0600	*21800 617	7.79 2.374	Sept. 22	0530	18100 513	7.03 2.143
Mar. 24	0230	*21800 617	7.79 2.374	Sept. 29	1100	10700 303	5.33 1.625
Apr. 3	2130	10400 295	5.26 1.603				

Minimum discharge, 320 ft³/s (9.06 m³/s) several days in November, gage height, 1.07 ft (0.326 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	434	327	980	2050	1250	3560	2140	1970	1910	1120	1280	667
2	450	333	721	9100	1030	3090	2020	1830	1580	962	1190	1000
3	450	327	622	5100	1190	2700	5520	1730	1600	899	1090	771
4	411	327	731	2850	1230	9850	7660	1830	1840	989	961	757
5	426	327	2350	2160	1070	15600	5990	1850	1610	1770	895	4120
6	396	327	1760	1790	1000	7160	4210	1730	1430	1160	847	6260
7	368	327	1150	1770	1050	4900	3350	1590	1320	1030	810	2480
8	354	354	932	3150	990	3900	2890	1510	1350	1260	772	1680
9	354	361	3290	2580	979	3260	3140	1470	1380	1150	735	1310
10	354	347	3600	1970	797	2790	3210	2050	1530	2310	704	1110
11	361	333	1830	1720	859	2860	2660	1830	1490	2190	720	984
12	354	327	1340	1530	945	2450	2500	1610	1300	1650	941	883
13	368	327	1110	1440	1020	2210	4400	2910	1160	1770	945	836
14	576	320	956	1440	960	2260	4550	2890	1080	1540	736	7560
15	490	333	817	1230	1100	2290	3510	2110	1020	1320	669	3240
16	419	347	795	1100	3080	2010	2940	1780	980	1280	653	2020
17	382	361	828	1110	3190	1860	2550	1580	2480	1120	622	1590
18	361	524	752	1160	2200	1740	2290	1460	2620	1000	597	1360
19	361	763	700	1130	1730	1650	2100	1380	1730	966	583	1210
20	361	474	795	1990	1610	1580	1950	1320	1570	1420	560	1080
21	354	389	1170	10100	1700	1510	1830	1350	1440	6810	539	1430
22	347	361	1330	6010	2350	1430	1750	1430	2080	7280	743	9400
23	347	404	1060	3680	3460	1660	1680	1530	2020	3960	710	3700
24	347	1000	1040	3050	7030	15300	1600	1900	1740	2920	713	2590
25	340	920	2070	2600	11100	8020	1540	1970	1630	2260	877	2160
26	340	585	1690	2060	11400	4800	3820	1980	1420	1990	817	1840
27	347	585	1280	1880	6040	3690	4530	1740	1240	1840	968	1670
28	340	763	1020	1840	4310	3220	3010	1750	1130	1740	841	2790
29	340	763	908	1580	---	2780	2450	1710	1070	1520	723	7350
30	333	1330	920	1380	---	2490	2160	1530	1150	1380	632	4020
31	327	---	1610	1430	---	2280	---	1610	---	1230	629	---
TOTAL	11792	14566	40157	81980	74670	124900	93950	54930	45900	59836	24502	77868
MEAN	380	486	1295	2645	2667	4029	3132	1772	1530	1930	790	2596
MAX	576	1330	3600	10100	11400	15600	7660	2910	2620	7280	1280	9400
MIN	327	320	622	1100	797	1430	1540	1320	980	899	539	667
CFSM	.47	.60	1.61	3.29	3.31	5.01	3.89	2.20	1.90	2.40	.98	3.23
IN.	.54	.67	1.86	3.79	3.45	5.77	4.34	2.54	2.12	2.77	1.13	3.60
CAL YR 1978 TOTAL	518064			1419	19800	320	1.76	23.94				
WTR YR 1979 TOTAL	705051			1932	15600	320	2.40	32.58				

TENNESSEE RIVER BASIN

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03465500 NOLICHUCKY RIVER AT EMBREEVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT						
03...	1230	419	70	19.0	--	--
19...	1445	360	85	10.5	--	--
DEC						
28...	1130	1100	43	1.0	--	--
JAN						
29...	1530	1500	46	1.0	--	--
MAR						
05...	1600	13700	26	10.5	--	--
MAY						
15...	1520	2020	36	20.0	--	--
AUG						
08...	1200	730	55	25.5	4	7.9
SEP						
17...	1430	1580	39	21.0	19	81

TENNESSEE RIVER BASIN

03466228 SINKING CREEK AT AFTON, TN

LOCATION.--Lat 36°11'55", long 82°44'31", Greene County, Hydrologic Unit 06010108, on left bank 300 ft (90 m) upstream from bridge on county road, 0.4 mi (0.6 km) northwest of Afton, and at mile 3.1 (5.0 km).

DRAINAGE AREA.--13.7 mi² (35.5 km²).

PERIOD OF RECORD.--July 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,459.36 ft (444.813 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,510 ft³/s (42.8 m³/s) July 21, 1979, gage height, 7.79 ft (2.374 m), from rating curve extended above 800 ft³/s (22.7 m³/s); minimum, 1.7 ft³/s (0.048 m³/s) several days in December 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 180 ft³/s (5.10 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage Height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
July 4	2200	353 10.0	4.20 1.280	July 21	1415	*1510 42.8	7.79 2.374

Minimum discharge, 1.7 ft³/s (0.048 m³/s), several days in December.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	2.9	2.4	13	16	44	18	13	11	6.7	21	10
2	3.5	2.9	1.9	48	14	35	17	13	9.9	6.7	20	8.9
3	3.5	2.9	1.7	18	14	30	45	12	9.6	6.6	18	9.3
4	3.8	2.9	2.7	14	14	65	35	16	9.4	50	18	9.6
5	3.8	2.7	3.8	11	14	51	29	16	8.9	38	17	15
6	3.5	2.9	2.4	10	14	36	24	13	8.8	11	16	22
7	3.5	2.7	2.0	24	13	31	22	12	9.9	9.9	16	12
8	3.5	2.7	1.9	29	13	30	21	12	10	8.9	15	10
9	3.8	2.7	19	17	13	28	31	11	8.6	14	15	8.6
10	3.8	2.7	9.2	14	12	30	24	11	10	42	14	7.9
11	3.5	2.5	5.8	13	12	46	21	11	9.1	20	14	7.6
12	3.5	2.4	5.0	12	12	31	19	11	8.9	16	14	7.3
13	3.5	2.4	4.5	12	13	28	23	10	8.4	15	13	7.0
14	3.1	2.2	4.0	12	14	30	21	11	8.2	18	12	6.7
15	3.1	2.5	4.0	10	20	26	19	9.9	8.2	15	12	6.4
16	3.1	2.7	4.0	9.6	26	24	18	9.6	7.9	14	12	6.1
17	3.1	2.5	4.2	9.6	18	23	17	9.5	9.4	13	11	6.1
18	3.1	3.1	4.2	9.6	16	22	17	9.2	8.4	12	11	6.1
19	3.3	2.7	4.5	9.3	16	21	16	8.9	7.7	12	11	6.1
20	3.3	2.4	4.5	23	15	21	16	8.9	7.5	25	10	6.1
21	3.3	2.4	9.9	80	26	20	15	8.9	7.3	270	10	7.3
22	3.1	2.4	8.9	34	34	19	15	9.4	8.3	90	10	7.6
23	3.1	2.5	7.2	26	26	19	15	8.9	7.6	47	10	6.4
24	3.1	2.7	12	31	71	30	15	14	7.6	33	10	6.4
25	3.1	2.5	22	25	56	24	14	13	7.4	29	10	6.4
26	3.1	2.2	11	21	59	21	14	11	7.1	33	9.6	6.1
27	3.1	2.2	8.9	20	49	20	17	11	6.9	43	9.6	6.1
28	3.1	2.2	7.6	21	51	20	15	13	6.7	35	9.3	8.2
29	2.9	2.4	7.2	18	---	19	14	11	6.6	27	11	7.3
30	2.9	3.1	7.2	17	---	18	13	10	7.5	24	9.6	10
31	2.9	---	11	17	---	18	---	10	---	22	8.9	---
TOTAL	102.5	78.0	204.6	628.1	671	880	600	348.2	252.8	1006.8	398.0	250.6
MEAN	3.31	2.60	6.60	20.3	24.0	28.4	20.0	11.2	8.43	32.5	12.8	8.35
MAX	3.8	3.1	22	80	71	65	45	16	11	270	21	22
MIN	2.9	2.2	1.7	9.3	12	18	13	8.9	6.6	6.6	8.9	6.1
CFSM	.24	.19	.48	1.48	1.75	2.07	1.46	.82	.62	2.37	.93	.61
IN.	.28	.21	.56	1.71	1.82	2.39	1.63	.95	.69	2.73	1.08	.68

CAL YR 1978	TOTAL	4285.8	MEAN 11.7	MAX 200	MIN 1.7	CFSM .85	IN 11.64
WTR YR 1979	TOTAL	5420.6	MEAN 14.9	MAX 270	MIN 1.7	CFSM 1.09	IN 14.72

TENNESSEE RIVER BASIN

03466500 NOLICHUCKY RIVER BELOW NOLICHUCKY DAM, TN

LOCATION.--Lat 36°03'59", long 82°52'18", Greene County, Hydrologic Unit 06010108, 0.2 mi (0.3 km) downstream from State Highway 70 bridge, 0.6 mi (0.9 km) northeast of Walker Ford, 3.2 mi (5.1 km) northeast of Cedar Creek, and at mile 45.7 (73.5 km).

DRAINAGE AREA.--1,184 mi² (3,067 km²).

PERIOD OF RECORD.--Water years 1973 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
JAN 10...	1420	2990	92	8.6	2.2	7	6	14.7	32	1.4	4800
APR 18...	1325	2330	90	7.4	14.5	7	6	11.2	--	1.1	--
JUN 20...	1250	1720	83	6.4	22.0	12	7	9.5	--	1.2	--
AUG 08...	1300	900	150	7.6	26.5	5	3	8.0	--	1.6	--

DATE	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- FRABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- FRABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 10...	--	13	2.1	1.6	.8	45	7.0	2.0	50	.07
APR 18...	40	--	--	--	--	47	5.0	2.0	70	.10
JUN 20...	37	--	--	--	--	33	4.0	3.0	60	.08
AUG 08...	71	--	--	--	--	51	5.0	2.0	90	.12

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
JAN 10...	404	13	.67	.01	.09	.040	--	560	<1	>0
APR 18...	440	7	.52	.02	.03	.030	.06	--	<1	<10
JUN 20...	279	15	.36	.07	.04	.050	.05	--	<1	<10
AUG 08...	219	10	.36	.04	.06	.040	.03	--	<1	>0

DATE	IRON, TOTAL RECOV- FRABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- FRABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- FRABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- FRABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- FRABLE (UG/L AS NI)	ZINC, TOTAL RECOV- FRABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
JAN 10...	870	120	<10	60	30	<.2	<10	<10	2.2	--
APR 18...	--	<50	24	--	20	<.2	--	50	1.5	--
JUN 20...	--	170	<10	--	40	<.2	--	20	2.6	--
AUG 08...	--	<50	<10	--	30	<.2	--	20	--	2.6

TENNESSEE RIVER BASIN

03468510 FRENCH BROAD RIVER AT DOUGLAS DAM (TAILWATER), TN

LOCATION.--Lat 35°57'40", long 83°32'20", Sevier County, Hydrologic Unit 06010107, at downstream side of dam, 0.5 mi (0.8 km) downstream from Douglas Creek, 1.2 mi (1.9 km) north of Union Grove, and at mile 32.3 (52.0 km).

DRAINAGE AREA.--4,541 mi² (11,761 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)
NOV 27...	0930	10000	250	7.3	15.0	13	14	8.7	8	--
FFB 20...	0800	9030	160	7.3	3.0	6	6	9.8	5	--
MAR 21...	1000	17200	89	7.0	10.0	44	37	10.2	--	1.3
MAY 09...	1023	12500	110	7.6	14.0	8	3	8.9	--	1.1
JUL 11...	1330	10050	130	6.8	19.0	10	5	5.7	--	2.7
SFP 12...	1055	12800	170	8.1	25.0	12	7	4.9	--	2.3

DATE	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
NOV 27...	--	22	3.7	53	2.0	49	32	24	170	.23
FFB 20...	--	16	3.0	2.3	1.1	38	5.0	10	80	.11
MAR 21...	39	--	--	--	--	25	12	4.0	60	.08
MAY 09...	41	--	--	--	--	63	13	6.0	80	.11
JUL 11...	43	--	--	--	--	31	16	8.0	70	.10
SFP 12...	54	--	--	--	--	100	20	12	100	.14

03468510 FRENCH BROAD RIVER AT DOUGLAS DAM (TAILWATER), TN-- (Continued)

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV 27...	4590	11	.63	.03	.13	.030	--	850	<1	30
FFR 20...	1950	5	.76	.12	<.01	<.010	--	<200	<1	10
MAR 21...	2790	11	.53	.08	.25	.060	.01	--	<1	20
MAY 09...	2700	2	.51	.04	.08	.020	--	--	<1	10
JUL 11...	1900	4	.44	.04	.41	.020	.02	--	<1	20
SFP 12...	3460	4	.33	.06	.51	.030	<.01	--	<1	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
NOV 27...	450	--	<10	230	--	.4	<10	200	4.1	--
FFR 20...	310	--	<10	40	--	<.2	<10	40	2.7	--
MAR 21...	--	1400	<10	--	70	<.2	--	40	--	3.9
MAY 09...	--	<50	<10	--	<10	<.2	--	20	2.2	--
JUL 11...	--	<50	<10	--	240	<.2	--	100	4.0	--
SFP 12...	--	<50	<10	--	160	<.2	--	50	5.1	--

TENNESSEE RIVER BASIN

03470000 LITTLE PIGEON RIVER AT SEVIERVILLE, TN

LOCATION.--Lat 35°52'42", long 83°34'40", Sevier County, Hydrologic Unit 06010107, on left bank, 0.2 mi (0.3 km) downstream from West Prong Little Pigeon River, 0.6 mi (1.0 km) north of intersection of U. S. Highway 441 and State Highway 66 in Sevierville, and at mile 4.4 (7.1 km).

DRAINAGE AREA.--353 mi² (914 km²).

PERIOD OF RECORD.--October 1920 to current year. Prior to November 1920 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1921-34. WSP 1336: 1921(M), 1922, 1923(M), WRD TN 1972: 1969(M), 1970(M), 1971(P).

GAGE.--Water-stage recorder. Datum of gage is 879.45 ft (268.056 m) National Geodetic Vertical Datum of 1929. Nov. 23, 1920, to June 13, 1928, nonrecording gage, and June 14, 1928, to June 1, 1966; water-stage recorder, at site 0.1 mi (0.2 km) upstream at datum 1.99 ft (0.607 m) higher. June 2, 1966, to June 5, 1967, at site 1.5 mi (2.4 km) downstream at datum 7.31 ft (2.228 m) lower.

REMARKS.--Records good. Some regulation at low flow caused by small mills above station prior to 1967. During the period April 1966 to July 1967, Tennessee Valley Authority constructed a flood-control project for town of Sevierville, widening and deepening Little Pigeon River through the town and 1.8 mi (2.9 km) downstream, and relocating the lower portion of West Prong Little Pigeon River. The present gage is located on the new dredged channel.

AVERAGE DISCHARGE.--59 years, 574 ft³/s (16.26 m³/s), 22.08 in/yr (561 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,000 ft³/s (1,160 m³/s) Mar. 26, 1965, gage height, 16.09 ft (4.904 m), site and datum then in use; minimum, 2.8 ft³/s (0.079 m³/s) Sept. 21, 1925; minimum gage height, 0.08 ft (0.024 m) Dec. 23, 1965, site and datum then in use; minimum daily discharge, 8.4 ft³/s (0.24 m³/s) Sept. 9, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 25, 1875, reached a stage of 18 ft (5.5 m), discharge, 55,000 ft³/s (1,560 m³/s); that of Apr. 1, 1896, 16.8 ft (5.12 m), discharge, 46,000 ft³/s (1,300 m³/s; and that of Mar. 7, 1867, 16.5 ft (5.03 m), discharge, 43,000 ft³/s (1,220 m³/s) all at site 0.1 mi (0.2 km) upstream, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft³/s (198 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1330	9310 264	6.68 2.036	Mar. 4	1430	*23,200 657	10.79 3.289
Jan. 21	0130	8660 245	6.43 1.960				

Minimum discharge, 63 ft³/s (1.78 m³/s) Nov. 6, gage height, 1.08 ft (0.329 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	69	354	1150	419	1330	466	369	809	266	361	581
2	134	69	250	3150	372	1130	493	340	625	219	320	289
3	102	69	209	1400	387	978	3280	327	659	200	289	392
4	105	67	1010	905	388	11500	2600	399	1450	191	272	289
5	105	67	1340	659	377	4880	1630	440	1020	432	244	250
6	91	67	670	592	349	2150	1210	376	756	295	224	682
7	83	71	399	1070	421	1530	951	333	719	361	209	449
8	81	105	308	2230	409	1250	809	308	809	466	200	320
9	81	102	4280	1290	414	1010	1070	289	836	376	186	250
10	78	83	1790	917	327	987	975	308	613	822	173	214
11	76	76	928	694	373	1680	822	283	1040	613	173	195
12	76	74	592	571	377	1240	872	283	769	571	302	173
13	81	74	432	511	505	999	4100	314	571	795	272	157
14	165	71	347	475	477	1140	2970	354	457	613	200	153
15	157	78	289	376	582	1180	1790	289	392	581	173	182
16	111	102	272	327	1250	963	1300	261	347	822	169	182
17	94	111	283	314	1010	822	1040	234	361	484	157	165
18	86	177	234	327	798	719	861	219	340	369	145	161
19	83	153	224	314	643	636	731	209	295	354	138	153
20	81	108	239	2110	564	581	625	214	272	905	131	145
21	81	94	1010	5520	749	540	550	449	278	3110	214	415
22	78	86	795	2150	968	521	493	432	272	2360	234	1760
23	76	169	511	1390	1440	636	449	647	308	1790	261	613
24	76	475	581	1400	3310	1450	415	1650	333	1460	224	423
25	76	266	1180	1200	3440	1060	392	2580	475	963	205	320
26	78	177	795	951	2560	809	415	1630	340	769	283	266
27	81	173	560	809	1770	682	694	1150	278	744	302	255
28	83	219	423	756	1600	603	540	1250	244	769	255	440
29	76	261	361	592	---	550	440	1010	229	756	224	861
30	74	731	327	511	---	502	399	836	384	511	261	719
31	71	---	647	484	---	466	---	769	---	423	571	---
TOTAL	2865	4444	21640	35145	26279	44524	33382	18552	16281	23390	7372	11454
MEAN	92.4	148	698	1134	939	1436	1113	598	543	755	238	382
MAX	165	731	4280	5520	3440	11500	4100	2580	1450	3110	571	1760
MIN	71	67	209	314	327	466	392	209	229	191	131	145
CFSM	.26	.42	1.98	3.21	2.66	4.07	3.15	1.69	1.54	2.14	.67	1.08
IN.	.30	.47	2.28	3.70	2.77	4.69	3.52	1.96	1.72	2.46	.78	1.21
CAL YR 1978	TOTAL	188338	MEAN 516	MAX 6900	MIN 67	CFSM 1.46	IN 19.85					
WTR YR 1979	TOTAL	245328	MEAN 672	MAX 11500	MIN 67	CFSM 1.90	IN 25.85					

TENNESSEE RIVER BASIN

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03470000 LITTLE PIGEON RIVER AT SEVIERVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-68, 1970, current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT						
05...	1000	108	150	17.0	--	--
NOV						
22...	1610	86	140	12.0	--	--
JAN						
04...	1130	892	75	1.0	--	--
31...	1129	508	75	3.5	--	--
MAY						
01...	1150	369	85	16.5	--	--
JUN						
07...	1115	594	72	19.5	--	--
JUL						
17...	1115	500	60	21.5	--	--
AUG						
15...	1125	171	120	22.0	--	--
SEP						
18...	1545	155	105	21.0	7	2.9

TENNESSEE RIVER BASIN

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN
(National stream-quality accounting network station)

LOCATION.--Lat 35°57'30", long 83°46'26", Knox County, Hydrologic Unit 06010107, on left bank, 0.7 mi (1.1 km) downstream from Johnson Hollow, 7.5 mi (12.1 km) upstream from confluence with Holston River, and 8 mi (13 km) east of Knoxville.

DRAINAGE AREA.--5,101 mi² (13,212 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to current year. Prior to December 1945 monthly discharge only, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Dec. 10, 1945, to Sept. 30, 1957, at site 200 ft (60 m) upstream on right bank at same datum.

REMARKS.--Records good. Flow regulated by Douglas Lake (station 03468500), 24.6 mi (39.6 km) upstream.

AVERAGE DISCHARGE.--34 years, 7,911 ft³/s (224.0 m³/s), 21.06 in/yr (535 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,300 ft³/s (1,820 m³/s) Mar. 12, 1963, elevation, 832.20 ft (253.655 m), from rating curve extended above 36,000 ft³/s (1,020 m³/s); minimum, 67 ft³/s (1.90 m³/s) Oct. 25, 1953, elevation, 813.38 ft (247.918 m); minimum daily, 68 ft³/s (1.93 m³/s) Oct. 23-26, 1953.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1867 reached a stage of 855.0 ft (260.60 m), from floodmarks, estimated discharge, 160,000 ft³/s (4,530 m³/s), from investigations by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 42,900 ft³/s (1,210 m³/s) Mar. 4, elevation, 827.84 ft (252.326 m); minimum, 163 ft³/s (4.62 m³/s) Oct. 30; elevation, 813.85 ft (248.061 m); minimum daily, 350 ft³/s (9.91 m³/s) Oct. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3690	2060	5650	4740	13100	20800	7030	7420	8040	8560	11600	10600
2	5450	1800	4080	11200	11400	23700	9600	7570	8000	9410	12200	10100
3	3430	1640	1730	9160	9000	23000	11500	8330	6370	8860	9130	11300
4	5430	1150	1990	9560	4570	30500	9990	8600	7730	4560	11000	10200
5	7270	1040	3180	6660	5590	28900	8320	9390	7440	4820	9930	10100
6	6820	1270	1950	7870	7520	26900	7710	6050	8410	7950	11100	10200
7	5200	1250	2520	8410	7620	28600	6590	7610	7770	7740	11100	10200
8	3930	1490	6420	10400	8150	28300	5130	10500	9540	5640	11800	10900
9	5710	1360	8200	13100	10200	27000	4730	9300	8960	5460	10700	11600
10	4700	1490	6700	17100	11300	23800	7290	9790	7760	6450	11700	9540
11	7010	1110	8680	16900	5880	25300	5770	9470	8370	6740	10600	10700
12	1940	1410	10300	16600	2790	23200	4440	8860	7290	8790	8450	10800
13	3490	1200	10600	16400	3090	19800	9950	6430	8150	9750	11700	6500
14	2190	1480	11600	13000	2800	19100	9290	9460	5790	9540	6970	6480
15	554	1530	12000	15500	2910	20100	5740	8720	8530	9150	9180	10100
16	1820	1410	12200	10500	2120	19700	9580	8840	10000	7870	10900	10500
17	4650	1400	7650	8340	3450	15300	12100	9270	9400	7820	11000	10700
18	5790	1690	8020	8310	2870	11400	11200	7610	11200	7450	10600	11300
19	6280	2320	9890	7340	3790	13400	11400	9320	10800	7520	8580	9160
20	2490	2970	11000	7820	4920	10400	11000	6760	9310	9530	11100	9370
21	1020	2390	9170	12200	5370	10200	10900	9390	8020	6130	10500	7590
22	431	5220	10400	14700	6530	9230	7740	9830	7870	5010	10800	10900
23	2250	1680	7690	17600	7150	9470	7250	9490	8030	11300	10100	13200
24	2190	1990	4150	18400	10400	9350	8830	3970	6170	14000	10900	12200
25	2030	1860	6770	18100	10700	8290	7690	3790	7590	12700	9550	11800
26	1360	1660	4710	17500	15100	13500	6900	6090	8580	12400	9300	11800
27	1480	2030	11200	17300	18900	12800	6870	7520	7920	12900	10500	11900
28	946	3680	6550	17200	20400	10400	9370	6650	6660	12800	9450	6340
29	350	5050	8150	17000	---	9710	6880	6870	9420	11900	9460	11500
30	697	5390	6590	13700	---	7340	8770	7370	9850	13000	9530	5420
31	2120	---	4250	13100	---	7310	---	9450	---	11500	8690	---
TOTAL	102718	62020	223990	395710	217620	546800	249560	249720	248970	277250	318120	303000
MEAN	3313	2067	7225	12760	7772	17640	8319	8055	8299	8944	10260	10100
MAX	7270	5390	12200	18400	20400	30500	12100	10500	11200	14000	12200	13200
MIN	350	1040	1730	4740	2120	7310	4440	3790	5790	4560	6970	5420
(†)	-50600	-4400	-29100	+34300	+140200	+79900	+247800	+45400	-27900	+31800	-162400	+500
MEAN†	1681	1921	6287	13870	12780	20220	16580	9520	7569	9969	5023	10120
CFSM†	.33	.38	1.23	2.72	2.51	3.96	3.25	1.87	1.44	1.95	.98	1.98
IN.†	.38	.42	1.42	3.13	2.61	4.57	3.63	2.15	1.61	2.25	1.14	2.21

CAL YR 1978 TOTAL 2586288 MEAN 7086 MAX 26200 MIN 350 MEAN† 7054 CFSM† 1.38 IN.† 18.77
WTR YR 1979 TOTAL 3195478 MEAN 8755 MAX 30500 MIN 350 MEAN† 9592 CFSM† 1.88 IN.† 25.52

† Change in contents, in cfs-days, in Douglas Lake, furnished by Tennessee Valley Authority.
‡ Adjusted for change in contents in lakes or reservoirs listed above.

TENNESSEE RIVER BASIN

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03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1975 to current year.

WATER TEMPERATURES: June 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1975.

REMARKS.--No conductance record Oct. 29-30, Aug. 14 to Sept. 30 due to instrument malfunction. No temperature record Oct. 30, June 8 to July 3, Aug. 2-4, Aug. 21 to Sept. 30 due to instrument malfunction. Flow regulated by Douglas Lake (station 03468500), 24.6 mi (39.6 km) upstream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 303 micromhos June 25, 1978; minimum, 34 micromhos Oct. 23, 1978.

WATER TEMPERATURES: Maximum, 33.0°C Aug. 11, 12, 1977; minimum 0.0°C Jan. 19, 1977, Feb. 11, 12, 20, 1979.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 266 micromhos Dec. 14, 1978; minimum, 34 micromhos Oct. 23, 1978.

WATER TEMPERATURES: Maximum, 28.5°C July 25, Aug. 20; minimum 0.0°C Feb. 11, 12, 20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
OCT											
12...	1130	1150	200	6.8	22.0	5.0	7.8	52	K10	63	14
NOV											
29...	1115	1730	240	6.7	14.0	15	7.8	35	K15	71	25
DEC											
05...	1100	1540	210	6.6	13.0	9.0	7.6	80	52	64	15
JAN											
18...	1100	1600	145	6.9	4.0	10	11.8	47	25	46	9
FEB											
13...	1130	1100	140	7.6	3.0	15	12.6	31	57	56	17
MAR											
15...	1200	28000	130	6.2	8.5	40	10.0	55	62	42	12
APR											
17...	1130	3160	120	6.8	12.0	10	8.7	--	--	46	10
MAY											
17...	1300	2480	110	8.2	16.0	3.0	8.7	K8	K14	46	14
JUL											
30...	1030	6420	135	7.1	21.0	6.0	--	140	80	48	3
AUG											
28...	1400	1730	145	7.8	25.0	2.0	--	K8	K15	54	8

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
OCT											
12...	19	3.8	14	32	.8	1.7	49	21	16	.1	6.8
NOV											
29...	23	3.4	21	38	1.1	2.3	46	30	25	.1	6.4
DEC											
05...	20	3.4	16	34	.9	1.9	49	26	19	.1	6.1
JAN											
18...	15	2.1	8.8	28	.6	1.6	37	17	10	.1	8.0
FEB											
13...	17	3.2	6.0	19	.4	1.3	39	13	7.3	.0	7.7
MAR											
15...	13	2.4	4.7	19	.3	1.4	30	11	5.7	.1	7.0
APR											
17...	14	2.6	4.7	18	.3	1.3	36	11	5.7	.1	7.3
MAY											
17...	14	2.7	5.9	21	.4	1.3	32	11	5.8	.0	6.2
JUL											
30...	15	2.5	7.6	25	.5	1.4	45	13	8.7	.1	7.5
AUG											
28...	17	2.9	8.9	26	.5	1.7	46	13	9.8	.1	7.3

TENNESSEE RIVER BASIN

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)
OCT 12...	116	112	.16	360	.24	.00	.41	.41	.09	.65
NOV 29...	145	139	.20	677	.48	.00	.17	.17	.14	.65
DEC 05...	127	122	.17	528	.49	.00	.59	.59	.44	1.1
JAN 18...	92	85	.13	397	.71	.10	.05	.15	.08	.86
FEB 13...	91	79	.12	270	.73	.06	.11	.17	.17	.90
MAR 15...	67	63	.09	5070	.61	.07	.28	.35	.08	.96
APR 17...	74	68	.10	631	.53	.05	.11	.16	.04	.69
MAY 17...	80	66	.11	536	.42	.00	.11	.11	.13	.53
JUL 30...	78	83	.11	1350	.42	.00	.05	.05	.01	.47
AUG 28...	92	88	.13	430	.37	.02	.18	.20	.22	.57

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 12...	.020	.010	--	--	--	--	10	31	73
NOV 29...	.030	.000	2.1	--	--	1100	11	51	97
DEC 05...	.030	.010	3.4	--	--	--	9	37	83
JAN 18...	.060	.030	--	3.2	.3	--	15	65	95
FEB 13...	.050	.030	1.8	--	--	--	13	39	84
MAR 15...	.080	.020	2.5	--	--	57	30	2270	93
APR 17...	.030	.010	--	4.7	--	--	20	171	50
MAY 17...	.020	.010	7.5	--	--	1300	6	40	41
JUL 30...	.020	.010	--	4.6	.1	180	472	8180	99
AUG 28...	.020	.000	4.2	--	--	1700	2	9.3	79

TENNESSEE RIVER BASIN

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03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
OCT 12...	1	0	0	0	1	0	<10	0	1
JAN 18...	5	0	0	0	0	0	<10	0	0
APR 17...	3	1	0	0	0	0	10	10	2
JUL 30...	3	1	--	30	0	1	20	10	0

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 12...	0	9	1	320	10	13	8	40	10
JAN 18...	0	1	0	1000	80	1	1	60	50
APR 17...	1	1	0	610	60	9	0	0	5
JUL 30...	0	6	1	400	20	0	0	80	40

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 12...	<.5	<.5	0	0	0	1	40	0
JAN 18...	<.5	<.5	0	0	0	0	30	0
APR 17...	<.5	<.5	0	0	0	0	10	0
JUL 30...	<.5	<.5	0	0	0	0	30	10

TENNESSEE RIVER BASIN

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 29,78 1115	MAR 15,79 1200	MAY 17,79 1300	JUL 30,79 1030	AUG 28,79 1400	
TOTAL CELLS/ML	1100	57	1300	180	1700	
DIVERSITY: DIVISION	1.2	0.8	1.0	0.7	0.4	
..CLASS	1.2	0.8	1.0	0.7	0.4	
..ORDER	1.6	0.8	1.3	0.9	0.4	
...FAMILY	1.7	0.8	1.5	1.3	0.5	
....GENUS	1.8	1.5	1.5	1.3	0.5	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...COELASTRACEAE						
....COELASTRUM	--	-	--	-	130	8
....OOCYSTACEAE						
....ANKISTRODESMUS	42	4	14# 25	--	13 7	--
....SELENASTRUM	14	1	--	-	--	-
....TETRAEDRON	--	-	--	-	--	-
...SCENEDESMACEAE					13	1
....SCENEDESMUS	--	-	--	-	130# 71	--
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	460# 40		14# 25	--	--	--
....MELOSIRA	28 2		29# 50	580# 46	26 14	--
...PENNALES						
...FRAGILARIACEAE						
....FRAGILARIA	--	-	--	-	--	-
...GOMPHONEMACEAE				26 2	--	--
....GOMPHONEMA	--	-	--	-	13 1	--
....NAVICULACEAE					--	-
....NAVICULA	83 7		--	-	39 3	--
...NITZSCHACEAE					--	-
....NITZSCHIA	28 2		--	-	26 2	--
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...HORMOGONALES						
...OSCILLATORIAEAE						
....OSCILLATORIA	480# 43	--	--	580# 46	--	1600# 92

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

TENNESSEE RIVER BASIN

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03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	221	199	205	208	182	195	244	224	238	190	178	183
2	208	196	203	213	201	206	243	229	236	188	138	162
3	209	198	202	216	203	209	245	229	234	149	136	144
4	208	194	200	215	203	209	237	220	228	169	143	159
5	202	194	199	216	204	209	233	195	221	178	163	172
6	206	196	199	217	204	209	199	183	190	185	171	181
7	200	190	195	220	208	213	205	188	194	189	174	185
8	199	186	192	216	209	212	243	203	220	188	175	182
9	196	184	191	218	207	212	247	223	240	177	163	173
10	197	186	192	218	207	211	218	190	195	181	173	177
11	197	187	193	218	206	213	233	189	207	179	177	178
12	205	188	196	219	207	212	251	229	241	177	150	163
13	205	191	197	218	209	213	258	249	254	149	142	144
14	205	195	199	220	214	216	266	259	262	147	142	144
15	213	184	204	226	218	222	261	248	256	150	146	148
16	176	36	87	231	225	228	254	244	252	151	142	150
17	104	83	92	241	225	231	254	233	248	156	144	152
18	117	101	107	242	232	237	254	233	243	157	145	153
19	125	106	113	251	230	240	253	240	247	156	146	153
20	127	107	113	258	241	248	246	231	241	156	147	153
21	115	111	113	256	239	243	237	222	229	147	103	126
22	115	38	75	253	236	245	221	204	214	111	97	104
23	173	34	93	257	241	246	223	208	217	127	112	119
24	175	168	172	250	235	243	226	212	219	131	128	130
25	172	167	169	250	231	240	224	203	211	139	132	135
26	175	170	173	249	223	238	208	191	203	144	138	141
27	177	171	173	255	228	238	203	181	194	149	143	146
28	176	172	174	252	226	240	200	181	190	148	145	147
29	---	---	---	262	247	255	199	180	193	148	146	147
30	---	---	---	256	233	249	195	182	189	146	145	145
31	192	178	184	---	---	---	190	177	182	147	143	145
MONTH	221	34	166	262	182	226	266	177	222	190	97	153

TENNESSEE RIVER BASIN

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	145	142	143	169	163	165	136	128	131	135	125	131
2	142	126	141	171	165	168	135	125	129	139	130	136
3	143	127	140	172	167	169	136	127	132	137	129	133
4	144	127	139	175	109	158	136	121	130	133	125	130
5	144	127	138	133	109	120	139	132	136	131	123	128
6	144	134	141	148	134	143	140	133	137	136	123	130
7	145	135	142	148	134	139	140	132	137	139	129	135
8	145	133	141	137	134	135	136	125	131	132	123	128
9	144	129	142	138	135	137	136	126	131	125	117	121
10	144	142	143	144	138	141	137	130	133	123	113	119
11	147	130	140	141	132	136	144	134	139	125	114	120
12	149	130	139	133	130	131	149	136	143	129	120	125
13	149	133	141	132	125	130	144	136	141	127	117	123
14	156	136	145	126	122	124	134	124	130	127	119	122
15	155	140	146	127	122	125	131	123	128	121	113	118
16	152	138	144	122	119	120	132	124	129	118	110	115
17	154	138	147	128	119	123	133	121	128	150	110	128
18	149	132	138	136	124	131	129	122	127	192	154	171
19	146	130	138	137	126	134	131	123	128	201	167	184
20	148	131	143	129	117	122	131	122	128	222	175	195
21	159	140	151	124	116	120	130	124	128	207	181	196
22	161	149	157	124	117	122	132	123	129	211	182	197
23	160	148	156	127	120	125	134	126	130	237	192	207
24	160	154	157	123	117	121	130	123	128	207	179	189
25	154	134	146	121	112	118	131	123	128	224	181	208
26	147	136	141	119	114	116	132	124	129	181	116	152
27	154	147	151	121	113	118	131	124	129	167	121	144
28	165	154	160	127	117	122	129	123	128	158	130	149
29	---	---	---	124	117	122	132	124	129	170	130	151
30	---	---	---	129	117	124	133	126	130	178	139	157
31	---	---	---	132	123	129	---	---	---	168	139	156
MONTH	165	126	145	175	109	132	149	121	131	237	110	148
	JUNE			JULY			AUGUST			SEPTEMBER		
1	172	134	155	163	123	144	166	117	154			
2	174	135	153	165	127	147	155	102	142			
3	168	133	150	152	144	146	152	100	139			
4	168	137	157	195	124	151	156	104	141			
5	170	130	146	224	172	190	163	107	140			
6	163	128	145	199	143	170	159	109	147			
7	159	127	144	208	145	175	152	107	142			
8	157	126	143	220	158	186	147	113	141			
9	160	126	141	201	136	171	144	99	132			
10	151	126	145	154	109	126	141	122	132			
11	150	123	140	152	111	128	146	98	133			
12	157	123	138	138	102	116	173	116	146			
13	152	117	133	132	97	112	187	143	177			
14	165	117	137	128	93	110	---	---	---			
15	159	129	145	151	95	119	---	---	---			
16	165	131	149	175	110	136	---	---	---			
17	160	130	144	192	114	144	---	---	---			
18	146	118	134	212	127	159	---	---	---			
19	143	117	132	204	136	167	---	---	---			
20	156	119	135	183	132	165	---	---	---			
21	150	117	134	236	179	213	---	---	---			
22	164	118	138	255	221	239	---	---	---			
23	168	123	143	232	167	194	---	---	---			
24	163	125	145	193	170	180	---	---	---			
25	160	125	145	182	161	170	---	---	---			
26	170	129	150	172	155	163	---	---	---			
27	180	128	153	169	144	156	---	---	---			
28	197	139	163	161	145	153	---	---	---			
29	161	126	147	168	145	160	---	---	---			
30	155	122	140	172	149	161	---	---	---			
31	---	---	---	164	115	155	---	---	---			
MONTH	197	117	144	255	93	158	187	98	144			

TENNESSEE RIVER BASIN

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03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	27.0	24.5	25.5	21.5	17.0	19.0	17.5	13.5	16.0	11.0	8.5	9.5
2	27.0	23.5	25.5	20.0	17.0	18.5	17.5	14.0	16.0	11.0	8.0	9.5
3	27.5	24.0	25.5	20.0	17.0	18.5	16.5	13.0	14.0	8.0	6.0	7.0
4	27.5	23.5	25.5	19.0	15.5	17.0	17.0	14.0	15.0	8.0	6.5	7.5
5	26.5	23.5	25.5	18.0	15.0	16.5	16.5	11.0	14.5	8.0	5.0	7.0
6	26.0	23.0	25.0	20.0	14.5	16.5	15.0	9.5	11.5	8.0	5.5	7.5
7	25.5	22.0	24.0	16.5	15.5	16.0	14.5	9.5	11.5	8.5	5.5	8.0
8	25.5	21.5	23.5	16.0	16.0	16.0	17.0	13.0	15.0	8.5	7.0	8.0
9	25.0	20.5	23.0	17.0	15.5	16.0	17.0	12.5	15.0	7.0	6.0	7.0
10	25.5	21.5	23.5	17.5	14.5	16.0	13.5	11.5	12.5	7.5	6.5	7.0
11	25.5	22.0	24.0	17.5	14.5	15.5	14.0	10.5	13.0	7.5	7.0	7.0
12	25.5	21.5	23.5	18.0	14.5	16.0	15.0	10.5	13.5	7.0	6.5	6.5
13	25.5	22.0	24.0	18.0	15.0	16.5	15.0	13.5	14.5	6.5	6.0	6.0
14	25.0	19.5	22.0	17.0	15.0	16.0	15.0	14.0	14.5	6.5	6.0	6.0
15	20.5	16.0	18.0	18.5	16.0	17.0	14.5	10.0	14.0	6.0	5.5	6.0
16	21.5	9.0	16.0	17.0	16.5	17.0	14.5	11.0	14.0	6.0	3.5	5.5
17	22.0	18.5	20.5	20.0	16.5	17.0	14.0	7.5	12.5	6.0	4.0	5.5
18	22.0	18.5	20.5	20.0	15.5	17.0	13.5	6.0	10.0	7.0	4.0	6.0
19	22.0	19.5	21.5	19.5	15.0	17.0	13.5	10.5	12.5	6.5	4.0	5.5
20	22.5	18.5	20.5	19.0	14.5	16.0	14.0	11.5	13.5	6.5	4.5	6.0
21	20.5	17.5	19.0	19.0	14.5	16.0	14.0	10.5	12.5	7.0	6.5	7.0
22	21.5	10.5	17.0	19.5	15.0	17.5	12.5	9.0	11.5	7.0	5.5	6.0
23	23.0	6.5	16.0	19.0	15.0	16.5	12.0	9.0	11.5	6.0	5.0	5.5
24	22.5	19.5	20.5	19.5	15.0	16.5	11.5	9.0	10.5	5.5	5.0	5.5
25	21.5	18.5	20.0	18.0	13.0	15.0	11.5	8.5	10.5	5.5	5.0	5.5
26	21.0	18.5	19.5	16.5	14.0	14.5	11.0	6.0	10.0	6.0	5.0	5.5
27	22.5	18.5	19.5	17.0	14.0	15.0	10.5	5.5	10.0	6.0	5.5	6.0
28	21.0	17.5	19.0	18.5	14.5	16.5	10.5	4.5	7.5	6.0	5.5	5.5
29	24.5	9.0	16.5	18.0	14.0	16.5	10.0	5.0	9.5	5.5	5.5	5.5
30	---	---	---	18.0	13.5	16.5	10.5	5.0	9.5	5.5	5.0	5.5
31	21.0	17.0	18.5	---	---	---	11.0	8.0	9.5	6.0	5.0	5.5
MONTH	27.5	6.5	21.5	21.5	13.0	16.5	17.5	4.5	12.5	11.0	3.5	6.5
FEBRUARY			MARCH			APRIL			MAY			
1	5.0	4.5	5.0	7.5	6.0	6.5	13.5	11.5	12.5	16.5	13.5	15.5
2	5.0	.5	4.0	8.5	6.5	7.5	13.0	11.5	12.0	17.5	15.5	16.5
3	4.5	1.0	4.0	8.5	8.0	8.0	13.0	10.5	12.0	17.0	15.0	16.0
4	6.0	2.5	4.5	9.5	8.5	9.0	13.5	12.5	13.0	16.5	14.5	16.0
5	5.0	1.5	4.0	9.0	7.5	8.5	13.5	12.0	13.0	17.0	14.0	15.5
6	4.5	2.5	4.0	8.0	7.5	8.0	13.5	11.0	12.5	18.0	14.0	16.5
7	4.5	2.5	4.0	8.5	7.5	8.0	13.0	10.5	12.0	20.0	15.5	17.5
8	4.5	2.5	4.0	8.5	8.0	8.0	15.0	11.0	12.5	18.5	14.5	16.5
9	4.5	1.0	4.0	9.0	8.0	8.5	13.0	11.0	12.5	18.0	14.5	16.0
10	4.0	3.0	4.0	9.0	8.5	9.0	12.5	10.5	11.5	18.5	15.0	16.5
11	4.5	.0	3.0	8.5	8.0	8.5	14.5	11.0	13.0	19.0	15.0	16.5
12	5.0	.0	2.5	9.0	7.5	8.5	15.0	12.5	14.0	19.0	15.0	17.0
13	5.5	1.0	3.5	9.5	8.0	9.0	15.0	13.5	14.0	17.0	15.5	16.5
14	6.0	1.0	3.5	9.5	9.0	9.0	15.0	13.5	14.0	17.5	15.0	16.5
15	8.0	3.0	5.0	9.0	8.0	8.5	15.5	14.0	14.5	18.5	15.0	17.0
16	7.0	3.0	5.5	9.5	8.0	9.0	15.0	12.0	13.5	19.0	15.0	17.0
17	8.0	2.5	6.5	10.0	9.0	9.5	15.0	12.0	14.0	17.5	15.0	16.5
18	4.5	.5	2.5	10.5	8.5	10.0	15.5	12.5	14.5	19.5	13.5	16.5
19	5.5	1.0	2.5	10.5	8.5	10.0	16.0	13.0	14.5	19.0	14.0	16.5
20	5.5	.0	3.5	11.0	9.0	10.0	16.0	13.0	15.0	19.5	14.0	16.5
21	6.0	3.0	5.0	11.5	9.0	10.5	16.0	13.5	15.0	18.5	14.5	16.5
22	6.5	4.5	5.5	11.0	9.5	10.5	16.5	13.5	15.0	18.0	14.5	16.5
23	7.0	5.0	6.0	11.0	9.0	10.5	16.5	14.5	15.5	17.5	14.5	16.0
24	8.0	5.5	6.5	11.0	9.5	10.5	16.5	13.5	15.0	16.5	15.0	16.0
25	9.0	7.0	8.0	9.5	7.5	8.5	16.0	13.5	15.0	18.5	15.0	17.0
26	8.0	5.0	6.0	10.0	8.5	9.0	16.0	14.0	15.0	16.5	13.5	15.0
27	6.0	5.0	5.5	10.0	8.0	9.5	17.0	14.5	15.5	16.5	14.5	15.5
28	6.5	5.5	6.0	11.5	9.0	10.5	16.0	13.5	15.0	17.5	14.0	16.0
29	---	---	---	12.5	9.5	11.0	16.0	14.0	15.0	19.5	15.0	17.0
30	---	---	---	12.0	10.0	11.5	17.0	13.5	15.5	19.0	15.0	17.5
31	---	---	---	13.0	11.5	12.0	---	---	---	18.0	15.0	16.5
MONTH	9.0	.0	4.5	13.0	6.0	9.5	17.0	10.5	14.0	20.0	13.5	16.5

TENNESSEE RIVER BASIN

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.5	15.5	17.5	---	---	---	22.5	19.5	21.5			
2	20.0	16.0	18.0	---	---	---	---	---	---			
3	19.0	16.0	17.5	---	---	---	---	---	---			
4	20.0	16.0	18.0	21.0	16.5	19.0	---	---	---			
5	21.5	16.0	18.5	21.5	16.5	19.0	26.0	19.5	23.0			
6	20.0	15.5	17.5	20.0	16.0	18.5	24.5	16.0	21.0			
7	20.0	16.0	18.0	20.0	16.5	18.5	25.0	16.0	20.0			
8	---	---	---	20.5	17.0	19.0	25.0	18.5	23.0			
9	---	---	---	20.0	17.0	18.5	25.0	14.0	20.5			
10	---	---	---	21.5	16.0	19.0	25.0	16.5	22.5			
11	---	---	---	20.0	16.5	19.0	24.5	15.5	22.0			
12	---	---	---	21.5	17.5	19.0	24.0	15.0	21.0			
13	---	---	---	20.5	17.5	19.5	24.5	15.5	23.5			
14	---	---	---	20.0	17.0	19.0	26.5	24.0	25.0			
15	---	---	---	21.0	18.0	19.5	24.5	21.5	23.5			
16	---	---	---	23.0	17.0	20.0	25.0	19.0	24.0			
17	---	---	---	23.0	17.5	20.0	25.5	20.5	24.0			
18	---	---	---	23.5	16.5	20.0	27.0	22.0	25.0			
19	---	---	---	23.5	16.5	20.0	27.0	22.5	25.5			
20	---	---	---	26.5	16.5	20.0	28.5	22.5	26.5			
21	---	---	---	21.0	19.5	20.0	---	---	---			
22	---	---	---	20.5	17.5	20.0	---	---	---			
23	---	---	---	20.0	19.0	19.5	---	---	---			
24	---	---	---	26.0	18.0	19.5	---	---	---			
25	---	---	---	28.5	18.5	19.5	---	---	---			
26	---	---	---	23.0	19.0	19.5	---	---	---			
27	---	---	---	27.0	18.5	21.0	---	---	---			
28	---	---	---	20.5	19.0	19.5	---	---	---			
29	---	---	---	24.0	19.5	21.0	---	---	---			
30	---	---	---	28.0	20.5	22.0	---	---	---			
31	---	---	---	27.5	19.5	22.0	---	---	---			
MONTH	21.5	15.5	18.0	28.5	16.0	19.5	28.5	14.0	23.0			

03476010 SOUTH FORK HOLSTON RIVER AT SOUTH HOLSTON DAM (TAILWATER), TN

LOCATION.--Lat 36°31'26", long 82°05'26", Sullivan County, Hydrologic Unit 06010102, at downstream side of dam, 1.4 mi (2.2 km) southeast of Emmett, 3.0 mi (4.8 km) southwest of Holston Valley, and at mile 49.8 (80.1 km).

DRAINAGE AREA.--703 mi² (1,821 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
NOV 21...	0745	1861	180	7.6	13.0	6	1	2.8	3	--	--
JAN 02...	0830	2750	180	7.9	9.0	7	2	6.3	5	--	--
MAR 28...	1215	2361	180	7.6	7.0	6	2	12.5	--	1.2	--
MAY 15...	1105	2400	180	7.9	6.7	8	1	9.9	--	<1.0	3300
JUL 10...	1045	2361	170	7.9	8.3	6	1	8.5	--	<1.0	800
SEP 18...	1230	2389	160	7.2	12.2	5	1	3.3	--	<1.0	>20000

DATE	HARD- NFSS (MG/L AS CAC03)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
NOV 21...	--	25	6.9	1.9	1.0	77	6.0	3.0	120	.16
JAN 02...	--	--	--	--	--	82	--	--	--	--
MAR 28...	83	--	--	--	--	78	8.0	4.0	100	.14
MAY 15...	83	--	--	--	--	74	10	5.0	110	.15
JUL 10...	90	--	--	--	--	79	8.0	4.0	130	.18
SEP 18...	79	--	--	--	--	72	14	4.0	130	.18

TENNESSEE RIVER BASIN

03476010 SOUTH FORK HOLSTON RIVER AT SOUTH HOLSTON DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C. SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV 21...	603	2	.48	.04	.06	<.010	--	<200	<1	20
JAN 02...	--	--	.52	.02	.07	.010	--	--	--	--
MAR 28...	637	2	.09	.06	.10	.010	<.01	--	<1	50
MAY 15...	713	1	.68	.20	.10	.010	--	--	<1	<10
JUL 10...	829	<1	1.2	.12	.11	<.010	.01	--	<1	<10
SEP 18...	839	2	.71	--	--	--	--	--	<1	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
NOV 21...	50	--	<10	50	--	.7	<10	20	3.4	--
JAN 02...	60	--	--	40	--	--	--	--	--	--
MAR 28...	--	<50	21	--	10	<.2	--	250	--	2.2
MAY 15...	--	<50	<10	--	<10	<.2	--	40	2.7	--
JUL 10...	--	--	<10	--	--	<.2	--	20	1.6	--
SEP 18...	--	<50	<10	--	<10	<.2	--	60	2.3	--

03483950 WATAUGA RIVER BELOW WATAUGA DAM, TN

LOCATION.--Lat 36°19'48", long 82°07'34", Carter County, Hydrologic Unit 06010103, at Watauga Dam powerhouse, 3.5 mi (5.6 km) northeast of Braemar, 4.0 mi (6.4 km) northeast of Valley Forge, 4.2 mi (6.8 km) southeast of Elizabethton, and at mile 35.8 (57.6 km).

DRAINAGE AREA.--468 mi² (1,212 km²).

PERIOD OF RECORD.--Water years 1973, 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)
OCT 16...	0847	1400	70	6.9	11.0	5	2	5.1	2	--
NOV 21...	0650	1700	81	7.0	12.5	6	1	--	2	--
DEC 18...	1700	2850	80	7.1	11.0	5	2	6.1	2	--
MAR 28...	1008	2611	73	7.4	5.0	8	4	18.5	--	<1.0
MAY 15...	0937	1305	71	7.3	6.7	10	1	10.9	--	<1.0
JUL 10...	1412	1027	72	7.6	7.8	7	1	9.8	--	1.1
SEP 18...	0950	2736	67	7.2	11.1	5	<1	6.4	--	<1.0

DATE	HARD- NESS (MG/L AS CaCO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT 16...	--	--	--	--	--	26	--	--	--	--
NOV 21...	--	60	3.3	1.6	.8	26	5.0	2.0	80	.11
DEC 18...	--	--	--	--	--	28	--	--	--	--
MAR 28...	30	--	--	--	--	32	6.0	3.0	40	.05
MAY 15...	29	--	--	--	--	25	5.0	3.0	50	.07
JUL 10...	27	--	--	--	--	25	8.0	3.0	60	.08
SEP 18...	31	--	--	--	--	21	6.0	3.0	60	.08

TENNESSEE RIVER BASIN

03483950 WATAUGA RIVER BELOW WATAUGA DAM, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT 16...	--	--	.69	.01	.10	.010	--	--	--	--
NOV 21...	367	1	.58	<.01	.02	<.010	--	<200	<1	20
DEC 18...	--	--	.61	.02	.12	.010	--	--	--	--
MAR 28...	282	24	.46	.01	.06	.010	<.01	--	<1	<10
MAY 15...	176	7	.48	.02	.05	<.010	--	--	<1	<10
JUL 10...	166	<1	.56	<.01	.12	<.010	.01	--	<1	<10
SEP 18...	443	<1	.57	.01	.05	<.010	<.01	--	<1	60

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
OCT 16...	80	--	--	30	--	--	--	--	--	--
NOV 21...	50	--	<10	30	--	.8	<10	50	3.5	--
DEC 18...	170	--	--	40	--	--	--	--	--	--
MAR 28...	--	<50	<10	--	20	<.2	--	30	--	1.6
MAY 15...	--	<50	<10	--	30	<.2	--	100	1.7	--
JUL 10...	--	--	<10	--	--	.2	--	<10	1.7	--
SEP 18...	--	<50	<10	--	<10	<.2	--	80	2.3	--

03484000 WATAUGA RIVER BELOW WILBUR DAM, TN

LOCATION.--Lat 36°20'39", long 82°07'46", Carter County, Hydrologic Unit 06010103, 1,800 ft (500 m) downstream from Wilbur Dam, 0.7 mi (1.1 km) downstream from Big Laurel Branch, 2.7 mi (4.3 km) downstream from Watauga Dam, 5 mi (8 km) east of Elizabethton, and at mile 33.6 (54.1 km).

DRAINAGE AREA.--471 mi² (1,220 km²).

PERIOD OF RECORD.--October 1902 to December 1908 (published as "near Elizabethton"), January 1948 to current year. Prior to May 1903 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 1276: 1906(M). WSP 1306: 1905(M), Drainage area at "near Elizabethton" site. WSP 1386: 1950.

GAGE.--Water-stage recorder. Datum of gage is 1,550.00 ft (472.440 m) National Geodetic Vertical Datum of 1929. May 11, 1903 to Dec. 31, 1908, nonrecording gage at railroad bridge 2 mi (3 km) downstream at different datum.

REMARKS.--Records good. Flow completely regulated by Watauga Lake since Dec. 1, 1948 (station 03483500). Low-flow regulated by Wilbur Lake during period of record. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--37 years, 748 ft³/s (21.18 m³/s), 21.57 in/yr (548 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 21,500 ft³/s (609 m³/s) Jan. 22, 1906, gage height, 13.6 ft (4.15 m), site and datum then in use, from rating curve extended above 2,500 ft³/s (70.8 m³/s); minimum, 2.3 ft³/s (0.065 m³/s) July 11, 1953; minimum daily, 2.4 ft³/s (0.068 m³/s) Aug. 14, 1949; minimum gage height at present site, 30.73 ft (9.367 m) July 11, 1953. Maximum discharge since closure of Watauga Dam on Dec. 1, 1948, 6,750 ft³/s (191 m³/s) Jan. 19, 1960, gage height, 38.10 ft (11.613 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of Aug. 14, 1940, and May 21, 1901, reached stages of about 61 ft (18.6 m) and 58 ft (17.7 m), respectively, present site and datum, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,450 ft³/s (97.7 m³/s) July 23, gage height, 35.80 ft (10.912 m); minimum, 25 ft³/s (0.71 m³/s), May 9, gage height, 31.28 ft (9.534 m); minimum daily, 26 ft³/s (0.74 m³/s) May 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	527	395	45	904	49	1590	39	904	62	1560	1360
2	830	219	87	1500	515	49	1980	38	830	1280	1480	53
3	367	434	44	2700	550	49	1900	40	46	860	1420	1360
4	619	316	216	1910	444	49	1760	37	814	406	1440	1780
5	148	110	312	646	1620	160	2720	168	983	1110	1360	1660
6	263	187	332	1200	540	1800	2850	28	1250	1160	1780	1920
7	600	332	122	158	210	2100	1940	28	1100	480	1690	1860
8	223	419	50	1870	180	1840	2070	26	854	50	1980	1410
9	575	405	723	2060	620	1680	1880	226	498	1100	1760	54
10	312	767	632	1050	1600	1150	2280	983	60	1090	2060	1700
11	460	400	948	1030	49	1190	1780	879	673	1320	1820	1830
12	509	198	767	471	49	1240	2020	245	509	1330	1330	1760
13	405	141	207	84	49	1190	1740	57	730	1660	1390	1190
14	556	312	367	509	49	838	2020	1000	613	1380	1160	1280
15	49	242	354	1320	49	652	1990	896	606	65	1130	67
16	1030	153	39	838	49	632	2060	892	680	1540	1420	41
17	896	471	38	256	360	141	2060	862	60	1590	1870	1600
18	939	163	666	974	380	48	2020	939	1260	1380	1420	1980
19	862	190	219	1210	610	476	2160	862	1430	1320	1010	1900
20	328	332	210	626	430	163	1610	181	1630	1460	1660	1930
21	372	569	266	666	49	414	581	879	1460	55	1830	1460
22	487	613	216	1030	49	171	562	1070	1420	1130	1870	1610
23	904	128	51	414	49	337	1710	320	587	1860	1660	70
24	965	114	49	1210	49	1260	1740	455	53	1930	1730	1860
25	896	120	48	1460	49	1880	1780	515	992	2120	1270	1810
26	498	40	292	619	150	2730	1550	201	533	2080	59	1870
27	487	190	760	50	49	1840	1250	85	1150	2330	1690	1950
28	439	476	814	160	49	1760	1520	181	1100	2130	1700	1960
29	414	533	783	680	---	1690	846	904	972	2190	1930	58
30	46	476	1200	242	---	1920	57	775	147	1870	1750	1510
31	1100	---	48	439	---	1690	---	948	---	2130	1240	---
TOTAL	16624	9577	11255	27427	9750	31188	52026	14759	23944	40468	47469	40893
MEAN	536	319	363	885	348	1006	1734	476	798	1305	1531	1363
MAX	1100	767	1200	2700	1620	2730	2850	1070	1630	2330	2060	1980
MIN	45	40	38	45	49	48	57	26	46	50	59	41
(†)	-11500	-2000	+8900	+14000	+34000	+32100	-10200	+15300	+1600	-600	-32800	-2000
MEAN‡	165	253	650	1336	1562	2042	1394	970	851	1286	473	1296
CFSM‡	.35	.54	1.38	2.84	3.32	4.34	2.96	2.06	1.81	2.73	1.00	2.75
IN.‡	.40	.60	1.59	3.27	3.45	5.00	3.30	2.37	2.02	3.15	1.16	3.07
CAL YR 1978 TOTAL	299588		MEAN 821	MAX 2910	MIN 29	MEAN‡ 702	CFSM‡ 1.49	IN.‡ 20.24				
WTR YR 1979 TOTAL	325380		MEAN 891	MAX 2850	MIN 26	MEAN‡ 1020	CFSM‡ 2.17	IN.‡ 29.39				

† Change in contents, in cfs-days, in Watauga Lake, furnished by Tennessee Valley Authority.

‡ Adjusted for change in contents in lakes or reservoirs listed above.

TENNESSEE RIVER BASIN

03485500 DOE RIVER AT ELIZABETHTON, TN

LOCATION.--Lat 36°20'40", long 82°12'37", Carter County, Hydrologic Unit 06010103, on left bank 1,500 ft (500 m) upstream from bridge on State Highway 91 at Elizabethton, and at mile 1.0 (1.6 km).

DRAINAGE AREA.--137 mi² (355 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1907 to June 1908 (gage heights only), October 1911 to September 1916, October 1920 to current year. Published as "at Valley Forge" 1911-16, 1920-31. Monthly discharge only for some periods, published in WSP 1306.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1913(M), 1915(M), 1929(M); 1931(M), Drainage area at "at Valley Forge" site. WSP 1336: 1933(M), 1938. WSP 1910: 1901(M).

GAGE.--Water-stage recorder. Datum of gage is 1,524.73 ft (464.738 m) National Geodetic Vertical Datum of 1929. See WSP 1910 for history of changes prior to Feb. 1, 1934.

REMARKS.--Records good.

AVERAGE DISCHARGE.--64 years (water years 1912-16, 1921-79), 225 ft³/s (6.372 m³/s), 22.30 in/yr (566 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft³/s (416 m³/s) Nov. 6, 1977, gage height, 9.18 ft (2.798 m) in gage well; 9.34 ft (2.847 m) from floodmarks; minimum discharge, 17 ft³/s (0.48 m³/s) Aug. 31, Sept. 7, 1925; minimum gage height, 0.18 ft (0.055 m) June 22, 1970 (result of construction upstream).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 21, 1901 reached a stage of 10.5 ft (3.20 m), discharge, 25,000 ft³/s (708 m³/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s (48.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	0845	1990 56.4	3.70 1.128	Mar. 24	1130	2350 66.6	4.04 1.231
Jan. 21	0245	1860 52.7	3.57 1.088	July 21	2015	*2960 83.8	4.55 1.387
Feb. 25	1900	1850 52.4	3.56 1.085	Sept. 21	2400	2350 66.6	4.04 1.231

Minimum discharge, 53 ft³/s (1.50 m³/s) Oct. 13, gage height, 0.42 ft (0.128 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	59	124	240	183	558	341	250	234	171	259	100
2	68	59	100	1410	166	506	323	232	195	152	217	90
3	61	59	112	766	182	451	839	221	189	142	190	108
4	63	59	131	472	211	647	1030	267	221	168	168	106
5	62	58	299	364	194	1050	793	267	182	235	156	358
6	58	58	186	313	185	678	602	233	163	154	147	346
7	57	58	146	361	198	535	490	215	154	141	140	172
8	57	64	130	512	183	472	407	203	156	140	133	137
9	58	64	753	426	175	421	498	268	153	140	125	120
10	58	61	530	350	145	384	441	192	215	367	120	110
11	58	59	297	303	165	484	389	183	281	247	141	103
12	57	59	221	266	151	416	374	182	203	213	206	95
13	57	59	180	255	177	374	586	244	170	223	148	107
14	175	58	157	243	154	426	553	256	151	261	124	187
15	90	63	134	199	285	412	475	207	139	280	117	139
16	72	68	139	191	790	368	409	186	136	402	116	118
17	66	73	129	191	660	336	359	171	771	277	105	110
18	63	83	108	225	471	310	323	163	568	211	102	105
19	62	72	104	204	364	288	295	155	403	177	99	103
20	61	64	148	405	292	272	273	152	341	308	97	96
21	60	61	378	1480	375	271	256	159	271	1340	96	279
22	59	60	314	883	502	244	242	163	375	1380	123	755
23	59	79	220	564	711	489	233	200	389	672	105	324
24	58	169	248	493	1090	1990	221	241	332	441	97	217
25	58	98	442	394	1460	1180	212	277	321	343	94	177
26	58	78	317	324	1480	728	279	307	264	311	101	159
27	62	88	242	295	913	572	419	258	223	300	100	151
28	63	106	188	291	667	474	338	273	196	263	94	187
29	59	119	167	241	---	423	299	282	181	250	108	242
30	58	218	163	220	---	387	271	240	187	232	91	190
31	58	---	238	218	---	357	---	238	---	204	85	---
TOTAL	2024	2333	7045	13099	12529	16503	12570	6885	7764	10145	4004	5491
MEAN	65.3	77.8	227	423	447	532	419	222	259	327	129	183
MAX	175	218	753	1480	1480	1990	1030	307	771	1380	259	755
MIN	57	58	100	191	145	244	212	152	136	140	85	90
CFSM	.48	.57	1.66	3.09	3.26	3.88	3.06	1.62	1.89	2.39	.94	1.34
IN.	.55	.63	1.91	3.56	3.40	4.48	3.41	1.87	2.11	2.75	1.09	1.49

CAL YR 1978	TOTAL	84184	MEAN 231	MAX 2770	MIN 57	CFSM 1.69	IN 22.86
WTR YR 1979	TOTAL	100392	MEAN 275	MAX 1990	MIN 57	CFSM 2.01	IN 27.26

TENNESSEE RIVER BASIN

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03485500 DOE RIVER AT ELIZABETHTON, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-68, current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 04...	1030	63	120	16.0	--	--	--
NOV 16...	0920	70	110	12.0	--	--	--
DEC 27...	1520	230	50	4.0	--	--	--
JAN 30...	1000	206	57	6.5	--	--	--
APR 11...	1135	407	53	13.0	--	--	--
JUN 26...	1600	262	61	21.0	--	--	--
AUG 08...	0930	133	85	21.0	5	1.8	--
SEP 18...	1610	106	85	20.0	17	4.9	38

TENNESSEE RIVER BASIN

03486000 Watauga River at Elizabethton, TN

LOCATION.--Lat 36°21'21", long 82°12'26", Carter County, Hydrologic Unit 06010103, on left bank 25 ft (8 m) upstream from bridge on U. S. Highway 19E at Elizabethton, 0.6 mi (1.0 km) downstream from Doe River, and at mile 25.9 (41.7 km).

DRAINAGE AREA.--692 mi² (1,792 km²).

PERIOD OF RECORD.--October 1925 to July 1949, July 1953 to current year. Monthly discharge only prior to February 1926, published in WSP 1306. Gage-height records collected in this vicinity December 1909 to July 1949 are contained in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 758: 1932(M). WSP 823: Drainage area. WSP 1336: 1927-28(M), 1930, 1931-32(M).

GAGE.--Water-stage recorder. Datum of gage is 1,486.23 ft (453.003 m) National Geodetic Vertical Datum of 1929. Feb. 21 to Oct. 4, 1926, nonrecording gage on former Southern Railway bridge 10 ft (3 m) upstream at same datum.

REMARKS.--Records good. Flow partly regulated by Watauga Lake 10.8 mi (17.4 km) upstream since Dec. 1, 1948 (station 03483500). Low-flow regulated by Wilbur Lake 8.1 mi (13.0 km) upstream during period of record. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--49 years (water years 1926-48, 1954-79), 1,095 ft³/s (31.01 m³/s), 21.49 in/yr (546 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,100 ft³/s (2,130 m³/s) Aug. 14, 1940, gage height, 20.87 ft (6.361 m), from rating curve extended above 29,000 ft³/s (821 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 42 ft³/s (1.19 m³/s) Sept. 20, 1932; minimum daily, 85 ft³/s (2.41 m³/s) Dec. 3, 1953; minimum gage height, 1.54 ft (0.469 m) Sept. 20, 1932. Maximum discharge since closure of Watauga Dam on Dec. 1, 1948, 14,500 ft³/s (411 m³/s) Mar. 12, 1963; gage height, 10.70 ft (3.261 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 21, 1901, reached a stage of about 21 ft (6.4 m), discharge, 76,000 ft³/s (2,150 m³/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,500 ft³/s (156 m³/s) Jan. 2, gage height, 7.46 ft (2.274 m); minimum, 110 ft³/s (3.12 m³/s) Nov. 14, gage height, 1.93 ft (0.588 m); minimum daily, 118 ft³/s (3.34 m³/s) Oct. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	283	581	363	1180	883	1990	392	1280	288	2130	1480
2	838	437	206	3200	897	830	2360	359	1150	1250	1570	343
3	421	410	172	3940	750	724	2970	343	495	1010	1670	1300
4	596	180	361	2700	650	864	3180	401	934	719	1640	1930
5	352	222	629	1250	1760	1330	3690	545	1250	1360	1540	1980
6	251	402	576	1700	970	2380	3590	361	1480	1370	1930	2510
7	564	389	304	726	418	2710	2610	333	1380	770	1830	2100
8	338	485	223	2540	434	2420	2570	313	1100	351	2100	1740
9	613	707	1630	2720	576	2190	2530	436	811	1040	1870	317
10	367	529	1410	1570	1850	1650	2800	1180	356	1570	2140	1560
11	499	329	1350	1610	300	1870	2290	1170	866	1700	1950	1950
12	633	187	1070	886	300	1880	2470	613	754	1620	1570	1790
13	381	314	472	435	350	1710	2500	352	948	1940	1600	1520
14	696	186	554	666	300	1310	2800	1230	807	1770	1320	1370
15	276	418	530	1620	500	1250	2670	1270	820	666	1360	339
16	943	257	222	1230	1150	1300	2620	1130	877	1820	1400	194
17	933	459	210	527	1250	594	2510	1030	1410	1920	1940	1450
18	982	319	733	1050	967	450	2420	1160	2030	1640	1600	2040
19	943	224	387	1680	1050	811	2510	1090	2010	1520	1040	1970
20	497	422	390	1330	855	556	2160	547	2060	1810	1700	2000
21	307	517	841	2940	529	740	910	938	1830	1740	1900	1920
22	658	684	700	2420	759	427	879	1250	1920	2610	1950	2230
23	880	301	371	1370	1130	784	1930	771	1280	2790	1740	646
24	907	252	407	1760	1750	3780	1940	785	516	2460	1790	1850
25	1040	233	773	2040	2270	3430	2000	1120	1290	2500	1450	1980
26	558	170	785	1250	2260	3670	1910	771	892	2430	311	2020
27	493	292	1100	461	1380	2570	1980	558	1350	2830	1550	2070
28	497	468	938	550	1010	2360	1960	592	1330	2830	1770	2200
29	118	706	1160	1000	---	2230	1390	1360	1180	2690	2000	587
30	934	658	1370	596	---	2390	584	1150	600	2740	1810	1530
31	756	---	418	539	---	2160	---	1340	---	2480	1320	---
TOTAL	18408	11440	20873	46669	27595	52253	68723	24890	35006	54234	51491	46916
MEAN	594	381	673	1505	986	1686	2291	803	1167	1749	1661	1564
MAX	1040	707	1630	3940	2270	3780	3690	1360	2060	2830	2140	2510
MIN	118	170	172	363	300	427	584	313	356	288	311	194
(†)	-11500	-2000	+8900	+14000	+34000	+32100	-10200	+15300	+1600	-600	-32800	-2000
MEAN‡	223	315	960	1957	2200	2721	1951	1296	1220	1730	603	1497
CFSM‡	.32	.46	1.39	2.83	3.18	3.93	2.82	1.87	1.76	2.50	.87	2.16
IN.‡	.37	.51	1.60	3.26	3.31	4.53	3.15	2.16	1.97	2.88	1.00	2.41
CAL YR 1978 TOTAL	410482			1125	MAX 6390	MIN 118	MEAN‡ 1006	CFSM‡ 1.45	IN.‡ 19.74			
WTR YR 1979 TOTAL	458498			1256	MAX 3940	MIN 118	MEAN‡ 1384	CFSM‡ 2.00	IN.‡ 27.16			

† Change in contents, in cfs-days, in Watauga Lake, furnished by Tennessee Valley Authority.

‡ Adjusted for change in contents in lakes or reservoirs listed above.

TENNESSEE RIVER BASIN

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03487010 SOUTH FORK HOLSTON RIVER AT FORT PATRICK HENRY DAM (TAILWATER), TN

LOCATION.--Lat 36°29'53", long 82°30'33", Sullivan County, Hydrologic Unit 06010102, on downstream side of Ft. Patrick Henry Dam, 3.1 mi (5.0 km) northeast of Vernon Heights, 3.1 mi (5.0 km) northwest of Fordtown, 4.9 mi (7.9 km) northeast of Sullivan Gardens, and at mile 8.2 (13.2 km).

DRAINAGE AREA.--1,903 mi² (4,929 km²), at Fort Patrick Henry Dam.

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Flow regulated by four reservoirs above site (see p. 308).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)
OCT										
10...	1130	3100	180	7.5	11.0	6	6	4.9	2	--
NOV										
21...	0830	3300	200	7.2	14.0	7	1	4.8	3	--
DEC										
19...	1215	3500	230	7.7	9.0	5	2	6.8	4	--
JAN										
02...	0730	7600	220	7.8	8.0	7	2	8.1	4	--
FEB										
13...	0800	3100	220	7.4	4.0	8	9	9.2	4	--
APR										
11...	1015	8535	180	7.6	9.4	8	4	10.3	--	1.8
JUN										
12...	1330	3364	190	7.0	12.8	3	2	6.9	--	1.5
AUG										
14...	1030	3447	220	7.6	15.0	7	2	7.4	--	1.9

DATE	HARD- NESS (MG/L AS CAC03)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT										
10...	--	--	--	--	--	72	--	--	--	--
NOV										
21...	--	23	6.3	6.1	1.4	73	19	5.0	150	.20
DEC										
19...	--	--	--	--	--	86	--	--	--	--
JAN										
02...	--	--	--	--	--	81	--	--	--	--
FEB										
13...	--	24	6.6	5.3	1.4	88	14	5.0	120	.16
APR										
11...	79	--	--	--	--	75	10	5.0	100	.14
JUN										
12...	85	--	--	--	--	78	12	5.0	120	.16
AUG										
14...	68	--	--	--	--	61	11	4.0	100	.14

TENNESSEE RIVER BASIN

03487010 SOUTH FORK HOLSTON RIVER AT FORT PATRICK HENRY DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM, TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT 10...	--	--	.68	.01	.13	.030	--	--	--	--
NOV 21...	1340	4	.69	.02	.15	.030	--	<200	<1	40
DEC 19...	--	--	.71	.08	.10	.030	--	--	--	--
JAN 02...	--	--	.73	.07	.11	.030	--	--	--	--
FFB 13...	1000	17	1.0	.08	.08	.030	--	<200	<1	<10
APR 11...	2300	7	.70	.07	.05	.020	.04	--	<1	40
JUN 12...	1090	2	.53	.09	.09	.020	.01	--	<1	<10
AUG 14...	931	5	.62	.07	.11	.020	<.01	--	<1	10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY, TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
OCT 10...	300	--	--	80	--	--	--	--	--	--
NOV 21...	220	--	<10	50	--	1.5	<10	50	2.0	--
DEC 19...	100	--	--	10	--	--	--	--	--	--
JAN 02...	230	--	--	30	--	--	--	--	--	--
FFB 13...	300	--	<10	20	--	<.2	<10	20	2.1	--
APR 11...	--	<50	<10	--	<10	<.2	--	90	2.1	--
JUN 12...	--	<50	21	--	20	<.2	--	<10	2.1	--
AUG 14...	--	<50	<10	--	10	<.2	--	10	--	2.9

03487550 REEDY CREEK AT OREBANK, TN

LOCATION.--Lat 36°33'42", long 82°27'36", Sullivan County, Hydrologic Unit 06010102, on left bank, 50 ft (15 m) upstream from Anderson Bridge, 0.1 mi (0.2 km) south of U.S. Highway 11W, 0.3 mi (0.5 km) north of Orebank, 1.0 mi (1.6 km) upstream from Gaines Branch, and at mile 9.8 (15.8 km).

DRAINAGE AREA.--36.3 mi² (94.0 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to current year.

REVISED RECORDS.--WRD TN 1973: 1971(P), 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 1,232.61 ft (375.700 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 4, 1975, at site 50 ft (15 m) downstream at same datum.

REMARKS.--Records good. The Bloomingdale Utility District diverts an average of about 0.6 ft³/s (0.017 m³/s) for water supply, 0.8 mi (1.3 km) upstream from the gage.

AVERAGE DISCHARGE.--16 years, 47.1 ft³/s (1.334 m³/s), 17.62 in/yr (448 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,940 ft³/s (140 m³/s) Oct. 2, 1977, gage height, 11.61 ft (3.539 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 2.9 ft³/s (0.082 m³/s) Sept. 14, 1978, gage height, 1.00 ft (0.305 m), result of upstream pumpage.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1927, reached a stage of 11.4 ft (3.47 m), discharge, about 11,000 ft³/s (312 m³/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 710 ft³/s (20.1 m³/s) at 0130 hours Jan. 21, gage height, 6.61 ft (2.015 m); no peak above base of 750 ft³/s (21.2 m³/s); minimum daily, 5.2 ft³/s (0.147 m³/s) Nov. 14; minimum, 3.6 ft³/s (0.102 m³/s) Oct. 25; gage height, 1.07 ft (0.326 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	7.4	10	76	52	153	57	40	30	21	26	20
2	7.2	7.8	7.4	264	47	121	55	37	25	17	23	16
3	6.0	5.8	12	97	46	102	97	36	40	16	21	36
4	7.6	6.1	30	65	44	318	138	52	52	22	21	25
5	6.4	7.1	44	54	41	265	152	50	34	21	19	57
6	6.2	7.4	19	51	39	194	101	44	26	16	18	70
7	6.7	7.4	12	158	42	155	82	39	30	15	17	39
8	6.7	7.8	11	221	38	151	73	35	33	15	16	29
9	6.4	7.4	251	111	36	138	83	32	24	34	15	23
10	6.5	7.4	85	79	33	128	72	30	22	67	15	20
11	6.5	7.1	45	66	33	159	64	28	20	36	15	19
12	6.4	7.1	32	58	33	132	62	27	18	29	19	17
13	6.4	6.7	25	54	33	112	73	29	17	30	15	16
14	7.8	5.2	20	52	33	103	72	29	16	70	14	16
15	7.4	6.4	17	43	50	89	65	25	15	70	14	15
16	7.1	7.8	18	40	110	79	59	23	15	42	12	14
17	6.7	10	19	39	79	73	55	21	60	31	12	14
18	6.1	12	16	38	65	67	50	20	34	27	12	13
19	6.4	7.8	16	37	57	62	47	20	25	24	11	12
20	6.4	6.1	20	223	51	58	44	20	19	27	13	12
21	6.4	5.2	95	580	80	54	42	20	17	52	12	23
22	6.7	5.5	56	202	125	49	40	21	48	35	16	31
23	6.7	11	38	127	126	50	40	20	31	31	15	18
24	7.4	14	54	145	304	129	38	39	28	26	14	14
25	6.4	7.4	99	115	302	104	36	42	27	26	13	13
26	7.8	6.7	55	92	304	79	43	29	20	49	13	13
27	8.6	12	39	83	176	72	67	25	17	63	16	12
28	7.4	12	32	79	148	69	56	30	16	45	16	23
29	7.8	14	28	68	---	65	49	28	16	39	23	19
30	7.1	19	28	61	---	60	44	23	34	33	47	15
31	7.1	---	70	58	---	57	---	25	---	30	25	---
TOTAL	213.6	254.6	1303.4	3436	2527	3447	1956	939	809	1059	538	664
MEAN	6.89	8.49	42.0	111	90.3	111	65.2	30.3	27.0	34.2	17.4	22.1
MAX	8.6	19	251	580	304	318	152	52	60	70	47	70
MIN	6.0	5.2	7.4	37	33	49	36	20	15	15	11	12
CFSM	.19	.23	1.16	3.06	2.49	3.06	1.80	.84	.74	.94	.48	.61
IN.	.22	.26	1.34	3.52	2.59	3.53	2.00	.96	.83	1.09	.55	.68

CAL YR 1978 TOTAL 15522.5 MEAN 42.5 MAX 970 MIN 5.2 CFSM 1.17 IN 15.91
WTR YR 1979 TOTAL 17146.6 MEAN 47.0 MAX 580 MIN 5.2 CFSM 1.30 IN 17.57

TENNESSEE RIVER BASIN

03487550 REEDY CREEK AT OREBANK, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-67, current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT						
04...	1315	8.5	375	17.0	--	--
NOV						
16...	1105	6.7	400	12.0	--	--
DEC						
26...	1600	48	280	6.5	--	--
JAN						
31...	1010	60	350	5.5	--	--
MAR						
07...	1030	155	295	9.0	--	--
23...	1100	46	330	13.0	--	--
APR						
12...	0930	60	330	14.0	--	--
MAY						
16...	1630	23	370	19.0	--	--
JUN						
26...	1240	22	380	19.0	--	--
AUG						
09...	0920	15	370	23.0	32	1.3
SEP						
18...	1330	12	390	19.0	18	.58

TENNESSEE RIVER BASIN

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03490500 HOLSTON RIVER AT SURGOINSVILLE, TN

LOCATION.--Lat 36°28'19", long 82°50'50", Hawkins County, Hydrologic Unit 06010104, on right bank 1,500 ft (500 m) upstream from Surgoinsville Creek and county bridge at Surgoinsville, 9.8 mi (15.8 km) upstream from Big Creek, and at mile 118.7 (191.0 km). Records include flow of Surgoinsville Creek.

DRAINAGE AREA.--2,874 mi² (7,444 km²), includes that of Surgoinsville Creek.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year. Prior to April 1941 monthly discharge only, published in WSP 1306.

GAGE.--Water-stage recorder. Datum of gage is 1,088.46 ft (331.763 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for growing season, which are fair. Flow partly regulated by four reservoirs (see p. 308).

AVERAGE DISCHARGE.--39 years, 3,805 ft³/s (107.8 m³/s), 17.98 in/yr (457 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,600 ft³/s (1,690 m³/s) Feb. 18, 1944, gage height, 17.48 ft (5.328 m); minimum, 470 ft³/s (13.3 m³/s), Oct. 21, 1941; minimum daily, 528 ft³/s (15.0 m³/s) Oct. 21, 1941. Maximum discharge since closure of Watauga Dam on Dec. 1, 1948, 59,300 ft³/s (1,680 m³/s) Mar. 13, 1963, gage height, 17.13 ft (5.221 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28,900 ft³/s (818 m³/s) Jan. 22, gage height, 10.57 ft (3.222 m); minimum, 780 ft³/s (22.1 m³/s) Oct. 2, 30, Nov. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1640	1330	2330	2920	5310	10500	6680	2980	4800	3870	6160	5480
2	803	803	2710	8590	5570	10100	5890	2830	4120	3510	5850	4990
3	1490	1190	1190	12100	2980	10600	7200	2640	3680	4500	5430	3990
4	2900	803	1740	12200	2680	15100	7980	4150	2490	3870	4040	5070
5	1910	803	3270	7160	4800	15800	10000	4430	3950	3130	4680	5990
6	1180	935	2680	6790	5490	13300	9870	2130	3420	3680	5540	7490
7	1300	874	2200	7160	1890	10700	9330	2690	3400	2900	5510	6950
8	803	973	1730	13500	1680	9940	7760	5920	4110	3100	5620	7460
9	1910	2000	4970	15200	2440	10000	7280	3810	2650	2790	4570	4700
10	1330	1330	8700	8840	5730	6800	7920	1520	2440	3920	5540	5210
11	1330	1050	6580	8220	2990	7480	9000	2700	1890	5320	4890	6710
12	1560	1390	5240	4780	1910	6390	8060	3070	2780	7460	3280	6190
13	1110	1430	2970	4750	1590	6280	7320	2240	3340	5990	1710	7680
14	1780	1430	1970	3640	2770	4990	8300	3320	3160	4570	4890	3700
15	2070	1500	2390	5080	2400	5910	6450	4540	2820	3920	5510	3330
16	1540	1150	1470	4630	2140	5270	6140	5000	2320	2720	4340	2240
17	4120	1340	1590	3050	5490	4410	4520	3630	2360	3900	3800	3510
18	4780	1470	2100	4390	7160	2430	4730	3600	6480	4320	4140	6600
19	3730	1180	2610	3710	4470	3070	3650	3350	6550	5290	2920	6080
20	2550	1420	1810	6490	5230	2710	4290	2920	7200	5260	2150	6710
21	1280	1510	3080	19100	3500	2390	3150	1400	6450	5070	4500	6480
22	898	1160	3860	24500	3810	1920	2390	2870	5670	7100	4320	7520
23	1680	1310	2870	12200	5800	1770	2440	4290	6630	6050	4910	5820
24	3750	1350	2240	9900	9600	3980	2780	5490	7260	7250	5150	5680
25	2680	1070	2910	10800	15800	13100	3100	3860	5820	6620	4440	6860
26	2090	1190	4310	9210	20000	11400	2670	2260	8630	5790	2620	6390
27	1570	1730	6330	5240	14500	8100	2620	2050	6950	6130	3260	6600
28	1010	1420	4950	3540	11800	7670	4260	1980	6190	7610	5900	5180
29	999	2250	5540	4900	---	7370	4300	2150	6480	10000	5180	3100
30	1410	1720	4500	4770	---	8050	2690	4200	5650	8940	5900	4810
31	2070	---	3420	2730	---	8840	---	4600	---	7580	4650	---
TOTAL	59273	39111	104260	250090	159530	236370	172770	102620	139690	162160	141400	168520
MEAN	1912	1304	3363	8067	5698	7625	5759	3310	4656	5231	4561	5617
MAX	4780	2250	8700	24500	20000	15800	10000	5920	8630	10000	6160	7680
MIN	803	803	1190	2730	1590	1770	2390	1400	1890	2720	1710	2240

CAL YR 1978 TOTAL 1280698 MEAN 3509 MAX 27500 MIN 803 MEAN† 3759 CFSM† 1.31 IN.† 17.75
WTR YR 1979 TOTAL 1735794 MEAN 4756 MAX 24500 MIN 803 MEAN† 5050 CFSM† 1.76 IN.† 23.85

† Adjusted change in contents in South Holston, Watauga, Boone and Fort Patrick Henry Lakes.

TENNESSEE RIVER BASIN

03490500 HOLSTON RIVER AT SURGOINSVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1974 to current year.

INSTRUMENTATION.--Temperature recorder since November 1974.

REMARKS.--Recorder malfunction Oct. 1-4, Nov. 19-28 (range in temperature not available). Flow partly regulated by four reservoirs (see p. 308).

COOPERATION.--Samples collected and analyzed by Tennessee Valley Authority. Temperature records also furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.5°C June 30, 1975, June 12, 1976, July 18, 1977, July 24, 1978; minimum, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum 27.0°C Aug. 27; minimum, 1.5°C Feb. 1.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
JAN 09...	1220	--	220	7.6	5.0	12	26	12.5	10	3.2	46000	--
APR 11...	1330	4990	230	8.0	12.8	14	3	11.5	--	1.7	--	92
JUN 12...	1130	2130	310	8.2	21.1	11	3	8.6	--	1.5	8400	110
AUG 14...	1235	3060	280	7.9	18.9	7	2	10.3	--	1.9	3700	77

DATE	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
JAN 09...	28	5.6	5.5	1.8	83	24	8.0	130	.18	--	68
APR 11...	--	--	--	--	84	15	12	140	.19	1890	7
JUN 12...	--	--	--	--	86	44	21	200	.27	1150	5
AUG 14...	--	--	--	--	65	16	10	120	.16	991	5

03490500 HOLSTON RIVER AT SURGOINSVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
JAN 09...	.95	.09	.11	.080	--	810	<2	150	<1	<5	10
APR 11...	.72	.10	.10	.040	.06	--	--	--	<1	--	20
JUN 12...	.62	.07	.15	.110	<.01	--	--	--	<1	--	<10
AUG 14...	1.1	.06	.11	.050	.02	--	--	--	<1	--	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
JAN 09...	1000	<50	<10	80	10	<.2	<10	<1	20	2.4	--
APR 11...	--	<50	<10	--	<10	<.2	--	--	60	2.3	--
JUN 12...	--	<50	<10	--	30	<.2	--	--	20	4.1	--
AUG 14...	--	100	<10	--	20	<.2	--	--	10	--	3.8

TENNESSEE RIVER BASIN

03490500 HOLSTON RIVER AT SURGOINSVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	19.5	16.5	18.0	15.0	11.0	13.0	11.0	9.5	10.5
2	---	---	---	19.5	15.5	17.0	14.5	11.5	13.0	10.0	5.0	8.0
3	---	---	---	20.0	15.5	18.0	12.0	11.5	11.5	5.0	4.0	4.5
4	---	---	---	19.5	15.5	17.0	14.5	12.0	13.5	5.5	4.0	4.5
5	22.0	19.0	20.5	19.0	15.0	16.5	14.5	11.5	13.5	4.5	2.0	4.0
6	21.0	19.0	20.0	19.0	15.5	17.0	12.0	10.0	11.0	5.5	3.0	4.5
7	20.5	19.0	19.5	17.0	16.0	16.5	11.0	10.0	10.5	6.5	5.5	6.0
8	19.5	16.0	20.5	16.0	15.5	16.0	14.0	11.0	12.0	6.0	4.5	5.0
9	19.5	15.5	17.0	18.0	16.0	16.5	14.5	10.0	13.5	5.0	3.5	4.5
10	20.5	17.0	19.0	16.5	14.5	15.5	10.0	8.0	9.0	5.5	3.5	4.5
11	21.0	17.0	19.0	18.5	15.5	16.5	8.5	5.5	7.0	5.5	4.0	4.5
12	23.5	19.5	21.0	19.0	15.0	16.5	9.5	7.0	8.5	6.5	4.5	5.5
13	23.0	20.0	21.0	19.5	16.0	18.0	10.0	6.5	8.0	8.5	5.0	6.5
14	23.0	18.5	21.0	19.5	16.0	17.0	9.0	5.5	6.5	9.0	5.5	6.5
15	20.0	17.0	19.0	19.0	17.0	18.5	8.5	5.0	6.5	6.5	4.0	5.0
16	17.0	16.0	16.5	19.0	17.0	18.0	8.5	6.5	8.0	6.0	4.5	5.0
17	19.5	16.5	18.0	19.0	18.0	18.5	10.5	7.0	8.5	7.0	5.5	6.0
18	19.5	16.5	18.0	19.0	16.5	18.0	9.0	5.5	6.5	8.5	5.5	6.5
19	18.5	16.0	17.0	---	---	---	9.5	8.5	9.0	7.0	5.5	6.0
20	20.0	15.5	18.0	---	---	---	11.5	9.0	10.5	8.5	6.0	6.5
21	20.0	16.0	18.0	---	---	---	11.5	8.0	10.0	7.0	6.0	6.5
22	20.5	16.0	18.5	---	---	---	9.5	5.5	8.0	6.5	5.5	6.0
23	21.5	18.0	19.5	---	---	---	7.0	5.0	6.0	7.0	5.5	6.5
24	21.5	18.0	19.5	---	---	---	6.0	5.5	6.0	6.5	5.0	6.0
25	19.5	16.0	18.5	---	---	---	8.5	5.5	6.5	5.5	4.0	5.0
26	20.0	18.5	19.0	---	---	---	7.0	5.0	5.5	6.0	4.0	5.0
27	22.0	18.0	20.0	---	---	---	8.0	4.5	6.0	6.5	5.0	5.5
28	20.5	18.0	19.0	---	---	---	8.0	4.5	5.5	5.5	4.5	5.0
29	20.5	16.5	18.5	13.5	12.0	13.0	8.0	4.5	6.0	6.0	4.5	5.5
30	20.0	16.5	18.5	14.0	11.5	13.0	9.0	6.5	7.0	8.0	5.0	6.0
31	20.0	16.5	18.5	---	---	---	10.0	8.5	9.0	6.5	4.5	5.5
MONTH	23.5	15.5	19.0	20.0	11.5	17.0	15.0	4.5	9.0	11.0	2.0	5.5
FEBRUARY			MARCH			APRIL			MAY			
1	5.0	1.5	3.5	10.5	8.0	9.0	14.0	10.5	12.0	19.0	15.5	17.0
2	5.5	3.0	4.0	12.0	8.0	9.5	13.5	10.5	11.5	20.0	15.0	18.0
3	5.5	4.0	4.0	10.5	9.0	9.5	13.0	9.5	11.0	18.0	16.0	16.5
4	7.0	5.0	5.5	12.0	10.0	11.0	13.5	10.0	11.5	17.0	14.5	15.5
5	6.5	4.0	5.0	13.5	10.5	11.5	13.5	10.0	11.5	17.0	15.0	16.0
6	4.5	4.0	4.0	11.5	10.0	11.0	11.5	9.5	10.0	19.5	14.5	17.0
7	4.5	3.5	3.5	11.0	9.0	10.0	11.0	8.0	9.5	23.0	18.5	21.0
8	6.5	3.0	4.5	10.5	8.5	9.5	11.5	9.5	10.5	19.5	15.0	17.0
9	6.0	4.5	5.0	11.5	9.5	10.0	10.5	9.0	10.0	20.0	15.5	17.0
10	5.5	2.0	4.0	10.0	8.5	9.0	11.0	8.5	10.0	21.5	16.0	19.0
11	6.5	2.0	4.5	9.0	7.0	8.0	13.0	9.0	10.5	22.0	19.5	21.0
12	6.0	3.5	4.5	11.0	6.5	9.0	13.5	10.5	11.5	21.5	19.0	20.0
13	7.0	5.5	6.0	10.5	7.0	9.0	13.5	10.5	11.5	21.0	16.5	19.0
14	8.0	5.5	6.5	11.0	9.0	10.0	14.5	10.0	12.0	22.0	16.5	19.0
15	9.0	6.5	8.0	10.5	7.0	9.0	14.5	10.5	12.0	21.0	15.5	18.5
16	9.5	8.0	9.0	10.5	7.0	9.0	14.0	11.0	12.0	19.0	15.5	17.0
17	8.0	5.5	6.0	12.0	7.0	10.0	15.0	10.5	13.5	19.0	15.0	17.0
18	5.5	3.0	4.0	13.0	8.5	10.5	16.5	11.5	14.5	19.0	15.5	17.0
19	6.5	3.5	4.5	14.0	10.0	12.0	18.5	13.0	16.0	19.5	17.0	18.5
20	7.0	3.0	5.0	15.5	11.0	13.5	19.5	14.0	17.0	20.5	18.0	19.5
21	8.0	5.5	6.5	17.0	15.5	16.0	18.5	14.5	16.5	22.0	18.5	20.5
22	9.5	6.5	8.5	16.0	14.5	15.0	19.5	17.0	18.5	22.0	18.0	20.5
23	11.0	9.0	10.0	15.5	13.5	14.5	19.0	18.0	18.5	19.0	15.0	16.5
24	11.5	10.0	11.0	13.5	9.0	11.5	19.0	16.0	18.0	18.0	14.0	15.5
25	11.5	10.0	11.0	9.0	6.5	8.0	19.0	17.0	18.0	14.0	13.5	14.0
26	10.0	7.0	8.0	8.5	6.0	6.5	19.0	15.5	17.0	16.5	13.5	15.0
27	9.0	7.0	8.0	6.5	5.5	6.0	19.5	16.0	17.0	15.5	15.0	15.0
28	10.0	6.5	8.5	9.5	5.5	8.0	17.0	15.5	16.5	18.0	15.5	16.5
29	---	---	---	11.0	8.0	9.5	16.5	13.5	15.0	21.5	17.0	19.0
30	---	---	---	11.5	9.0	10.0	19.5	14.5	17.0	19.5	16.0	18.0
31	---	---	---	11.5	10.0	10.5	---	---	---	19.0	15.0	16.5
MONTH	11.5	1.5	6.0	17.0	5.5	10.0	19.5	8.0	13.5	23.0	13.5	17.5

03490500 HOLSTON RIVER AT SURGOINSVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.0	15.5	17.0	21.0	18.0	19.5	23.5	19.0	21.0	25.0	19.0	20.5
2	20.0	16.0	18.5	22.0	19.0	20.5	23.5	21.5	22.0	23.5	18.5	20.0
3	20.0	15.0	17.0	21.5	17.0	19.5	23.0	20.5	21.5	24.0	21.0	21.5
4	24.0	16.5	20.5	22.0	16.5	18.5	23.5	20.5	22.0	24.0	19.0	20.5
5	21.5	18.5	20.0	21.5	19.0	20.5	24.5	22.0	23.0	22.0	18.5	19.5
6	21.0	19.0	20.0	22.0	18.0	19.5	22.0	20.5	21.5	23.5	18.0	19.5
7	21.5	19.5	20.5	21.0	19.0	20.0	23.0	21.0	21.5	23.0	18.5	19.5
8	21.5	18.5	20.0	20.5	18.5	19.0	23.5	19.0	21.0	22.0	18.0	19.5
9	22.0	19.5	20.5	21.5	18.0	19.5	26.0	19.5	22.0	22.0	18.0	19.5
10	24.5	20.5	23.0	19.5	17.0	18.5	25.5	19.0	21.0	23.0	17.0	19.5
11	25.0	19.5	22.0	20.5	16.5	19.0	24.0	19.0	20.5	21.5	17.0	19.5
12	23.0	20.0	21.5	21.0	16.0	18.5	24.0	19.5	20.5	22.0	18.0	20.0
13	21.5	20.0	20.5	21.0	16.5	19.0	25.0	19.5	22.0	20.5	18.5	19.5
14	22.0	20.0	21.0	22.0	16.5	19.0	24.0	19.0	20.5	22.0	19.0	19.5
15	23.0	20.0	21.5	23.5	18.5	20.0	22.0	18.5	20.0	21.5	18.0	20.0
16	23.0	19.0	21.0	26.0	19.0	23.5	21.5	18.0	20.0	23.0	20.0	21.5
17	22.0	18.0	20.0	25.0	23.5	24.0	23.0	18.5	20.5	23.5	19.5	21.5
18	21.0	19.0	20.0	24.5	18.5	20.5	23.0	18.0	20.0	21.0	18.5	19.5
19	21.0	16.5	19.0	24.5	18.5	20.0	23.5	20.5	21.5	21.5	18.5	19.5
20	21.0	16.5	19.0	23.5	18.0	19.0	27.0	21.0	24.5	20.5	17.0	19.0
21	21.0	16.5	18.5	21.5	17.0	18.5	25.5	19.0	22.0	20.5	18.0	19.0
22	21.5	16.5	19.0	21.5	16.5	18.5	24.0	18.0	20.0	20.5	18.0	19.0
23	21.5	16.5	19.0	22.0	17.0	19.5	23.5	18.5	20.0	20.0	18.0	19.0
24	21.0	17.0	18.5	23.0	17.0	20.0	23.5	18.0	19.5	20.5	19.0	19.5
25	19.5	16.5	18.5	23.0	17.0	19.0	23.0	18.0	20.0	20.5	18.0	19.0
26	19.5	16.0	18.5	23.0	18.0	18.5	24.0	21.5	23.0	21.0	17.0	19.0
27	20.5	16.0	18.5	23.0	17.0	19.5	27.0	19.5	24.5	20.0	18.0	18.5
28	20.5	16.0	18.5	24.0	18.0	20.0	24.0	18.5	20.0	21.0	18.0	19.5
29	21.5	16.5	18.5	24.0	19.0	20.5	24.5	19.0	21.0	23.0	20.0	21.0
30	20.5	16.0	18.0	23.0	18.0	20.0	24.5	18.5	20.0	24.0	18.5	21.0
31	---	---	---	23.5	18.5	20.0	24.5	19.0	20.5	---	---	---
MONTH	25.0	15.0	19.5	26.0	16.0	19.5	27.0	18.0	21.0	25.0	17.0	20.0

TENNESSEE RIVER BASIN

03491000 BIG CREEK NEAR ROGERSVILLE, TN

LOCATION.--Lat 36°25'34", long 82°57'07", Hawkins County, Hydrologic Unit 06010104, on left bank 300 ft (90 m) upstream from county road bridge, 3 mi (5 km) northeast of Rogersville, and at mile 2.0 (3.2 km).

DRAINAGE AREA.--47.3 mi² (122.5 km²).

PERIOD OF RECORD.--April 1941 to June 1949; occasional low-flow measurements, water years 1950-55, 1957; annual maximum, water years 1955-57; October 1957 to current year.

REVISED RECORDS.--WSP 1436: 1945.

GAGE.--Water-stage recorder. Datum of gage is 1,128.9 ft (344.09 m) National Geodetic Vertical Datum of 1929 (levels based on City of Rogersville construction plans for pumping station). Dec. 7, 1954, to Sept. 30, 1957, crest-stage gage at same site and datum.

REMARKS.--records fair. Periodic observations of specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--29 years (water years 1942-48, 1958-79), 60.9 ft³/s (1.725 m³/s), 17.48 in/yr (444 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,760 ft³/s (163 m³/s) Mar. 12, 1963, gage height, 9.40 ft (2.865 m), from rating curve extended above 3,000 ft³/s (85.0 m³/s) on basis of contracted-opening measurement of peak flow; maximum gage height, 10.68 ft (3.255 m) Dec. 30, 1969, backwater from log jam; minimum discharge observed, 1.3 ft³/s (0.037 m³/s) Sept. 23, 1955; minimum gage height, 1.32 ft (0.402 m) Sept. 19, Oct. 2, 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Jan. 20	1915	2670	75.6	6.30	1.920	Mar. 4	1415	*5050	143	8.71	2.655

Minimum discharge, 4.8 ft³/s (0.136 m³/s) Oct. 24, gage height, 1.45 ft (0.442 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	6.3	30	165	74	318	96	34	34	17	45	22
2	7.4	6.3	20	736	62	226	116	32	27	12	30	20
3	6.9	6.0	26	230	61	173	427	30	65	10	25	17
4	6.8	6.1	75	133	56	2480	314	55	124	10	21	16
5	7.7	6.0	90	99	52	735	267	65	60	58	19	15
6	7.0	6.0	36	84	46	325	171	52	41	21	17	23
7	6.3	6.3	18	461	47	230	130	43	34	14	16	19
8	6.1	7.1	15	765	41	256	109	37	35	12	15	16
9	5.9	7.2	500	282	39	248	143	33	28	15	14	13
10	6.0	7.1	100	171	173	199	126	30	25	119	13	12
11	6.1	6.8	50	129	84	233	101	28	25	77	19	11
12	5.9	6.2	34	104	65	182	88	25	21	39	62	11
13	5.9	6.0	26	89	55	148	99	38	19	30	25	10
14	6.2	6.1	22	80	110	130	114	48	17	26	18	9.8
15	6.7	6.3	20	69	175	107	102	30	16	21	15	9.8
16	6.8	7.8	19	56	220	90	85	25	15	23	14	9.3
17	5.9	13	22	50	150	80	73	22	19	19	12	8.8
18	5.8	15	20	45	90	73	63	20	19	16	12	8.5
19	5.7	12	19	46	60	67	56	19	15	14	11	8.5
20	5.5	7.9	30	1210	55	62	51	19	13	14	11	7.9
21	5.6	6.6	250	850	220	57	47	18	13	102	12	12
22	5.5	6.3	80	293	320	52	44	19	13	188	16	34
23	5.5	10	40	208	250	55	43	19	22	68	12	18
24	5.1	28	36	251	800	318	40	40	22	63	11	12
25	5.1	15	150	194	523	203	37	45	20	44	13	11
26	5.6	10	60	150	502	132	41	30	15	49	26	9.8
27	6.0	11	46	135	285	117	63	23	13	90	127	11
28	6.3	21	42	138	272	136	51	25	11	82	35	17
29	6.5	19	37	111	---	115	43	43	11	56	28	19
30	6.4	60	35	96	---	97	38	30	12	41	31	14
31	6.3	---	102	88	---	84	---	26	---	36	27	---
TOTAL	191.7	338.4	2050	7518	4887	7728	3178	1003	804	1386	752	425.4
MEAN	6.18	11.3	66.1	243	175	249	106	32.4	26.8	44.7	24.3	14.2
MAX	7.7	60	500	1210	800	2480	427	65	124	188	127	34
MIN	5.1	6.0	15	45	39	52	37	18	11	10	11	7.9
CFSM	.13	.24	1.40	5.14	3.70	5.26	2.24	.69	.57	.95	.51	.30
IN.	.15	.27	1.61	5.91	3.84	6.08	2.50	.79	.63	1.09	.59	.33

CAL YR 1978 TOTAL 19986.2 MEAN 54.8 MAX 1170 MIN 4.7 CFSM 1.16 IN 15.72
WTR YR 1979 TOTAL 30261.5 MEAN 82.9 MAX 2480 MIN 5.1 CFSM 1.75 IN 23.80

TENNESSEE RIVER BASIN

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03491300 BEECH CREEK AT KEPLER, TN

LOCATION.--Lat 36°24'06", long 82°53'09", Hawkins County, Hydrologic Unit 06010104, on upstream right wingwall of county road bridge, at Kepler, 5.9 mi (9.5 km) east of intersection of U. S. Highway 11W and Burem Road, and at mile 6.6 (10.6 km).

DRAINAGE AREA.--47.0 mi² (121.7 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1961-62, 1964-65; October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,107.83 ft (337.667 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--14 years, 53.3 ft³/s (1.509 m³/s), 15.40 in/yr (391 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,480 ft³/s (98.6 m³/s) Mar. 30, 1975, gage height, 13.38 ft (4.078 m), from rating curve extended above 1,300 ft³/s (36.8 m³/s); minimum observed, 0.97 ft³/s (0.027 m³/s) Sept. 17, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 12, 1963, reached a stage of 14.6 ft (4.45 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0045	1530 43.3	9.24 2.816	Mar. 4	1700	*2320 65.7	11.34 3.456

Minimum discharge, 1.7 ft³/s (0.048 m³/s) Oct. 1, 8, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	3.4	7.7	143	38	252	58	30	24	8.1	9.3	11
2	2.1	3.6	5.8	681	35	148	57	28	16	5.5	8.1	16
3	2.0	3.6	6.5	103	33	108	363	25	23	4.8	7.1	23
4	2.4	3.4	31	57	30	1480	349	43	28	9.4	6.5	16
5	2.3	3.4	37	42	25	1040	295	39	16	42	6.0	36
6	2.1	3.4	12	37	22	241	132	31	13	9.1	5.6	62
7	1.9	3.5	7.4	465	24	143	93	29	11	6.6	5.2	22
8	1.9	4.0	6.2	538	22	135	77	27	11	5.8	4.9	13
9	1.9	3.8	490	121	25	114	111	24	10	11	4.5	9.1
10	1.8	3.4	82	67	24	107	83	22	13	147	4.5	7.4
11	1.9	3.0	22	49	23	210	68	21	9.7	35	8.6	6.4
12	1.9	2.9	14	40	19	115	62	19	8.1	17	18	5.7
13	2.1	2.8	11	36	13	88	71	17	7.4	13	8.6	5.1
14	3.6	2.8	9.5	35	20	83	68	18	7.0	105	6.1	5.2
15	3.0	2.9	8.5	26	59	68	57	16	6.5	26	5.3	5.1
16	2.8	3.5	8.4	23	148	57	50	15	6.2	21	4.7	4.6
17	2.7	4.6	9.1	22	73	52	43	13	12	14	4.2	4.3
18	2.5	5.4	8.4	23	54	48	39	12	10	10	4.1	4.1
19	2.7	4.0	8.0	21	51	44	36	12	7.8	8.5	4.1	4.1
20	2.8	3.2	9.6	449	46	41	34	12	7.3	8.3	3.9	4.1
21	2.7	3.0	211	1040	137	38	32	12	6.2	166	3.8	11
22	2.8	3.0	58	229	253	35	31	12	6.9	108	5.1	32
23	2.9	6.2	28	118	177	41	30	12	9.0	49	4.5	9.8
24	2.9	11	26	203	679	323	29	17	7.1	54	7.6	7.4
25	2.9	5.4	141	109	462	139	27	19	7.3	27	5.6	6.2
26	3.2	3.9	43	73	474	86	29	14	6.2	22	12	5.8
27	3.7	4.8	27	65	242	80	70	13	5.2	21	37	6.9
28	3.6	6.6	21	80	252	89	43	16	4.8	17	20	23
29	3.6	7.7	18	57	---	73	34	15	4.6	14	16	19
30	3.6	16	18	46	---	63	31	12	8.2	12	51	12
31	3.6	---	68	42	---	57	---	15	---	10	22	---
TOTAL	81.7	138.2	1453.1	5040	3460	5598	2502	610	312.5	1007.1	313.9	397.3
MEAN	2.64	4.61	46.9	163	124	181	83.4	19.7	10.4	32.5	10.1	13.2
MAX	3.7	16	490	1040	679	1480	363	43	28	166	51	62
MIN	1.8	2.8	5.8	21	13	35	27	12	4.6	4.8	3.8	4.1
CFSM	.06	.10	1.00	3.47	2.64	3.85	1.77	.42	.22	.69	.22	.28
IN.	.06	.11	1.15	3.99	2.74	4.43	1.98	.48	.25	.80	.25	.31

CAL YR 1978	TOTAL	18852.5	MEAN 51.7	MAX 1280	MIN 1.7	CFSM 1.10	IN 14.92
WTR YR 1979	TOTAL	20913.8	MEAN 57.3	MAX 1480	MIN 1.8	CFSM 1.22	IN 16.55

TENNESSEE RIVER BASIN

03493510 HOLSTON RIVER AT CHEROKEE DAM (TAILWATER), TN

LOCATION.--Lat 36°09'58", long 83°29'58", Jefferson County, Hydrologic Unit 06010104, on downstream, left bank side of Cherokee Dam, 2.4 mi (3.9 km) north of the city limit of Jefferson City, 4.8 (7.7 km) northwest of Talbott, and at mile 52.3 (84.2 km).

DRAINAGE AREA.--3,428 mi² (8,878 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Flow regulated by five reservoirs above site (see p. 308).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)
OCT										
03...	1330	--	--	6.8	23.0	--	7	3.7	--	1.7
26...	1100	7000	280	7.8	19.0	--	20	5.2	--	1.8
NOV										
21...	0730	12000	280	7.6	16.0	8	5	--	4	--
30...	1055	--	--	7.6	15.0	--	4	7.5	--	<1.0
FEB										
20...	0800	1800	230	8.1	3.0	12	17	8.9	4	--
MAY										
16...	0910	6400	250	7.5	10.5	7	4	6.7	--	<1.0
JUL										
11...	1510	13700	270	7.3	15.0	7	2	.8	--	1.4
SEP										
12...	0925	15280	260	7.1	23.5	7	2	.3	--	1.1

DATE	HARD- NESS (MG/L AS CAC03)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
OCT										
03...	--	--	--	--	--	73	--	--	230	.31
26...	--	--	--	--	--	79	--	--	160	.22
NOV										
21...	--	30	7.5	14	1.9	82	14	17	180	.24
30...	--	--	--	--	--	82	--	--	160	.22
FEB										
20...	--	27	6.6	9.3	2.1	85	25	10	140	.19
MAY										
16...	110	--	--	--	--	91	19	11	150	.20
JUL										
11...	120	--	--	--	--	92	22	12	150	.20
SEP										
12...	100	--	--	--	--	84	23	12	190	.26

03493510 HOLSTON RIVER AT CHEROKEE DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C. SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
OCT										
03...	--	--	.36	.24	.12	.040	.01	--	--	--
26...	3020	--	.50	.05	.15	.040	<.01	--	--	--
NOV										
21...	5830	7	.56	.03	.13	.040	--	640	<1	30
30...	--	--	.56	.08	.06	.040	--	--	--	--
FEB										
20...	680	6	.99	.14	.06	.060	--	<200	<1	<10
MAY										
16...	2590	5	.48	.02	.12	.020	--	--	<1	10
JUL										
11...	5550	1	1.3	.03	.19	.010	.02	--	<1	<10
SEP										
12...	7840	4	.45	.08	.19	.020	.01	--	<1	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
03...	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--
NOV									
21...	360	--	<10	60	--	<.2	<10	20	2.5
30...	--	--	--	--	--	--	--	--	--
FEB									
20...	500	--	<10	20	--	<.2	<10	20	3.2
MAY									
16...	--	280	<10	--	60	<.2	--	50	2.5
JUL									
11...	--	<50	<10	--	260	.2	--	20	3.5
SEP									
12...	--	<50	<10	--	210	.6	--	20	3.8

TENNESSEE RIVER BASIN

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN
(National stream-quality accounting network station)

LOCATION.--Lat 36°00'56", 83°49'54", Knox County, Hydrologic Unit 06010104, on right bank at bridge on U. S. Highway 70, at Knoxville city limits, and 5.5 mi (8.8 km) upstream from confluence with French Broad River.

DRAINAGE AREA.--3,747 mi² (9,705 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to June 1976, January 1978 to current year. Published as "at Strawberry Plains" 1930-48. Records published for both sites June 1945 to September 1948. Gage-height records collected at Strawberry Plains from December to March 1885-97 are contained in reports of the U. S. Weather Bureau.

REVISED RECORDS.--WSP 893: 1935(M). WSP 1336: 1939.

GAGE.--Water-stage recorder. Datum of gage is 815.84 ft (248.668 m) National Geodetic Vertical Datum of 1929. Oct. 1, 1930, to June 8, 1931, nonrecording gage, and June 9, 1931, to Sept. 30, 1948, water-stage recorder, at site 12 mi (19 km) upstream at datum 22.55 ft (6.873 m) higher. June 19, 1945, to Oct. 4, 1960, 300 ft (90 m) upstream at present datum.

REMARKS.--Records fair. Flow regulated by five reservoirs (see p. 308).

AVERAGE DISCHARGE.--46 years (water years 1931-75, 1978), 4,732 ft³/s (134.0 m³/s), 17.15 in/yr (436 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,900 ft³/s (1,780 m³/s) Mar. 28, 1935, gage height, 20.20 ft (6.157 m), site and datum then in use; minimum, 44 ft³/s (1.25 m³/s) Dec. 12, 21, 22, 1941, gage height, -0.58 ft (-0.177 m), site and datum then in use; minimum daily, 44 ft³/s (1.25 m³/s) Dec. 21, 22, 1941. Maximum discharge since closure of Cherokee Dam on Dec. 5, 1941, 31,400 ft³/s (889 m³/s) Mar. 22, 1963, gage height, 11.20 ft (3.414 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1791, about 41 ft (12.5 m) in March 1867, from profile by Tennessee Valley Authority. Flood in 1901 reached a stage of about 32 ft (9.8 m), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,900 ft³/s (592 m³/s) Mar. 4, gage height, 8.60 ft (2.621 m); minimum, 291 ft³/s (8.24 m³/s) Dec. 8, gage height, 1.47 ft (0.448 m), minimum daily, 389 ft³/s (11.0 m³/s) Dec. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1800	3670	4300	5300	14600	12300	611	3280	1400	6600	8410	8050
2	2300	3690	3180	5200	13400	13500	599	1570	700	6740	9370	7660
3	3500	3260	1770	6600	10900	12200	3430	1680	650	6000	8720	8690
4	2400	1500	1870	10900	7400	13700	2930	1890	2500	5080	8840	10200
5	2200	1550	2010	9100	4390	4010	2750	1930	2600	2090	8720	10100
6	2200	1640	735	11000	7260	11600	2070	747	2500	7170	9800	10400
7	2400	1580	389	7900	7580	15400	1930	485	4000	6630	9800	10700
8	1400	1570	1100	10100	7870	16100	1770	1270	4600	6300	10200	9400
9	2700	1650	2160	10400	8410	17000	1600	5950	4600	4320	10300	6900
10	4700	1580	2250	11800	10800	15400	2440	4930	4000	5920	10400	8100
11	4100	1520	2200	11800	7810	14400	1960	4220	4200	5890	10000	11100
12	3700	1470	2250	11900	2180	11300	1790	4010	3200	7280	8700	10000
13	3600	1440	1620	11800	2990	9600	2400	747	2200	7370	8600	8290
14	3300	1650	2140	9100	3340	9100	2270	975	3200	7600	8800	4510
15	2500	1570	3110	10000	3600	10100	1210	5810	4000	7630	7800	8500
16	3200	1680	2650	9900	2750	9720	1100	5340	4500	8110	8600	7750
17	4000	1650	1790	10000	5680	8380	1670	5630	3900	6240	10500	7230
18	4910	1410	2310	10400	1570	4540	786	5630	5100	6440	9700	10300
19	6110	1570	2970	9980	2710	4440	879	4930	6800	6440	8500	8350
20	4580	2090	3960	9440	3030	3490	773	4150	5900	7460	9600	5870
21	3130	3130	6520	9340	3780	2340	611	3050	5300	6460	10300	6600
22	2570	3180	6550	6880	2770	2090	576	4980	5200	3150	9250	6550
23	3410	2230	6580	9120	2520	2160	564	3450	5200	1940	8750	8020
24	3670	1670	2990	13100	2690	2090	1750	2600	4800	3870	9630	10000
25	3180	1520	4460	17000	2310	1840	1820	2000	5900	9370	9180	8690
26	2460	1470	3150	10500	4580	3130	2550	2000	6400	9400	8350	6970
27	2750	1600	8140	12200	6030	4980	1860	1300	5700	10000	8350	5790
28	2890	2670	4460	15700	10100	1800	1800	1100	5900	8530	8320	4680
29	2710	2890	3920	9280	---	1870	747	1100	6500	8690	7490	5110
30	3240	2810	10100	16000	---	2000	564	1500	6940	9090	8170	4340
31	4060	---	6190	14800	---	825	---	2000	---	8470	7230	---
TOTAL	99670	60910	107824	326540	163050	241405	47810	90254	128390	206280	280380	238850
MEAN	3215	2030	3478	10530	5823	7787	1594	2911	4280	6654	9045	7962
MAX	6110	3690	10100	17000	14600	17000	3430	5950	6940	10000	10500	11100
MIN	1400	1410	389	5200	1570	825	564	485	650	1940	7230	4340

CAL YR 1978 TOTAL 1693011 MEAN 4638 MAX 17100 MIN 370 MEAN‡ 4521 CFSM‡ 1.21 IN.‡ 16.38
WTR YR 1979 TOTAL 1991363 MEAN 5456 MAX 17000 MIN 389 MEAN‡ 6471 CFSM‡ 1.73 IN.‡ 23.45

‡ Adjusted for change in contents in South Holston, Watauga, Boone, Fort Patrick Henry, and Cherokee Lakes.

NOTE.--No gage-height record May 24 to June 29.

TENNESSEE RIVER BASIN

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03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965, 1977 to current year.

REMARKS.--Flow regulated by five reservoirs (see p. 308).

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
OCT										
23...	1200	2000	260	6.5	19.5	3.0	5.7	2800	39	110
NOV										
29...	1230	4130	270	6.5	14.0	10	8.1	30	20	120
DEC										
05...	1200	1970	270	7.3	13.0	10	8.3	44	32	110
JAN										
18...	1345	2900	300	8.0	7.0	3.0	10.2	K16	K8	140
FEB										
13...	1445	2300	280	8.0	4.5	4.0	12.2	44	73	130
MAR										
15...	1400	5400	270	6.6	7.0	10	10.3	24	310	120
APR										
16...	1115	1140	265	8.4	17.5	6.0	9.4	--	--	130
MAY										
18...	1130	7250	255	7.8	13.5	3.0	8.1	44	98	120
JUN										
21...	0945	7690	260	8.1	15.0	6.0	--	20	80	120
AUG										
06...	0830	5620	280	7.6	19.0	3.0	--	90	98	120
21...	1050	12200	260	7.6	22.5	4.0	--	87	102	110

DATE	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT										
23...	36	29	8.1	12	19	.5	2.1	70	26	26
NOV										
29...	31	33	8.0	13	19	.5	2.2	84	28	17
DEC										
05...	24	32	8.1	11	17	.5	2.1	89	27	16
JAN										
18...	52	41	10	15	18	.5	2.1	92	32	18
FEB										
13...	25	36	8.5	8.1	12	.3	1.8	100	20	10
MAR										
15...	23	35	7.6	8.6	13	.3	1.6	96	20	12
APR										
16...	22	39	8.3	4.3	7	.2	1.7	110	13	--
MAY										
18...	21	34	7.6	7.9	13	.3	1.6	95	21	11
JUN										
21...	19	34	7.7	7.3	12	.3	1.7	98	19	11
AUG										
06...	29	35	7.8	9.6	15	.4	1.4	91	16	13
21...	15	31	7.3	11	18	.5	1.8	92	18	11

K--Results based on colony count outside acceptable range (non-ideal colony count)

TENNESSEE RIVER BASIN

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
OCT 23...	.1	1.9	165	147	.22	891	.33	.01	.28	.21
NOV 29...	.1	3.0	161	155	.22	1800	.54	.00	.20	.15
DEC 05...	.1	2.9	182	153	.25	968	.59	.00	.26	.27
JAN 18...	.1	4.0	175	179	.24	1370	.93	.03	.02	.10
FEB 13...	.1	5.2	162	150	.22	1010	1.0	.05	.27	.42
MAR 15...	.1	5.3	158	148	.21	2300	1.0	.07	.17	.04
APR 16...	.1	2.3	147	--	.20	452	.49	.02	.11	.10
MAY 18...	.1	4.1	172	144	.23	3370	.94	.00	.17	.07
JUN 21...	.1	3.8	170	144	.23	3530	.91	.01	.39	.10
AUG 06...	.1	2.8	162	140	.22	2460	.42	.02	.25	.20
21...	.1	3.2	147	139	.20	4840	.55	.01	.25	.19

DATE	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 23...	.62	.020	.010	--	3.1	.7	--	8	43	83
NOV 29...	.74	.030	.010	2.3	--	--	140	16	178	89
DEC 05...	.85	.050	.020	4.6	--	--	--	12	64	96
JAN 18...	.98	.050	.040	--	2.7	.4	--	7	55	83
FEB 13...	1.3	.050	.040	1.5	--	--	--	13	81	81
MAR 15...	1.2	.050	.170	2.1	--	--	840	14	204	88
APR 16...	.62	.020	.010	--	2.9	.5	--	9	28	74
MAY 18...	1.1	.030	.020	3.1	--	--	65	5	98	88
JUN 21...	1.3	.020	.010	3.8	--	--	270	24	498	57
AUG 06...	.69	.030	.020	--	2.0	.1	0	17	258	63
21...	.81	.030	.020	2.3	--	--	18000	20	659	55

TENNESSEE RIVER BASIN

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03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)		ARSENIC DIS- SOLVED (UG/L AS AS)		BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)		BARIUM, DIS- SOLVED (UG/L AS BA)		CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)		CADMIUM DIS- SOLVED (UG/L AS CD)		CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)		CHRO- MIUM, DIS- SOLVED (UG/L AS CR)		COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	
OCT 23...		1		1		0		0		0		0		<10		0		1
JAN 18...		5		1		--		100		0		0		10		0		0
APR 16...		3		1		0		0		0		1		20		<10		2
AUG 06...		4		1		--		30		0		1		10		<10		0

DATE	COBALT, DIS- SOLVED (UG/L AS CO)		COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)		COPPER, DIS- SOLVED (UG/L AS CU)		IRON, TOTAL RECOV- ERABLE (UG/L AS FE)		IRON, DIS- SOLVED (UG/L AS FE)		LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)		LEAD, DIS- SOLVED (UG/L AS PB)		MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)		MANGA- NESE, DIS- SOLVED (UG/L AS MN)	
OCT 23...		1		6		2		130		20		3		3		30		20
JAN 18...		0		1		0		190		--		1		1		40		10
APR 16...		2		1		1		180		10		4		0		50		20
AUG 06...		1		6		3		310		10		4		0		120		3

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)		MERCURY DIS- SOLVED (UG/L AS HG)		SELE- NIUM, TOTAL (UG/L AS SE)		SELE- NIUM, DIS- SOLVED (UG/L AS SE)		SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)		SILVER, DIS- SOLVED (UG/L AS AG)		ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)		ZINC, DIS- SOLVED (UG/L AS ZN)	
OCT 23...		<.5		<.5		0		0		3		2		30		0
JAN 18...		<.5		<.5		0		0		0		0		10		10
APR 16...		<.5		<.5		0		0		0		0		20		10
AUG 06...		<.5		<.5		0		0		0		0		30		10

TENNESSEE RIVER BASIN

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 29,78 1230	MAR 15,79 1400	MAY 18,79 1130	JUN 21,79 0945	AUG 6,79 0830	AUG 21,79 1050
TOTAL CELLS/ML	140	840	65	270	0	18000
DIVERSITY: DIVISION	0.7	1.6	0.0	0.5	0.0	0.1
..CLASS	0.7	1.6	0.0	0.5	0.0	0.1
...ORDER	1.5	2.3	1.0	1.3	0.0	0.2
...FAMILY	2.0	2.5	1.0	2.5	0.0	0.3
....GENUS	2.2	0.0	1.0	2.8	0.0	0.3

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...OOCYSTACEAE												
....ANKISTRODESMUS	--	-	29	3	--	-	13	5	--	-	*	0
....CHODATELLA	--	-	14	2	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	--	-	*	0
....TETRAEDRON	--	-	--	-	--	-	--	-	--	-	*	0
...SCENEDESMACEAE												
....SCENEDESMUS	29#	20	--	-	--	-	--	-	--	-	100	1
..VOLVOCALES												
...CHLAMYDOMONADACEAE	--	-	43	5	--	-	--	-	--	-	--	-
...CHLAMYDOMONAS	--	-	--	-	--	-	13	5	--	-	*	0
...POLYTOMA	--	-	58	7	--	-	--	-	--	-	--	-
CHRYSTOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	43#	30	58	7	39#	60	64#	24	--	-	*	0
....MELOSIRA	--	-	360#	43	--	-	--	-	--	-	--	-
...PENNALES												
...ACHNANTHACEAE												
....COCCONEIS	--	-	--	-	--	-	26	10	--	-	--	-
....RHOICOSPHENIA	--	-	--	-	--	-	39	14	--	-	*	0
...CYMBELLACEAE												
....CYMBELLA	--	-	--	-	--	-	--	-	--	-	*	0
...DIATOMACEAE												
....DIATOMA	--	-	29	3	--	-	26	10	--	-	--	-
...FRAGILARIACEAE												
....ASTERIONELLA	--	-	14	2	--	-	--	-	--	-	--	-
...GOMPHONEMACEAE												
....GOMPHONEMA	--	-	--	-	--	-	26	10	--	-	*	0
...NAVICULACEAE												
....NAVICULA	14	10	29	3	26#	40	64#	24	--	-	*	0
....PINNULARIA	29#	20	--	-	--	-	--	-	--	-	--	-
...NITZSCHIA												
....NITZSCHIA	29#	20	--	-	--	-	--	-	--	-	*	0
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONADALES												
...CRYPTOCHRYSIDACEAE												
....CHROOMONAS	--	-	29	3	--	-	--	-	--	-	--	-
...CRYPTOMONADACEAE												
....CRYPTOMONAS	--	-	29	3	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROOCOCCALES												
...CHROOCOCCACEAE												
....ANACYSTIS	--	-	58	7	--	-	--	-	--	-	*	0
...HORMOGONALES												
...OSCILLATORIA												
....OSCILLATORIA	--	-	86	10	--	-	--	-	--	-	17000#	97
...RIVULARIACEAE												
....RAPHIIDIOPSIS	--	-	--	-	--	-	--	-	--	-	230	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03497000 TENNESSEE RIVER AT KNOXVILLE, TN

LOCATION.--Lat 35°57'17", long 83°51'42", Knox County, Hydrologic Unit 06010201, on left bank 0.7 mi (1.1 km) downstream from confluence of French Broad and Holston Rivers, 3.5 mi (5.6 km) upstream from First Creek, 3.6 mi (5.8 km) upstream from Gay Street Bridge at Knoxville, and at mile 651.4 (1,048.1 km). Records include flow of First Creek.

DRAINAGE AREA.--8,934 mi² (23,139 km²), includes that of First Creek.

PERIOD OF RECORD.--October 1899 to current year. Prior to October 1918 monthly discharge only, published in WSP 1306 (daily discharges contained in Tennessee Division of Geology, Bulletin 34). Gage-height records collected in this vicinity since 1883 are contained in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 583: 1902(M), 1904(M). WSP 853: Drainage area. WSP 1306: 1899-1918. WSP 1706: Maximum stage and discharge since at least 1791.

GAGE.--Water-stage recorder. Datum of gage is 797.38 ft (243.041 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 1, 1943, nonrecording gages or water-stage recorders at several sites within 4 mi (6 km) of present site at various datums. Since Sept. 1, 1943, auxiliary water-stage recorder 6.3 mi (10.1 km) downstream from base gage at same datum.

REMARKS.--Records good except those below 5,000 ft³/s (141.6 m³/s), which are fair. Flow regulated by six reservoirs (see p. 308).

AVERAGE DISCHARGE.--80 years, 13,110 ft³/s (371.3 m³/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 195,000 ft³/s (5,520 m³/s) Mar. 1, 1902, gage height, 36.4 ft (11.09 m) site and datum then in use, from rating curve extended above 130,000 ft³/s (3,680 m³/s); minimum daily, 1,010 ft³/s (28.6 m³/s) Mar. 28, 1954; minimum gage height, -1.7 ft (-0.52 m) Sept. 11, 1925, site and datum then in use. Maximum discharge since completion of several upstream dams in Dec. 1941, 89,200 ft³/s (2,530 m³/s) Mar. 12, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1791, 45.0 ft (13.72 m) Mar. 8, 1967, site and datum of gage at old city pumping plant, 3.2 mi (5.1 km) downstream from base gage, discharge, 290,000 ft³/s (8,210 m³/s), from rating curve extended above 130,000 ft³/s (3,680 m³/s), from high-water profile by Corps of Engineers and Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 51,800 ft³/s (1,470 m³/s) Mar. 4; maximum gage height, 18.47 ft (5.630 m) Mar. 4; minimum daily discharge, 2,250 ft³/s (63.7 m³/s) Dec. 6; minimum gage height, 8.45 ft (2.576 m) Dec. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5690	6300	9520	9580	30400	34100	6890	9860	9020	15100	19600	17600
2	6130	6000	7060	16100	25100	38600	9410	8240	7970	15800	20100	17600
3	6940	5300	3070	12100	20100	37000	14800	9500	7880	14600	17500	18700
4	7240	2900	4130	16800	12900	46100	13100	10300	7810	9700	19600	19300
5	9900	2900	5060	14000	10400	35400	11100	10600	10100	5120	18100	19500
6	9030	3800	2250	13400	14600	40200	9220	5210	8520	14500	16400	19500
7	7340	3100	2890	15300	15700	45400	7750	7850	10400	14200	19700	19400
8	5100	5800	7090	14800	16000	45800	6600	11100	12500	11500	20800	20200
9	9000	3300	11200	17900	19000	45400	6270	14700	13000	8990	19800	18800
10	8400	3300	9310	27400	23000	41200	9260	14500	10800	12200	21000	14900
11	11300	2800	10800	29900	16000	42000	6740	13200	11200	12700	19700	20300
12	5520	3200	11900	27800	7720	35700	5330	12800	9860	15800	16400	19800
13	5500	2800	12200	23900	5470	31800	12500	5970	8090	17800	20500	14900
14	6080	3400	13200	24700	6740	29600	11800	9600	8870	17400	13800	10100
15	3670	3300	14200	25500	7580	31800	6050	14500	10500	17600	17100	17500
16	5430	5000	13800	20400	5440	30500	9600	13700	13200	15800	18100	17400
17	7750	3300	9430	20500	9320	24300	12700	14900	13500	14700	20500	16800
18	11000	3300	8770	16700	4390	15300	11100	12700	13600	14200	19900	20500
19	13000	4100	12400	18200	6210	17600	11500	13900	16400	14000	16400	17100
20	7400	5400	14500	18000	7970	13900	11000	10300	14800	16200	20000	14700
21	3930	5000	14900	22400	8650	12700	10700	12300	12800	13900	19900	13200
22	2870	8800	16100	22300	10300	10600	7090	14900	12200	7950	19400	16800
23	5300	4200	13800	27600	10000	10800	6810	12800	12600	11900	18100	20300
24	5310	3900	7280	32300	11700	11400	9690	5400	10600	19100	20200	21200
25	5500	3600	11100	35700	15100	10300	8490	3780	10900	21500	18600	20000
26	4000	3400	7770	28100	21200	15400	8850	6070	14300	21500	17600	18700
27	4500	3800	18000	26900	25500	17800	7260	7260	12200	22100	18100	17500
28	4200	6700	10200	33600	31700	11700	10500	5880	11700	21100	17800	10700
29	3400	8070	11900	27100	---	11300	6390	5880	14800	20900	16600	16500
30	4200	8150	15600	30800	---	9320	7970	6820	16700	20600	17300	9400
31	6400	---	10600	28400	---	7340	---	11600	---	19900	15900	---
TOTAL	201030	134920	320030	698180	398190	810360	276470	316120	346820	478360	574500	518900
MEAN	6485	4497	10320	22520	14220	26140	9216	10200	11560	15430	18530	17300
MAX	13000	8800	18000	35700	31700	46100	14800	14900	16700	22100	21000	21200
MIN	2870	2800	2250	9580	4390	7340	5330	3780	7810	5120	13800	9400
CAL YR 1978 TOTAL	4236080			MEAN 11610		MAX 40900		MIN 1810				
WTR YR 1979 TOTAL	5073880			MEAN 13900		MAX 46100		MIN 2250				

TENNESSEE RIVER BASIN

03497100 TENNESSEE RIVER BELOW KNOXVILLE, TN

LOCATION.--Lat 35°56'46", long 83°56'48", Knox County, Hydrologic Unit 06010201, on left bank under bridge on State Highway 73, 7.0 mi (11.3 km) downstream from confluence of French Broad and Holston Rivers, near auxiliary gage for station 03497000, and at mile 645.1 (1,038.0 km).

DRAINAGE AREA.--8,963 mi² (23,214 km²).

PERIOD OF RECORD.--Water years 1967, 1968, 1970 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1969 to current year.

INSTRUMENTATION.--Temperature recorder since December 1969.

REMARKS.--Prior to 1970 water year, data published as Tennessee River at Knoxville, Tn, station 03497000. Flow regulated by six reservoirs (see p. 308). Missing record Aug. 16-Sept. 30 (range in temperature 21.5 to 25.5°C).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.5°C Aug. 29, 1977; minimum, 1.0°C Jan. 21, 1970, Jan. 29, 30, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum 25.5°C Oct. 1 and during period of missing record; minimum, 3.0°C Feb. 10.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	25.5	25.0	25.0	18.0	17.0	18.0	13.5	13.0	13.5	10.5	9.0	10.0
2	25.0	24.5	25.0	18.0	17.0	18.0	14.0	13.5	13.5	10.0	7.0	8.5
3	25.0	24.0	24.5	18.0	17.0	18.0	14.0	13.5	14.0	7.0	5.5	6.0
4	24.5	23.5	24.0	18.0	16.5	17.0	14.0	13.0	13.5	6.0	4.5	5.0
5	25.0	23.5	24.0	18.0	16.5	17.0	13.5	12.0	13.0	7.0	5.5	6.5
6	24.0	22.0	23.5	17.0	16.0	16.5	13.0	11.5	12.0	7.0	5.5	6.0
7	23.0	21.0	22.0	16.5	16.0	16.5	13.0	11.5	12.0	7.0	6.0	6.5
8	22.0	21.0	21.5	16.0	15.5	15.5	13.5	11.5	12.0	7.0	5.5	6.5
9	21.5	20.0	21.0	16.0	15.5	15.5	13.5	11.0	12.0	5.5	4.5	5.0
10	21.5	20.5	21.0	15.5	15.0	15.5	11.0	9.0	10.0	5.5	4.5	5.0
11	22.0	20.5	21.0	15.5	15.0	15.5	9.5	8.5	9.0	6.0	5.0	5.5
12	23.5	21.5	22.0	16.0	15.5	15.5	10.0	8.5	9.5	6.0	5.5	6.0
13	22.0	21.5	22.0	16.0	15.5	16.0	10.5	9.5	10.0	6.0	5.5	6.0
14	22.0	21.5	21.5	16.5	16.0	16.0	10.5	9.5	10.0	6.0	5.0	5.5
15	21.5	21.0	21.0	16.5	16.0	16.5	10.0	9.0	9.5	5.0	4.0	4.5
16	21.0	19.5	20.5	17.0	16.5	17.0	10.5	10.0	10.0	6.0	5.0	5.0
17	19.5	18.5	19.0	17.0	16.5	17.0	10.5	9.5	10.0	6.5	5.0	6.0
18	19.5	18.0	18.5	17.0	16.5	17.0	10.0	8.5	9.5	7.0	5.5	6.0
19	19.5	19.0	19.0	17.0	16.5	16.5	10.0	9.0	9.5	6.5	5.5	6.0
20	20.0	19.0	19.5	16.5	15.5	16.0	11.5	10.0	11.0	6.5	5.5	6.0
21	20.5	19.0	19.5	15.5	15.0	15.5	11.5	9.5	11.0	6.5	6.0	6.0
22	20.5	19.5	20.0	15.5	15.0	15.5	10.0	9.0	9.5	6.5	5.5	6.0
23	20.0	19.5	19.5	15.5	15.5	15.5	9.5	9.0	9.5	5.5	5.0	5.5
24	19.5	19.0	19.5	16.0	15.0	15.5	9.5	8.5	9.0	6.0	5.0	5.5
25	20.0	19.5	19.5	15.0	14.5	15.0	9.0	8.5	8.5	5.0	4.5	5.0
26	20.0	19.0	19.5	15.0	14.0	14.5	9.0	8.5	8.5	5.5	4.5	5.0
27	19.5	19.0	19.0	14.0	14.0	14.0	8.5	8.0	8.0	5.5	5.0	5.5
28	19.5	19.0	19.0	14.0	13.5	13.5	8.5	7.0	8.0	5.5	5.0	5.0
29	19.0	18.5	19.0	14.0	13.5	13.5	8.5	6.5	8.0	5.0	5.0	5.0
30	19.0	18.0	18.5	13.5	13.5	13.5	9.5	8.5	9.0	5.5	4.5	5.0
31	18.5	17.0	18.0	---	---	---	10.0	9.0	9.5	5.5	4.5	5.0
MONTH	25.5	17.0	21.0	18.0	13.5	16.0	14.0	6.5	10.5	10.5	4.0	6.0

03497100 TENNESSEE RIVER BELOW KNOXVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	5.0	4.5	4.5	6.5	6.0	6.0	13.5	13.5	13.5	16.5	14.0	15.0
2	4.5	4.0	4.5	7.0	6.0	6.5	14.0	13.0	13.5	16.0	15.0	15.5
3	5.0	4.5	4.5	8.0	6.5	7.0	14.0	12.0	13.0	16.0	15.0	15.5
4	5.0	4.5	4.5	9.5	8.0	8.5	14.0	13.0	13.5	15.5	15.0	15.0
5	5.5	5.0	5.0	10.0	8.5	9.5	13.5	12.0	13.0	15.0	15.0	15.0
6	5.0	4.0	4.0	9.0	8.0	8.5	14.0	12.0	13.0	15.5	14.5	15.0
7	4.0	3.5	4.0	8.0	7.0	7.0	13.0	11.5	12.0	17.0	15.0	16.0
8	4.0	3.5	4.0	8.0	8.0	8.0	13.5	12.0	13.0	17.0	15.5	16.5
9	4.5	3.5	4.0	8.5	7.0	8.0	13.5	12.0	13.0	18.5	15.0	16.5
10	4.5	3.0	3.5	8.5	8.5	8.5	13.0	11.5	12.0	15.0	14.0	14.5
11	4.0	3.5	3.5	8.5	8.0	8.5	13.0	11.5	12.0	15.5	14.0	15.0
12	4.0	3.5	3.5	9.0	7.0	8.0	14.5	12.0	13.5	16.0	15.5	15.5
13	4.5	3.5	4.0	9.5	8.5	9.0	14.0	13.5	13.5	16.0	15.5	16.0
14	5.0	4.0	4.5	10.0	9.5	9.5	14.0	13.5	14.0	16.0	15.0	15.5
15	5.5	4.5	5.0	9.5	8.5	9.0	15.0	14.0	14.5	17.0	15.0	16.0
16	6.0	5.5	6.0	9.5	8.5	9.0	15.5	13.5	14.5	16.0	14.5	15.0
17	6.5	5.5	6.0	10.5	9.0	9.5	14.5	13.0	13.5	16.0	14.5	15.0
18	5.5	5.0	5.0	11.0	10.0	10.5	14.0	13.0	13.5	16.0	14.5	15.0
19	5.5	4.5	5.0	11.5	10.5	11.0	14.0	13.0	13.5	16.0	14.5	15.5
20	5.0	4.5	4.5	12.0	11.0	11.5	14.5	13.5	14.0	16.0	15.0	15.5
21	5.5	5.0	5.0	13.0	11.5	12.0	15.0	13.5	14.5	17.0	15.5	16.0
22	6.0	5.5	5.5	13.0	11.5	12.0	14.5	14.0	14.0	16.0	15.0	16.0
23	7.0	5.5	6.0	12.0	11.5	11.5	15.5	14.5	15.0	16.0	15.0	15.5
24	8.0	6.5	7.0	11.5	10.5	11.0	16.5	14.5	15.0	16.5	15.5	15.5
25	8.5	7.0	8.0	11.0	9.0	10.0	16.5	15.0	15.5	15.5	15.0	15.0
26	9.0	6.0	8.0	10.0	9.0	9.5	15.5	15.0	15.0	16.0	14.5	15.5
27	6.0	5.5	5.5	10.0	9.5	9.5	15.0	14.5	14.5	16.0	14.5	15.5
28	6.0	5.5	6.0	11.5	9.5	10.5	15.0	14.0	14.5	15.5	15.0	15.5
29	---	---	---	13.0	11.0	11.5	14.5	14.0	14.0	17.0	15.5	16.5
30	---	---	---	13.0	12.0	13.0	15.0	14.0	14.5	18.5	16.5	18.0
31	---	---	---	13.5	13.0	13.0	---	---	---	18.0	17.0	18.0
MONTH	9.0	3.0	5.0	13.5	6.0	9.5	16.5	11.5	14.0	18.5	14.0	15.5
JUNE			JULY			AUGUST			SEPTEMBER			
1	19.0	18.0	18.5	19.5	17.0	18.5	22.0	21.0	21.5			
2	19.0	18.0	18.5	20.0	16.5	18.5	23.0	21.0	21.5			
3	19.0	18.5	18.5	19.0	16.5	18.0	22.0	20.5	21.5			
4	19.0	18.5	19.0	19.5	18.0	18.5	21.5	21.0	21.5			
5	21.0	18.0	19.5	19.5	18.0	18.5	23.0	21.0	21.5			
6	21.0	18.5	19.5	20.5	16.0	19.0	23.0	21.5	22.0			
7	20.0	18.0	18.5	18.0	15.5	16.5	23.5	21.0	22.0			
8	20.0	18.0	18.5	18.0	15.5	16.5	23.0	21.5	22.0			
9	18.5	17.0	18.0	17.0	15.5	16.5	23.5	21.5	22.0			
10	19.0	17.0	18.5	19.0	16.0	17.0	23.5	22.0	22.0			
11	18.5	18.0	18.5	19.5	16.5	18.5	23.0	21.5	22.0			
12	18.5	18.0	18.0	20.0	16.5	18.5	23.0	21.0	22.0			
13	19.5	17.0	18.5	20.5	18.0	19.0	22.0	21.0	21.5			
14	19.0	18.0	18.5	20.5	18.0	19.0	23.5	22.0	22.0			
15	20.5	18.5	19.5	19.5	17.0	18.5	23.5	21.5	22.0			
16	19.5	17.0	18.5	21.0	18.0	19.0	---	---	---			
17	17.0	16.0	16.5	21.5	18.5	20.0	---	---	---			
18	18.5	16.0	17.0	21.5	19.0	20.0	---	---	---			
19	19.0	17.0	18.0	21.5	19.0	20.0	---	---	---			
20	18.5	16.0	18.0	21.0	18.5	19.5	---	---	---			
21	19.0	16.0	18.0	19.5	19.0	19.0	---	---	---			
22	18.5	17.0	18.0	20.5	19.0	20.0	---	---	---			
23	19.5	16.5	18.5	21.5	20.5	20.5	---	---	---			
24	20.0	18.0	18.5	21.5	20.0	21.0	---	---	---			
25	18.5	16.5	18.0	20.5	19.0	19.5	---	---	---			
26	18.5	16.0	17.0	20.0	19.0	19.5	---	---	---			
27	19.5	16.0	18.5	20.5	19.0	19.5	---	---	---			
28	20.0	18.0	18.5	21.0	19.5	20.5	---	---	---			
29	20.0	17.0	18.5	21.5	20.5	21.0	---	---	---			
30	18.5	16.0	17.0	21.5	20.5	21.0	---	---	---			
31	---	---	---	22.0	20.5	21.0	---	---	---			
MONTH	21.0	16.0	18.5	22.0	15.5	19.0	23.5	20.5	22.0			

TENNESSEE RIVER BASIN

03497300 LITTLE RIVER ABOVE TOWNSEND, TN
(Hydrologic bench-mark station)

LOCATION.--Lat 35°39'52", long 83°42'41", Blount County, Hydrologic Unit 06010201, in Great Smoky Mountains National Park, on left bank along State Highway 73, 0.3 mi (0.5km) upstream from Rush Branch, 0.4 mi (0.6 km) southeast of Park entrance, 2.2 mi (3.5 km) southeast of Townsend, and at mile 35.3 (56.8 km).

DRAINAGE AREA.--106 mi² (275 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,106.92 ft (337.389 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--16 years, 297 ft³/s (8.411 m³/s), 38.05 in/yr (966 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft³/s (453 m³/s) Mar. 16, 1973, gage height, 12.30 ft (3.749 m); minimum, 32 ft³/s (0.91 m³/s) Oct. 30, 31, 1963, Oct. 7-10, 1970, Oct. 13, 1978; minimum gage height, 1.26 ft (0.384 m) Sept. 17, 18, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,100 ft³/s (87.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1030	3900 110	6.28 1.914	Mar. 4	Unknown	*11800 334	10.58 3.225
Jan. 20	2300	4080 116	6.41 1.954				

Minimum discharge, 32 ft³/s (0.906 m³/s) Oct. 13, gage height, 1.25 ft (0.381 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	35	158	715	239	571	266	196	410	113	205	118
2	60	35	120	1660	223	501	289	186	375	101	188	101
3	50	35	104	758	226	441	912	188	426	97	173	97
4	45	35	495	497	220	5400	919	227	585	99	163	91
5	40	35	528	385	201	2610	662	223	445	211	148	85
6	38	34	304	344	194	1250	517	202	362	133	134	139
7	36	35	223	663	231	900	418	190	307	254	124	131
8	36	51	188	1190	213	700	367	179	285	266	118	101
9	36	44	1970	665	204	500	583	174	278	229	109	88
10	36	38	784	483	190	400	451	174	249	344	106	80
11	36	36	432	387	204	850	395	168	340	291	125	78
12	35	35	317	332	190	500	422	157	263	323	208	70
13	42	35	259	303	201	413	1820	167	230	381	144	66
14	95	34	219	275	193	456	1420	169	206	391	114	73
15	58	37	193	234	259	416	863	144	189	422	104	89
16	44	42	179	218	501	384	616	134	175	404	100	78
17	39	49	184	208	441	360	480	124	173	311	92	71
18	38	136	156	219	390	338	395	118	164	260	88	69
19	37	63	150	199	328	317	347	116	145	252	83	69
20	36	48	153	1160	296	302	314	116	134	904	78	66
21	36	41	355	2360	355	293	285	171	129	1900	77	166
22	35	39	286	1090	470	282	263	164	128	1330	134	402
23	35	69	246	687	898	317	244	199	154	722	157	219
24	35	139	262	859	1740	517	228	430	220	497	138	176
25	35	88	357	573	1590	422	216	484	212	404	143	147
26	35	68	307	441	1220	379	224	484	158	360	182	127
27	38	108	269	387	790	347	309	413	135	348	188	127
28	39	128	238	359	639	325	241	582	119	351	159	176
29	36	148	214	307	---	303	219	542	114	286	135	213
30	35	238	218	280	---	286	206	449	143	253	139	190
31	35	---	441	270	---	272	---	434	---	228	158	---
TOTAL	1281	1958	10309	18509	12846	21352	14891	7704	7253	12465	4214	3703
MEAN	41.3	65.3	333	597	459	689	496	249	242	402	136	123
MAX	95	238	1970	2360	1740	5400	1820	582	585	1900	208	402
MIN	35	34	104	199	190	272	206	116	114	97	77	66
CFSM	.39	.62	3.14	5.63	4.33	6.50	4.68	2.35	2.28	3.79	1.28	1.16
IN.	.45	.69	3.62	6.50	4.51	7.49	5.23	2.70	2.55	4.37	1.48	1.30

CAL YR 1978	TOTAL	87642	MEAN 240	MAX 2990	MIN 34	CFSM 2.26	IN 30.76
WTR YR 1979	TOTAL	116485	MEAN 319	MAX 5400	MIN 34	CFSM 3.01	IN 40.88

TENNESSEE RIVER BASIN

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03497300 LITTLE RIVER ABOVE TOWNSEND, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1963 to current year.

INSTRUMENTATION.--Temperature recorder since October 1963.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.0°C June 23, 1964, July 3, 1970; minimum, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 23.5°C Aug. 8, 9, 10, 21; minimum, 0.5°C several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT						
05...	1505	41	21	16.5	--	--
NOV						
21...	1100	42	17	10.5	--	--
DEC						
27...	1525	267	14	3.5	--	--
FEB						
01...	1122	250	12	.0	--	--
MAR						
15...	1200	412	12	6.5	--	--
APR						
30...	1330	214	12	11.5	--	--
JUN						
08...	1245	291	18	17.0	--	--
28...	0850	119	19	17.0	--	--
JUL						
19...	1040	233	16	19.0	--	--
AUG						
17...	1040	102	20	16.5	2	.55

TENNESSEE RIVER BASIN

03497300 LITTLE RIVER ABOVE TOWNSEND, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	19.0	17.5	18.0	13.5	11.0	12.5	9.0	7.0	8.0	11.0	10.0	10.5
2	18.0	16.0	17.0	13.5	11.5	12.5	11.0	6.5	8.5	9.5	3.5	6.5
3	18.5	16.0	17.0	12.5	11.0	12.0	11.0	7.0	9.0	3.0	1.0	1.5
4	19.0	17.0	17.5	12.0	10.0	11.0	12.0	10.5	11.5	2.5	.5	1.5
5	17.0	15.0	16.0	12.0	9.5	10.5	12.5	7.5	10.0	3.0	2.0	2.5
6	16.0	14.5	15.0	12.0	9.5	11.0	7.5	6.5	7.0	4.5	3.0	4.0
7	14.5	13.5	14.0	11.5	10.5	11.0	9.5	6.0	7.5	8.0	5.0	6.5
8	14.0	12.0	13.0	11.5	11.0	11.0	14.0	9.5	11.5	7.0	3.0	5.0
9	13.0	10.5	12.0	12.0	11.0	11.0	14.0	7.0	11.0	3.0	1.0	2.0
10	13.5	11.5	12.5	12.0	10.0	11.0	7.0	4.0	5.5	2.5	1.5	2.0
11	14.5	12.5	13.5	11.5	10.0	10.5	4.5	3.0	4.0	3.5	2.0	2.5
12	16.0	13.5	14.5	12.0	10.0	11.0	4.5	3.5	4.0	4.5	3.5	4.0
13	16.5	14.5	15.5	12.5	10.5	11.5	4.5	3.0	4.0	6.5	5.0	5.5
14	16.0	14.0	15.0	13.5	11.5	12.5	4.0	3.0	3.5	7.0	4.0	6.0
15	13.5	11.5	12.5	14.0	13.0	13.5	3.0	1.5	2.5	3.5	1.5	2.0
16	12.0	10.5	11.5	14.0	13.5	14.0	6.0	3.0	4.0	3.0	1.0	2.0
17	11.5	9.5	10.5	15.5	13.5	14.5	6.0	4.0	5.0	5.5	3.0	4.5
18	11.0	9.0	10.0	15.0	13.0	14.0	4.0	2.5	3.0	6.5	5.0	6.0
19	11.5	9.0	10.0	13.0	11.0	11.5	7.0	4.0	5.0	5.0	4.0	4.5
20	12.0	9.5	11.0	11.5	10.5	11.0	11.0	7.0	9.0	7.5	4.5	6.0
21	12.0	9.5	11.0	11.5	10.5	11.0	11.0	7.0	9.5	8.0	5.0	7.0
22	13.0	10.5	12.0	11.5	10.5	11.0	7.0	4.5	5.5	5.0	4.5	4.5
23	14.0	11.5	13.0	12.0	11.0	11.5	4.5	3.5	4.0	5.5	4.0	4.5
24	14.5	13.0	13.5	13.0	11.5	12.0	6.0	4.0	5.0	6.0	3.5	5.0
25	15.0	12.0	13.5	11.0	9.0	9.5	6.5	5.0	6.0	4.0	3.0	3.5
26	16.0	13.5	15.0	9.5	8.5	9.0	5.0	3.5	4.5	3.5	2.0	3.0
27	16.0	14.0	15.0	11.0	9.5	10.0	4.5	3.0	3.5	5.5	3.5	4.5
28	14.5	13.0	13.5	11.5	9.5	11.0	3.0	1.5	2.0	5.0	3.0	4.0
29	13.5	11.5	12.5	9.5	8.0	8.5	3.5	1.5	2.0	3.0	2.0	2.5
30	13.5	11.0	12.5	9.5	8.5	9.0	7.5	3.5	5.5	3.0	1.0	2.0
31	13.0	11.0	12.0	---	---	---	10.0	7.5	9.0	3.0	1.5	2.5
MONTH	19.0	9.0	13.5	15.5	8.0	11.5	14.0	1.5	6.0	11.0	.5	4.0

TENNESSEE RIVER BASIN

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03497300 LITTLE RIVER ABOVE TOWNSEND, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1.5	.5	1.0	9.5	7.5	8.5	15.5	13.0	14.0	14.5	11.0	13.0
2	.5	.5	.5	9.5	7.0	8.5	15.0	13.5	14.0	16.0	12.5	14.5
3	2.0	.5	1.0	10.5	8.5	9.5	13.5	11.0	12.0	16.0	15.0	15.5
4	4.0	2.5	3.0	10.5	9.5	10.0	14.0	10.5	12.0	16.5	15.5	16.0
5	3.0	2.0	2.5	10.0	9.0	9.5	12.0	10.0	11.0	15.5	14.5	15.0
6	2.0	1.5	1.5	9.0	7.0	8.0	11.5	8.5	10.0	17.0	13.5	15.0
7	3.0	1.5	2.5	8.0	6.0	7.0	10.5	7.5	9.0	17.5	15.0	16.0
8	3.5	2.0	3.0	8.0	7.5	7.5	11.5	9.0	10.5	17.5	16.0	17.0
9	2.5	.5	1.0	9.5	7.0	8.0	11.5	8.5	10.5	18.0	16.5	17.0
10	.5	.5	.5	9.0	8.0	8.5	11.0	8.0	9.5	18.5	16.5	17.5
11	.5	.5	.5	7.5	6.0	6.5	13.5	9.0	11.5	19.5	17.0	18.0
12	2.0	.5	1.0	8.0	4.5	6.5	13.5	13.0	13.0	19.0	17.5	18.5
13	3.5	2.0	3.0	10.0	5.5	8.0	12.5	11.5	12.0	18.5	16.0	17.5
14	4.0	2.0	3.0	10.0	8.0	9.5	12.5	10.5	11.5	17.0	14.5	16.0
15	7.5	4.0	5.5	7.5	6.0	7.0	12.5	9.5	11.0	17.0	14.0	16.0
16	7.0	5.0	6.5	7.0	4.0	6.0	12.0	9.0	10.5	17.5	15.0	16.0
17	4.5	3.5	4.0	9.0	5.0	7.0	12.5	9.0	11.0	17.0	14.0	15.5
18	4.0	2.0	2.5	10.5	7.0	9.0	12.5	9.0	11.0	17.0	14.0	15.5
19	4.0	2.5	3.5	12.0	8.5	10.5	13.5	9.5	11.5	17.0	15.0	16.0
20	4.0	1.5	3.0	13.0	10.5	12.0	14.0	10.0	12.5	18.0	16.0	17.0
21	7.0	4.5	6.0	13.0	11.5	12.5	14.5	12.0	13.5	17.5	16.5	17.0
22	8.5	6.0	7.0	12.5	11.5	12.0	14.5	13.5	14.0	18.0	16.0	17.0
23	9.0	8.0	8.5	13.5	12.0	12.5	15.0	13.5	14.0	17.0	16.0	16.5
24	9.0	8.0	8.5	12.0	8.0	10.0	15.5	14.0	14.5	16.0	14.5	15.5
25	10.0	7.5	9.0	7.5	5.0	6.0	15.0	14.5	15.0	14.0	10.5	12.5
26	7.0	4.5	5.0	7.5	4.0	5.5	15.0	14.0	14.5	12.5	9.5	11.0
27	6.5	4.5	5.5	7.0	5.5	6.5	14.5	13.0	14.0	12.0	10.5	11.0
28	7.5	5.0	6.5	11.5	6.5	9.0	13.5	11.5	12.5	14.5	12.0	13.0
29	---	---	---	12.5	10.0	11.5	13.0	9.5	11.5	15.0	13.5	14.0
30	---	---	---	13.5	11.0	12.0	13.5	10.0	12.0	15.5	13.5	14.5
31	---	---	---	13.5	12.5	13.0	---	---	---	15.5	14.5	15.0
MONTH	10.0	.5	4.0	13.5	4.0	9.0	15.5	7.5	12.0	19.5	9.5	15.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	16.5	14.5	15.5	20.5	17.5	19.0	22.0	20.0	21.0	21.0	20.0	20.5
2	17.0	15.0	16.0	20.0	18.0	19.0	22.5	20.5	21.5	21.0	20.0	20.5
3	16.0	15.5	16.0	20.5	18.5	19.5	21.5	20.0	21.0	22.0	20.5	21.0
4	16.5	15.0	15.5	21.5	19.0	20.0	22.0	19.5	20.5	22.5	20.5	21.5
5	17.0	14.0	15.5	20.5	19.0	19.5	22.0	19.5	21.0	21.5	21.0	21.5
6	17.0	15.0	16.0	18.5	17.5	18.0	22.5	20.0	21.5	21.5	20.5	21.0
7	18.0	15.5	16.5	18.5	17.5	18.0	23.0	20.5	22.0	21.5	20.5	21.0
8	19.0	16.5	17.5	18.0	16.5	17.5	23.5	21.0	22.0	21.5	20.0	21.0
9	18.0	16.5	17.5	18.0	17.0	17.5	23.5	21.5	22.5	20.5	18.5	19.5
10	19.5	17.0	18.0	18.0	16.5	17.5	23.5	22.0	23.0	20.0	18.5	19.5
11	19.0	16.0	17.5	17.5	16.5	17.0	23.0	21.5	22.0	20.0	18.0	19.0
12	17.0	14.0	15.5	19.5	17.0	18.0	21.0	19.0	20.0	20.0	17.5	19.0
13	18.0	14.5	16.5	19.0	18.0	18.5	20.0	17.5	19.0	20.5	19.0	20.0
14	18.0	16.0	17.0	18.5	17.5	18.0	21.0	19.0	20.0	20.5	20.0	20.5
15	18.0	15.5	17.0	19.0	17.0	18.0	20.0	19.0	19.5	19.5	18.5	19.0
16	17.0	15.5	16.0	20.0	17.0	18.5	20.0	17.5	19.0	19.0	17.5	18.5
17	17.0	15.0	16.0	20.5	18.0	19.0	20.5	18.0	19.5	19.0	18.0	18.5
18	19.5	16.0	17.5	21.0	18.5	19.5	20.5	19.0	20.0	18.5	18.5	18.5
19	20.5	18.0	19.0	20.5	19.0	19.5	22.0	19.5	21.0	20.0	18.5	19.0
20	21.0	18.5	20.0	19.0	17.5	18.5	23.0	20.5	22.0	19.0	18.0	18.5
21	20.5	19.0	19.5	17.5	16.5	17.0	23.5	21.5	22.5	19.5	18.0	18.5
22	21.5	18.0	19.5	17.5	16.5	17.0	22.5	21.0	21.5	18.0	17.0	17.5
23	21.0	18.5	20.0	18.0	16.5	17.5	21.0	20.5	20.5	17.0	16.0	16.5
24	20.5	18.0	19.0	19.0	17.0	18.0	21.0	20.0	20.5	17.0	16.0	16.5
25	18.0	16.5	17.0	18.5	18.0	18.5	21.5	20.5	21.0	17.5	16.5	17.0
26	18.0	15.5	17.0	18.5	18.0	18.0	21.0	20.5	20.5	17.5	16.5	17.0
27	20.0	16.5	18.0	19.0	18.0	18.5	21.5	20.0	20.5	17.5	17.0	17.0
28	20.0	16.5	18.5	20.0	18.0	19.0	21.0	20.0	20.5	18.0	17.0	17.5
29	18.5	17.5	18.0	21.0	19.0	20.0	21.5	19.5	21.0	19.0	18.0	18.5
30	20.0	17.0	18.5	21.5	19.0	20.0	22.0	20.5	21.0	19.0	17.5	18.5
31	---	---	---	21.5	19.0	20.5	21.0	19.0	20.0	---	---	---
MONTH	21.5	14.0	17.5	21.5	16.5	18.5	23.5	17.5	21.0	22.5	16.0	19.0

TENNESSEE RIVER BASIN

03498500 LITTLE RIVER NEAR MARYVILLE, TN

LOCATION.--Lat 35°47'10", long 83°53'04", Blount County, Hydrologic Unit 06010201, on right bank on downstream side of bridge on U. S. Highway 411, 0.8 mi (1.3 km) downstream from Crooked Creek, 5.0 mi (8.0 km) east of Maryville, and at mile 17.3 (27.8 km).

DRAINAGE AREA.--269 mi² (697 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 850.00 ft (259.080 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diurnal fluctuations at low flow caused by small mills above station. The town of Maryville diverted an average of about 2.5 ft³/s (0.071 m³/s) for municipal supply 300 ft (90 m) upstream from gage.

AVERAGE DISCHARGE.--28 years, 541 ft³/s (15.32 m³/s), 27.31 in/yr (694 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,200 ft³/s (912 m³/s) Mar. 12, 1963, gage height, 24.20 ft (7.376 m), from rating curve extended above 20,000 ft³/s (566 m³/s) on basis of area-velocity study and road overflow computations; minimum, 32 ft³/s (0.91 m³/s) Aug. 27, 1956; minimum gage height, 6.25 ft (1.905 m) Sept. 24, 1970; minimum daily, 44 ft³/s (1.25 m³/s) Sept. 19, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 25, 1875, reached a stage of 31 ft (9.4 m), discharge, 50,000 ft³/s (1,420 m³/s), and flood of April 1, 1896, reached a stage of 26 ft (7.9 m), discharge, 36,000 ft³/s (1,020 m³/s), from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,000 ft³/s (170 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1400	6040 171	12.92 3.938	Mar. 4	1530	*17800 504	20.22 6.163
Jan. 21	0330	7900 224	14.33 4.368	July 20	2330	8490 240	14.76 4.499

Minimum discharge, 59 ft³/s (1.67 m³/s) Oct. 26, Nov. 3; minimum gage height, 6.26 ft (1.908 m) Nov. 3-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	63	252	836	513	1150	436	359	857	256	453	236
2	108	62	195	2980	433	980	494	341	641	218	403	193
3	82	61	181	1360	444	857	2070	331	726	209	372	185
4	80	62	518	922	444	9360	1950	386	1010	215	352	176
5	77	62	795	713	411	4620	1240	414	760	367	325	159
6	76	62	479	610	389	2050	933	364	616	268	304	191
7	70	63	342	1130	456	1380	760	337	537	408	283	204
8	68	84	287	2080	461	1150	667	318	490	534	268	177
9	67	92	3080	1170	456	914	910	309	470	433	253	155
10	68	76	1460	843	428	893	806	309	436	749	240	144
11	67	72	713	680	406	1390	696	291	552	574	250	139
12	66	69	519	585	400	988	748	282	445	520	412	131
13	71	67	417	531	456	801	3490	292	391	602	305	126
14	132	66	357	490	433	849	2800	315	357	639	247	124
15	125	70	305	417	525	778	1600	267	329	770	224	144
16	87	88	285	379	922	690	1120	255	309	802	216	138
17	75	98	300	363	787	638	886	241	306	571	203	127
18	70	172	255	373	673	594	744	231	300	471	192	126
19	68	138	241	346	579	558	651	226	272	466	186	129
20	70	100	245	1470	525	527	584	231	255	1750	175	123
21	69	89	879	5520	753	499	532	352	247	4600	170	139
22	68	83	610	2220	951	482	492	310	252	2810	217	546
23	65	111	456	1310	1170	459	460	461	284	1580	263	305
24	64	203	461	1560	2760	723	432	1050	386	1160	245	247
25	63	172	760	1170	3230	650	411	900	463	880	232	209
26	62	130	561	879	2480	574	425	760	325	740	279	186
27	63	136	473	760	1620	532	523	641	277	753	298	191
28	72	195	406	740	1380	499	448	822	251	865	266	253
29	70	210	363	622	---	470	406	808	236	946	242	266
30	65	370	341	555	---	444	379	693	300	587	206	286
31	62	---	567	537	---	424	---	760	---	503	259	---
TOTAL	2343	3326	17103	34151	24485	36923	28093	13656	13080	26246	8340	5755
MEAN	75.6	111	552	1102	874	1191	936	441	436	847	269	192
MAX	132	370	3080	5520	3230	9360	3490	1050	1010	4600	453	546
MIN	62	61	181	346	389	424	379	226	236	209	170	123
CFSM	.28	.41	2.05	4.10	3.25	4.43	3.48	1.64	1.62	3.15	1.00	.71
IN.	.32	.46	2.37	4.72	3.39	5.11	3.88	1.89	1.81	3.63	1.15	.80

CAL YR 1978	TOTAL	150115	MEAN 411	MAX 5860	MIN 61	CFSM 1.53	IN 20.76
WTR YR 1979	TOTAL	213501	MEAN 585	MAX 9360	MIN 61	CFSM 2.18	IN 29.52

TENNESSEE RIVER BASIN

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03498500 LITTLE RIVER NEAR MARYVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-68, current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT						
16...	1530	82	130	13.5	--	--
NOV						
22...	1030	82	120	10.0	--	--
DEC						
27...	1230	491	80	4.5	--	--
APR						
30...	1550	403	95	14.5	--	--
MAY						
02...	1140	341	95	18.5	--	--
JUN						
12...	1000	431	70	18.5	--	--
JUL						
19...	1245	404	85	21.5	--	--
AUG						
15...	1430	217	130	20.0	9	5.3

TENNESSEE RIVER BASIN

03499510 TENNESSEE RIVER AT FORT LOUDON DAM (TAILWATER), TN

LOCATION.--Lat 35°47'30", long 84°14'36", Loudon County, Hydrologic Unit 06010201, at downstream side of Fort Loudon Dam, 1.1 mi (1.8 km) northwest of Bussettstown, 2.4 mi (3.9 km) southwest of Martel, and at mile 602.3 (969.1 km).

DRAINAGE AREA.--9,550 mi² (24,734 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Flow regulated by many reservoirs above site (see p. 308).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
NOV 21...	0730	27000	240	7.4	16.0	8	2	6.1	6	--	--
FEB 13...	0700	22000	200	7.8	3.0	14	17	9.0	7	--	--
APR 18...	0950	19500	150	6.5	14.5	12	7	9.2	--	1.4	--
JUN 13...	1115	5800	160	6.2	19.0	5	4	5.3	--	1.6	--
AUG 23...	1015	16700	220	7.5	23.5	9	7	5.7	--	1.3	300

DATE	HARD- NESS (MG/L AS CAC03)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
NOV 21...	--	24	6.0	13	1.7	70	25	17	150	.20
FEB 13...	--	27	5.8	9.6	1.5	70	12	9.0	120	.16
APR 18...	65	--	--	--	--	56	4.0	5.0	100	.14
JUN 13...	66	--	--	--	--	61	9.0	5.0	100	.14
AUG 23...	84	--	--	--	--	66	18	10	110	.15

03499510 TENNESSEE RIVER AT FORT LOUDON DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DFG. C. SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE TOTAL (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV 21...	10900	7	.29	.19	.08	.040	--	<200	<1	50
FFR 13...	7130	10	.93	.11	.17	.070	--	800	<1	10
APR 18...	5270	6	.54	.11	.07	.050	.05	--	<1	<10
JUN 13...	1570	7	.45	.18	.08	.030	.02	--	1	<10
AUG 23...	4960	7	.59	.03	.07	<.010	<.01	--	<1	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
NOV 21...	120	--	<10	50	--	.4	<10	20	3.7	--
FFR 13...	670	--	<10	40	--	<.2	<10	<10	3.4	--
APR 18...	--	100	12	--	<10	<.2	--	30	2.8	--
JUN 13...	--	60	<10	--	30	<.2	--	10	3.1	--
AUG 23...	--	--	<10	--	--	.4	--	150	--	4.7

TENNESSEE RIVER BASIN

03518300 LITTLE TENNESSEE RIVER BELOW CHILHOWEE DAM, TN

LOCATION.--Lat 35°32'48", long 84°03'50", Blount County, Hydrologic Unit 06010204, on right bank on U. S. Highway 129, at Tallassee, 100 ft (30 m) upstream from Cochran Creek, 0.8 mi (1.3 km) downstream from Chilhowee Dam, 20 mi (32 km) south of Maryville, and at mile 32.8 (52.8 km). Records include inflow of Cochran Creek.

DRAINAGE AREA.--1,987 mi² (5,146 km²), including Cochran Creek.

PERIOD OF RECORD.--July 1958 to September 1979 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 799.58 ft (243.712 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by seven reservoirs (See stations 03517900, 03518200, and Water Resources Data for North Carolina, 1979).

AVERAGE DISCHARGE.--21 years, 5,012 ft³/s (141.9 m³/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,500 ft³/s (1,180 m³/s) May 28, 1973, gage height, 17.31 ft (5.276 m); minimum, 20 ft³/s (0.57 m³/s) Oct. 4, 1974, gage height, 5.46 ft (1.664 m); minimum daily, 26 ft³/s (0.74 m³/s) Aug. 30, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,900 ft³/s (564 m³/s) Mar. 4, gage height, 13.23 ft (4.033 m); minimum 98 ft³/s (2.78 m³/s) Apr. 24, gage height, 5.77 ft (1.759 m); minimum daily, 1,300 ft³/s (36.8 m³/s) Oct. 29, Nov. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1810	1650	2030	4340	6930	7810	4650	6200	5670	3470	7330	5800
2	3220	1470	1780	9350	6230	8170	6200	5320	5260	4690	7300	6010
3	2940	1820	1580	6950	8260	7440	7550	6170	5150	4520	6890	5850
4	3480	1570	3690	6590	5990	13500	7550	7340	5430	4330	4040	6250
5	3260	2350	3690	8070	6610	10300	7470	7450	4930	3900	6450	7280
6	3250	3290	2160	5110	7300	7760	7380	3840	5070	4580	6890	7220
7	3360	3840	2070	4940	5680	12100	4260	5060	5550	3820	7750	6270
8	2800	4520	2930	6540	6650	15900	3920	6580	5540	3080	4590	5510
9	3470	3500	8250	7730	8030	14800	6570	6000	5450	5090	8540	5750
10	3090	3220	4230	6640	7320	14900	5500	5640	4300	4710	7710	7500
11	3140	2170	2860	7640	5150	14900	5530	6810	5160	4760	6310	7500
12	3370	2310	3780	6120	7890	13200	4660	3230	5210	5660	5640	7340
13	3920	3560	2680	6110	6890	11400	8980	1690	4600	5900	7770	4720
14	4170	2540	3640	6040	4090	11400	6760	4550	3170	4990	7560	3100
15	1750	2130	3780	7170	2960	10300	4590	5590	4170	4810	6700	5370
16	3610	1910	2380	7750	5910	10500	6710	5010	5010	5790	6540	6130
17	4820	1850	2380	5530	6020	8440	5710	4940	4040	5130	7030	8150
18	4980	2490	3680	6270	4050	6890	5060	5030	4790	4640	5220	7500
19	5090	2250	3610	4800	5190	7460	5180	5330	3890	4470	5130	5120
20	1890	3470	3180	7120	6080	8050	4930	3960	5160	5490	7090	5170
21	2180	3390	3550	9990	2930	7910	4040	5470	3480	8950	6830	5810
22	1510	3060	4430	5830	2230	7130	4560	5350	4370	6790	6790	4810
23	3790	2680	3570	6970	3910	7100	4470	5320	3820	8500	7120	6900
24	2070	2860	3430	7810	5210	8820	4870	5340	3490	7120	4030	7400
25	3370	2720	3560	7510	6770	7940	5400	5630	3990	7600	4160	6910
26	3190	1300	5500	7370	9130	6180	5780	5300	3230	8660	7180	7070
27	2370	2800	3940	6810	6420	8730	4870	5590	4220	7180	5150	7470
28	1690	2890	5030	8130	7570	7370	5020	5080	3410	7770	5050	7550
29	1300	4640	5350	6670	---	4950	4670	4490	4380	7670	5780	7250
30	3270	3330	6970	6000	---	5260	4990	5540	2930	7630	5170	6700
31	2340	---	4780	6070	---	4900	---	5970	---	7770	5310	---
TOTAL	94500	81580	114490	209970	167400	291510	167830	164820	134870	179470	195050	191410
MEAN	3048	2719	3693	6773	5979	9404	5594	5317	4496	5789	6292	6380
MAX	5090	4640	8250	9990	9130	15900	8980	7450	5670	8950	8540	8150
MIN	1300	1300	1580	4340	2230	4900	3920	1690	2930	3080	4030	3100
CAL YR 1978 TOTAL	1505690			MEAN 4125	MAX 12600	MIN 1260						
WTR YR 1979 TOTAL	1992900			MEAN 5460	MAX 15900	MIN 1300						

03518500 TELlico RIVER AT TELlico PLAINS, TN

LOCATION.--Lat 35°21'42", long 84°16'44", Monroe County, Hydrologic Unit 06010204, on right bank 1,300 ft (400 m) upstream from bridge on Tellico Plains-Ballplay Road, 0.4 mi (0.6 km) downstream from Laurel Creek, 0.8 mi (1.3 km) east of Tellico Plains, and at mile 28.2 (45.4 km).

DRAINAGE AREA.--118 mi² (306 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1925 to current year. Published as "near Tellico Plains" October 1927 to September 1930.

REVISED RECORDS.--WSP 1336: 1927-28(M), 1936, 1940, 1944.

GAGE.--Water-stage recorder. Datum of gage is 846.64 ft (258.056 m) National Geodetic Vertical Datum of 1929. July 20, 1925, to Sept. 30, 1927, nonrecording gage at same site and datum. Oct. 1, 1927, to Sept. 30, 1930, nonrecording gage at site 0.5 mi (0.8 km) upstream at datum 8.29 ft (2.527 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--54 years, 286 ft³/s (8.100 m³/s), 32.91 in/yr (836-mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,900 ft³/s (564 m³/s) Mar. 16, 1973, gage height, 14.18 ft (4.322 m) from dross line in well, from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of slope-area measurement of peak flow; minimum, 13 ft³/s (0.37 m³/s) Sept. 7, 1925, gage height, 0.25 ft (0.076 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1840 reached a stage of 15 ft (4.6 m), discharge, about 21,500 ft³/s (609 m³/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft³/s (99.1 m³/s) and maximum (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Dec. 9	0845	4050	115	7.95	2.423	Mar. 4	0800	*15300	433	12.97	3.953
Jan. 20	2245	4150	118	8.04	2.451	Apr. 13	1545	3790	107	7.69	2.344

Minimum discharge, 34 ft³/s (0.96 m³/s) Oct. 13, gage height, 0.66 ft (0.201 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	38	107	877	266	610	335	269	556	155	228	217
2	65	38	89	1800	279	527	369	258	444	144	209	152
3	47	38	87	704	252	476	1220	282	518	141	196	173
4	45	38	300	475	249	6410	895	304	687	140	188	150
5	45	37	370	387	228	1870	641	286	502	220	175	133
6	40	37	190	368	220	1100	531	264	411	150	164	128
7	38	39	143	720	340	830	467	246	360	296	156	122
8	38	56	127	1210	280	744	432	238	331	260	150	116
9	38	48	1570	615	286	636	766	229	307	248	143	110
10	38	41	539	462	264	645	568	223	303	454	138	107
11	38	39	330	378	267	901	498	217	350	309	147	106
12	37	39	255	329	242	659	580	205	273	385	217	102
13	37	38	217	300	247	568	2570	241	246	351	149	99
14	83	38	191	278	241	570	1610	246	230	381	136	111
15	58	38	172	239	288	499	921	202	216	455	130	116
16	44	39	169	223	412	455	700	191	207	323	127	103
17	40	87	193	213	358	425	587	180	218	258	122	98
18	39	153	161	248	335	400	512	177	213	222	118	101
19	39	62	158	214	284	381	467	172	187	221	116	104
20	39	51	174	1480	266	363	429	185	177	717	111	96
21	38	48	448	2150	432	491	396	391	173	1850	107	245
22	38	45	311	871	542	482	368	292	188	1140	122	327
23	37	81	246	605	734	468	349	301	168	559	153	181
24	37	120	289	1150	1640	636	333	877	249	414	158	150
25	37	76	482	655	1660	572	319	600	277	411	238	137
26	37	61	330	496	1160	489	366	527	201	428	180	129
27	39	101	270	434	752	454	347	444	178	381	226	147
28	39	125	232	401	658	423	315	792	161	348	185	229
29	38	199	211	339	---	389	295	535	154	311	185	215
30	38	148	241	309	---	366	283	427	186	269	164	182
31	38	---	490	297	---	347	---	568	---	248	163	---
TOTAL	1355	1998	9092	19227	13182	24186	18469	10369	8671	12189	5001	4386
MEAN	43.7	66.6	293	620	471	780	616	334	289	393	161	146
MAX	91	199	1570	2150	1660	6410	2570	877	687	1850	238	327
MIN	37	37	87	213	220	347	283	172	154	140	107	96
CFSM	.37	.56	2.48	5.25	3.99	6.61	5.22	2.83	2.45	3.33	1.36	1.24
IN.	.43	.63	2.87	6.06	4.16	7.62	5.82	3.27	2.73	3.84	1.58	1.38

CAL YR 1978	TOTAL	79112	MEAN 217	MAX 2620	MIN 37	CFSM 1.84	IN 24.94
WTR YR 1979	TOTAL	128125	MEAN 351	MAX 6410	MIN 37	CFSM 2.98	IN 40.39

TENNESSEE RIVER BASIN

03518500 TELlico RIVER AT TELlico PLAINS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to February 1978, current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: July 1964 to March 1972, January 1973 to February 1978.

INSTRUMENTATION.--Temperature recorder since July 1964.

REMARKS.--No record Feb. 1-15 (range in temperature not available).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD.

WATER TEMPERATURES: Maximum, 31.0°C July 31. Aug. 2, 1964: minimum, 0.0°C many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
OCT						
25...	1215	35	--	14.0	--	--
DEC						
06...	1200	187	24	5.5	--	--
JAN						
05...	1230	418	16	2.5	--	--
FEB						
14...	1135	240	19	2.5	--	--
MAR						
29...	1215	343	18	12.0	--	--
MAY						
03...	1130	251	18	15.5	--	--
JUN						
06...	1300	415	--	16.5	--	--
JUL						
19...	1130	195	19	21.0	--	--
AUG						
16...	1100	124	--	--	--	--
16...	1130	125	22	18.0	4	1.3
30...	1115	141	20	21.0	1	.38
SEP						
19...	1430	104	30	20.0	<1	.15

03519740 LITTLE TENNESSEE RIVER NEAR CENTERSVILLE, TN

LOCATION.--Lat 35°42'55", long 84°14'48", Loudon County, Hydrologic Unit 06010204, on right bank 200 ft (60 m) below Coytee Spring, 2.2 mi (3.5 km) west of Centersville, and at mile 6.8 (10.9 km).

DRAINAGE AREA.--2,612 mi² (6,765 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1975 to September 1979 (discontinued).

INSTRUMENTATION.--Single point temperature recorder since November 1975.

REMARKS.--Clock stopped Oct. 1 to Nov. 5 (range in temperature 13.0 to 22.0°C); recorder malfunction Jan. 22 to Feb. 22, Mar. 4-20, Apr. 14 to May 7 (range in temperature not available), Aug. 11 to Sept. 6 (range in temperature 16.0 to 19.5°C). Flow regulated by seven reservoirs (see stations 03517900, 03518200, and Water Resources Data for North Carolina, 1979).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.

WATER TEMPERATURES: Maximum, 22.0°C during period of missing record Oct. 1 to Nov. 5, 1978; minimum, 2.0°C Jan. 17, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 22.0°C during period of missing record Oct. 1 to Nov. 5; minimum recorded 4.5°C Jan. 9, 10, but may have been lower during period of missing record Jan. 22 to Feb. 22.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1				---	---	---	13.0	11.5	12.0	10.0	9.0	9.5
2				---	---	---	12.0	10.5	11.5	9.0	6.5	8.0
3				---	---	---	13.0	11.0	11.5	6.5	5.5	6.0
4				---	---	---	13.5	12.0	13.0	6.5	5.5	6.0
5				---	---	---	12.0	11.0	11.5	6.5	6.0	6.0
6				15.0	12.0	14.5	12.0	10.0	11.0	7.0	6.0	6.5
7				15.0	13.5	14.5	11.0	10.0	10.5	7.0	6.0	6.5
8				14.0	13.5	14.0	13.5	10.5	12.0	6.5	6.0	6.0
9				15.0	13.5	14.0	13.5	10.5	11.5	6.0	4.5	5.5
10				15.5	14.0	14.5	10.5	9.0	9.5	6.0	4.5	5.5
11				15.5	14.0	14.5	10.0	8.5	9.5	6.0	5.0	5.5
12				15.5	13.5	14.0	9.5	8.5	9.0	6.5	5.5	6.0
13				15.5	13.5	14.5	10.0	8.5	9.0	7.0	6.0	6.5
14				15.0	14.0	14.5	9.5	8.0	8.5	7.0	5.5	6.0
15				15.0	14.5	14.5	10.0	8.0	9.0	5.5	5.0	5.0
16				15.0	14.5	14.5	10.0	9.0	9.5	5.5	5.5	5.5
17				15.0	14.5	15.0	9.5	8.5	9.0	6.5	5.5	6.0
18				15.0	14.0	14.5	9.0	8.0	8.5	7.0	6.0	6.5
19				14.5	13.5	14.0	9.5	9.0	9.0	6.5	5.5	6.0
20				14.0	13.0	14.0	11.5	9.5	10.5	6.0	5.5	6.0
21				14.5	13.5	14.0	11.5	9.5	10.5	6.0	5.0	5.5
22				14.0	13.5	14.0	9.5	8.5	9.0	---	---	---
23				14.0	13.5	14.0	9.0	8.0	8.5	---	---	---
24				14.5	13.5	14.0	9.0	8.0	8.5	---	---	---
25				14.0	13.0	13.5	9.5	8.0	8.5	---	---	---
26				13.5	13.0	13.0	8.5	7.0	8.0	---	---	---
27				13.0	12.0	13.0	8.5	6.5	8.0	---	---	---
28				13.5	13.0	13.0	7.0	5.5	6.5	---	---	---
29				12.0	12.0	12.0	8.5	6.0	7.0	---	---	---
30				12.0	11.5	12.0	8.0	8.0	8.5	---	---	---
31				---	---	---	9.5	8.0	---	---	---	---
MONTH				15.5	11.5	14.0	13.5	5.5	9.5	10.0	4.5	6.0

TENNESSEE RIVER BASIN

03519740 LITTLE TENNESSEE RIVER NEAR CENTERSVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	---	---	---	7.0	6.0	6.5	13.0	11.5	13.0	---	---	---
2	---	---	---	7.0	5.5	6.0	12.0	10.5	11.0	---	---	---
3	---	---	---	7.0	6.5	7.0	12.0	10.5	11.0	---	---	---
4	---	---	---	---	---	---	12.0	11.0	12.0	---	---	---
5	---	---	---	---	---	---	12.0	10.0	11.5	---	---	---
6	---	---	---	---	---	---	11.5	10.0	11.0	---	---	---
7	---	---	---	---	---	---	11.5	10.0	11.0	---	---	---
8	---	---	---	---	---	---	13.5	11.5	12.0	15.0	13.0	14.0
9	---	---	---	---	---	---	12.0	10.0	11.0	14.0	12.0	13.5
10	---	---	---	---	---	---	11.5	10.0	10.5	11.5	12.0	14.5
11	---	---	---	---	---	---	13.0	11.5	12.0	14.5	14.5	14.0
12	---	---	---	---	---	---	13.0	12.0	13.0	15.5	14.0	15.0
13	---	---	---	---	---	---	13.0	12.0	12.0	15.5	14.5	14.5
14	---	---	---	---	---	---	---	---	---	16.0	14.0	15.0
15	---	---	---	---	---	---	---	---	---	15.0	13.5	14.5
16	---	---	---	---	---	---	---	---	---	16.0	13.5	15.0
17	---	---	---	---	---	---	---	---	---	16.0	14.0	15.0
18	---	---	---	---	---	---	---	---	---	16.5	14.0	15.5
19	---	---	---	---	---	---	---	---	---	15.5	14.0	15.0
20	---	---	---	---	---	---	---	---	---	16.0	14.0	15.0
21	---	---	---	10.0	9.0	9.5	---	---	---	16.0	14.5	15.5
22	---	---	---	10.5	9.5	10.0	---	---	---	15.5	14.5	15.0
23	8.0	6.5	7.0	10.5	9.5	10.0	---	---	---	15.0	14.0	14.5
24	8.5	6.5	8.0	10.0	9.0	9.5	---	---	---	16.0	14.5	15.0
25	8.5	8.0	8.0	9.0	8.0	8.5	---	---	---	14.5	12.0	13.5
26	8.0	5.5	6.0	9.0	8.0	8.5	---	---	---	14.5	12.0	13.0
27	6.5	5.0	5.5	9.5	8.0	8.5	---	---	---	14.5	13.0	13.5
28	6.5	5.0	6.0	9.5	8.0	9.0	---	---	---	15.0	13.5	14.0
29	---	---	---	11.0	9.0	10.0	---	---	---	16.0	13.5	15.0
30	---	---	---	11.0	10.0	10.5	---	---	---	16.0	13.5	14.5
31	---	---	---	11.5	10.5	11.0	---	---	---	15.5	14.5	15.0
MONTH	8.5	5.0	7.0	11.5	5.5	9.0	13.5	10.0	11.5	16.5	12.0	14.5
JUNE				JULY			AUGUST			SEPTEMBER		
1	16.0	14.5	15.5	20.0	18.5	19.0	19.0	15.5	17.0	---	---	---
2	16.0	14.5	15.5	19.0	16.5	18.0	19.0	15.5	17.0	---	---	---
3	16.0	14.5	15.5	18.5	16.5	17.0	18.0	15.5	16.5	---	---	---
4	16.5	14.5	15.5	19.0	16.0	18.0	20.5	17.0	19.0	---	---	---
5	16.5	14.0	15.5	19.0	16.5	18.0	19.5	16.0	18.0	---	---	---
6	16.0	14.5	15.5	18.5	16.5	17.0	19.0	16.0	17.0	---	---	---
7	16.0	14.0	15.0	17.0	15.5	16.5	18.5	15.5	17.0	19.5	17.0	18.5
8	16.5	14.5	15.5	17.0	16.0	16.5	19.5	16.0	18.0	20.0	16.5	18.5
9	17.0	15.0	16.0	17.0	16.0	16.5	19.5	16.0	18.0	19.5	17.0	18.5
10	18.0	15.0	16.5	18.5	15.5	16.5	19.0	16.0	17.0	19.0	16.5	18.0
11	18.0	15.0	16.5	18.5	16.0	16.5	---	---	---	19.0	16.5	18.5
12	17.0	15.0	16.0	19.0	15.5	17.0	---	---	---	19.5	16.5	18.5
13	18.0	15.0	16.5	19.0	16.0	17.0	---	---	---	19.5	18.0	18.5
14	18.0	15.5	16.5	19.0	16.0	17.0	---	---	---	19.5	18.5	19.0
15	18.5	15.5	16.5	19.0	16.0	17.0	---	---	---	19.5	17.0	18.5
16	18.0	15.0	16.0	19.5	16.5	18.0	---	---	---	19.5	17.0	18.5
17	16.5	15.0	15.5	20.0	16.0	18.0	---	---	---	19.0	18.0	18.5
18	18.0	15.5	16.5	19.5	16.0	18.0	---	---	---	18.5	17.0	18.0
19	18.0	15.5	16.5	20.0	16.0	18.0	---	---	---	19.5	17.0	18.5
20	18.5	16.0	17.0	19.5	16.0	18.0	---	---	---	19.0	17.0	18.0
21	18.0	15.0	16.0	18.5	16.5	18.0	---	---	---	18.5	18.0	18.5
22	18.5	15.5	16.5	19.5	18.0	18.5	---	---	---	18.5	18.0	18.0
23	18.0	15.5	17.0	19.5	17.0	18.5	---	---	---	18.5	16.5	17.0
24	18.0	16.5	17.0	19.0	16.5	18.0	---	---	---	19.0	17.0	18.0
25	18.0	16.0	16.5	18.0	16.5	17.0	---	---	---	19.0	17.0	18.0
26	19.0	16.5	18.0	18.0	16.5	17.0	---	---	---	18.5	17.0	18.0
27	19.0	16.5	18.0	18.5	16.0	17.0	---	---	---	18.5	18.0	18.0
28	18.5	16.5	17.0	18.5	15.5	16.5	---	---	---	18.5	18.0	18.0
29	18.5	16.0	17.0	19.0	16.0	17.0	---	---	---	19.0	18.0	18.5
30	18.5	15.5	17.0	19.0	16.0	17.0	---	---	---	19.5	17.0	18.5
31	---	---	---	18.5	15.5	17.0	---	---	---	---	---	---
MONTH	19.0	14.0	16.5	20.0	15.5	17.5	20.5	15.5	17.5	20.0	16.5	18.5

03528000 CLINCH RIVER ABOVE TAZEWEILL, TN

LOCATION.--Lat 36°25'30", long 83°23'54", Claiborne County, Hydrologic Unit 06010205, on right bank 0.4 mi (0.6 km) upstream from Grissom Island, 4.6 mi (7.4 km) downstream from Big War Creek, 10 mi (16 km) east of Tazewell, and at mile 159.8 (257.1 km).

DRAINAGE AREA.--1,474 mi² (3,818 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1918 to current year. Published as "near Lone Mountain" October 1918 to September 1927; as "near Tazewell" August 1927 to December 1936; and as "above Tazewell" July 1935 to current year. Prior to April 1919 monthly discharge only, published in WSP 1306. Gage-height record "near Tazewell" January 1937 to July 1941.

REVISED RECORDS.--WSP 803: Drainage area at site "near Tazewell". WSP 1306: Drainage area at site "near Lone Mountain". WSP 1336: 1928.

GAGE.--Water-stage recorder. Datum of gage is 1,060.7 ft (323.30 m) National Geodetic Vertical Datum of 1929. Apr. 1, 1919 to Sept. 30, 1927, nonrecording gage on railroad bridge 23.3 mi (37.5 km) downstream at datum 102.7 ft (31.30 m) lower. Aug. 8, 1927, to July 16, 1941, water-stage recorder at site 8.0 mi (12.9 km) downstream at datum 47.2 ft (14.39 m) lower. Water-stage recorder at present site and datum since July 29, 1935.

REMARKS.--Records good.

AVERAGE DISCHARGE.--61 years, 2,117 ft³/s (59.95 m³/s), 19.50 in/yr (495 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 98,100 ft³/s (2,780 m³/s) Apr. 5, 1977, gage height, 29.32 ft (8.937 m), from floodmarks; minimum, 108 ft³/s (3.06 m³/s) Sept. 11, 1925; minimum gage height at present site and datum, 0.33 ft (0.101 m) Sept. 20, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in February 1862 reached a stage of about 24 ft (7.3 m), present site and datum, from information by local resident; discharge, about 66,000 ft³/s (1,870 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 14,000 ft³/s (396 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)	Date	Time	Discharge (ft ³ /s)	(m ³ /s)	Gage height (ft)	(m)
Dec. 10	1400	16700	473	10.83	3.301	Jan. 22	1330	*30600	867	15.55	4.740
Jan. 3	0730	15800	447	10.45	3.185	Feb. 26	1900	21300	603	12.54	3.822
Jan. 9	0230	20400	578	12.21	3.722	Mar. 5	1800	24400	691	13.61	4.148

Minimum discharge, 218 ft³/s (6.17 m³/s) Nov. 5, 6, 7, gage height, 0.68 ft (0.207 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	322	225	1890	4530	2820	8240	2720	1670	2060	1550	2410	768
2	306	227	1470	9640	2470	7140	3420	1510	2040	1430	1970	1050
3	294	226	1130	14700	2180	6040	5160	1410	2160	1190	1640	1030
4	302	225	1960	9170	2050	10800	9050	1850	3320	1030	1430	782
5	297	220	5770	5200	1930	22300	9840	3850	5610	1240	1200	667
6	291	218	4890	3770	1780	17300	8080	5160	3930	1880	1050	846
7	289	218	3030	5870	1680	9580	6160	4050	2630	1420	943	1530
8	287	228	2260	15500	1630	7150	4580	3000	2050	1080	868	1630
9	280	235	6230	17800	1580	6750	4190	2390	1740	947	803	1230
10	271	234	15200	9410	1430	5380	4760	2020	1790	1450	743	897
11	265	229	9480	5620	1280	4990	4860	1760	1930	1780	710	726
12	261	229	4350	4120	1210	4880	4090	1620	2060	1470	1050	625
13	258	229	2860	3250	1280	4290	3640	1670	2070	1240	833	556
14	268	226	2090	2840	1280	3690	3460	1880	1610	1120	848	508
15	261	227	1660	2640	1300	3250	3280	2200	1310	1120	780	474
16	260	247	1390	2310	2280	2840	3000	2250	1110	1870	721	451
17	274	312	1220	2030	6420	2510	2720	1850	1020	2490	625	426
18	273	354	1080	1900	6580	2260	2440	1610	3340	1750	574	420
19	268	426	980	1800	4590	2100	2190	1390	5250	1540	544	412
20	259	434	940	3800	3460	1970	1990	1240	2920	1210	519	392
21	251	400	2180	19900	3170	1850	1830	1150	2660	4190	523	410
22	243	363	3480	30000	4450	1720	1690	1220	2450	4670	534	586
23	239	390	4150	23300	7410	1630	1590	1160	2380	2880	551	1090
24	237	596	2990	10600	11800	2800	1500	1430	4020	2110	566	1590
25	232	596	2800	8080	18500	7110	1410	2030	4170	1720	572	1120
26	227	526	3310	6930	20800	8510	1390	2850	4180	1590	688	852
27	225	534	3300	5200	17600	5680	1720	2560	3200	2440	774	738
28	225	882	2640	4490	10800	4330	1680	2330	2330	4980	1300	717
29	222	1270	2100	4210	---	3610	1950	2150	1830	7770	1140	722
30	222	1720	1760	3670	---	3140	1860	1830	1600	4230	829	721
31	225	---	2260	3180	---	2790	---	1720	---	2990	776	---
TOTAL	8134	12446	100850	245460	143760	176630	106250	64810	78770	68377	28514	23966
MEAN	262	415	3253	7918	5134	5698	3542	2091	2626	2206	920	799
MAX	322	1720	15200	30000	20800	22300	9840	5160	5610	7770	2410	1630
MIN	222	218	940	1800	1210	1630	1390	1150	1020	947	519	392
CFSM	1.18	.28	2.21	5.37	3.48	3.87	2.40	1.42	1.78	1.50	.62	.54
IN.	.21	.31	2.55	6.19	3.63	4.46	2.68	1.64	1.99	1.73	.72	.60
CAL YR 1978 TOTAL	771643	MEAN	2114	MAX	32300	MIN	218	CFSM	1.43	IN	19.47	
WTR YR 1979 TOTAL	1057967	MEAN	2899	MAX	30000	MIN	218	CFSM	1.97	IN	26.70	

TENNESSEE RIVER BASIN

03528000 CLINCH RIVER ABOVE TAZEWEEL, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-65, 1971 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1962 to September 1965, April 1971 to September 1975.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 31.0°C June 20, 23, 24, 1964; minimum, 0.0°C many days during winter months of 1963-65.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- NUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
JAN 10...	1155	9101	200	7.2	4.4	8	33	12.3	12	2.3	7700
APR 11...	1300	4867	220	7.2	13.0	5	13	10.6	--	1.2	--
JUN 13...	1155	2078	260	7.6	22.0	3	22	8.5	--	1.1	--
AUG 15...	1030	766	410	8.3	22.5	6	4	8.9	--	1.1	--

DATE	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 10...	--	33	6.1	2.2	1.7	73	20	3.0	120	.16
APR 11...	100	--	--	--	--	81	19	3.0	130	.18
JUN 13...	130	--	--	--	--	100	23	3.0	150	.20
AUG 15...	140	--	--	--	--	130	11	4.0	170	.23

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
JAN 10...	2950	63	.97	.02	.10	.050	--	1200	<1	20
APR 11...	1710	23	.63	.03	.08	.030	.05	--	<1	<10
JUN 13...	842	24	.67	.05	.02	.030	.01	--	<1	<10
AUG 15...	352	10	.99	.02	.08	.020	<.01	--	<1	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
JAN 10...	2400	70	<10	140	<10	<.2	<10	100	3.7	--
APR 11...	--	<50	<10	--	<10	<.2	--	80	2.1	--
JUN 13...	--	60	<10	--	10	<.2	--	30	2.4	--
AUG 15...	--	<50	<10	--	<10	<.2	--	<10	--	2.9

03532000 POWELL RIVER NEAR ARTHUR, TN

LOCATION.--Lat 36°32'30", long 83°37'49", Claiborne County, Hydrologic Unit 06010206, on left bank 500 ft (150 m) upstream from bridge on U. S. Highway 25E, 2.3 mi (3.7 km) east of Arthur, 2.4 mi (3.9 km) downstream from Indian Creek, and at mile 65.4 (105.2 km).

DRAINAGE AREA.--685 mi² (1,774 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1919 to current year. Gage-height records collected at same site December 1892 to August 1893, September 1904 to March 1925 are in reports of U. S. Weather Bureau (published as "near Tazewell").

REVISED RECORDS.--WSP 1336: 1920, 1921(M), 1923.

GAGE.--Water-stage recorder. Datum of gage is 1,043.84 ft (318.162 m) Tennessee River Survey datum. Prior to July 23, 1927, nonrecording gage, and July 23, 1927, to Sept. 30, 1970, water-stage recorder, at same site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--60 years, 1,157 ft³/s (32.77 m³/s), 22.94 in/yr (583 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,500 ft³/s (1,690 m³/s) Apr. 6, 1977, gage height, 38.96 ft (11.875 m), from floodmark; minimum, 47 ft³/s (1.33 m³/s) Jan. 6, 1940, result of freezeup; minimum daily, 60 ft³/s (1.70 m³/s) Sept. 23, 1955; minimum gage height, 1.32 ft (0.402 m) Sept. 6, 1975, result of dredging.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1826 reached a stage of 29.5 ft (8.99 m) present datum, discharge, 34,000 ft³/s (963 m³/s), and flood of Jan. 29, 1918, reached a stage of 29.2 ft (8.90 m) present datum, discharge, 33,000 ft³/s (935 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft³/s (255 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Dec. 10	Unknown	11700	331	a15.96	4.865	Feb. 25	2300	11800	334	16.05	4.892
Jan. 9	0500	10900	309	15.23	4.642	Mar. 5	2330	12600	357	16.74	5.102
Jan. 22	Unknown	*15300	433	a18.79	5.727						

a From high water mark.

Minimum discharge, 111 ft³/s (3.14 m³/s) Oct. 26, 27, 28, 29, gage height, 1.34 ft (0.408 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	123	1070	2990	1450	4730	1380	836	2360	376	985	398
2	148	123	883	6810	1300	4010	1590	793	2970	387	810	353
3	142	118	666	7810	1180	3270	2930	769	2180	386	683	439
4	145	118	3200	4600	1120	4320	5720	1620	2330	340	576	539
5	148	116	6980	2750	1080	9810	5430	3210	3100	390	495	438
6	148	114	4260	2080	1020	8290	3550	3720	2180	429	434	371
7	140	114	2180	3520	996	5020	2620	2530	1580	576	394	342
8	150	118	1830	8050	966	3580	2140	1850	1250	401	363	505
9	140	118	5880	9440	932	3550	2200	1470	1050	359	337	455
10	130	118	10200	4690	857	3620	2650	1240	938	356	317	378
11	125	118	6450	3000	798	3330	2690	1110	1100	370	335	325
12	125	118	2870	2270	742	3290	2240	1000	937	447	555	288
13	125	118	1890	1860	768	2800	2150	995	871	390	451	260
14	125	118	1430	1610	764	2370	2260	1020	777	359	435	241
15	128	118	1200	1410	785	2020	2270	980	757	391	390	228
16	135	163	1010	1220	1290	1720	2090	878	732	491	313	216
17	150	236	894	1060	2300	1490	1800	783	623	914	278	218
18	166	290	802	992	2650	1360	1570	714	581	622	266	220
19	148	392	731	949	2000	1270	1400	662	763	456	254	209
20	130	356	696	2370	1630	1200	1260	623	629	394	244	195
21	125	290	1260	9900	1520	1130	1160	611	550	1030	264	222
22	123	218	1960	13200	2170	1060	1080	586	504	1340	275	407
23	118	230	2000	7560	3140	1030	1010	627	486	1000	285	390
24	118	411	1530	4510	5900	1490	957	1100	487	936	409	702
25	116	606	1320	3720	9990	2880	905	1580	489	984	348	504
26	114	564	1340	2980	7310	3020	901	1590	458	820	330	386
27	111	452	1210	2600	7260	2240	980	1400	434	1240	371	336
28	111	523	1060	2290	5550	1870	999	1260	393	2780	441	413
29	114	797	944	2100	---	1670	961	1130	362	2050	561	372
30	116	957	865	1770	---	1520	896	1000	357	1510	462	374
31	116	---	1140	1580	---	1410	---	1280	---	1160	398	---
TOTAL	4078	8255	69751	121691	67468	90370	59789	38967	32228	23684	13059	10724
MEAN	132	275	2250	3926	2410	2915	1993	1257	1074	764	421	357
MAX	166	957	10200	13200	9990	9810	5720	3720	3100	2780	985	702
MIN	111	114	666	949	742	1030	896	586	357	340	244	195
CFSM	.19	.40	3.29	5.73	3.52	4.26	2.91	1.84	1.57	1.12	.62	.52
IN.	.22	.45	3.79	6.61	3.66	4.91	3.25	2.12	1.75	1.29	.71	.58
CAL YR 1978 TOTAL	385129			1055	MAX 12200	MIN 111	CFSM 1.54	IN 20.91				
WTR YR 1979 TOTAL	540064			1480	MAX 13200	MIN 111	CFSM 2.16	IN 29.33				

TENNESSEE RIVER BASIN

03532000 POWELL RIVER NEAR ARTHUR, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-65, 1971 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1962 to September 1965, April 1971 to September 1975.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 29.0°C July 20, 22, 23, 24, 1972; minimum, 0.0°C Jan. 16, 1972, Jan. 13, 1973.

WATER QUALITY DATA. WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
JAN 10...	1000	4781	200	7.5	5.0	7	40	12.4	2	1.4	6800
APR 11...	1110	2741	230	7.8	12.0	4	39	10.4	--	1.2	--
JUN 13...	1040	947	270	7.7	22.0	2	5	8.4	--	1.2	--
AUG 15...	0900	495	410	8.2	22.3	9	6	8.6	--	1.4	--

DATE	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
JAN 10...	--	28	6.0	1.7	1.6	88	23	3.0	110	.15
APR 11...	100	--	--	--	--	83	27	2.0	140	.19
JUN 13...	120	--	--	--	--	92	39	2.0	160	.22
AUG 15...	150	--	--	--	--	150	24	3.0	170	.23

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHATE, TOTAL (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
JAN 10...	1420	94	.91	.04	.07	.050	--	1300	<1	20
APR 11...	1040	67	.65	.03	.04	.040	.03	--	<1	<10
JUN 13...	409	13	.78	<.01	.05	.020	.01	--	1	<10
AUG 15...	227	16	1.6	.06	.08	.020	<.01	--	<1	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
JAN 10...	2600	80	<10	210	10	<.2	<10	50	1.8	--
APR 11...	--	<50	20	--	<10	<.2	--	60	2.0	--
JUN 13...	--	<50	<10	--	20	<.2	--	<10	1.6	--
AUG 15...	--	<50	<10	--	<10	<.2	--	<10	--	3.3

03533000 CLINCH RIVER BELOW NORRIS DAM, TN

LOCATION.--Lat 36°12'56", long 84°04'56", Anderson County, Hydrologic Unit 06010207, 0.5 mi (0.8 km) upstream from Clear Creek, 0.8 mi (1.3 km) below Norris Dam, 1.5 mi (2.4 km) north of Norris, and at mile 78.8 (126.8 km).

DRAINAGE AREA.--2,913 mi² (7,545 km²).

PERIOD OF RECORD.--Water years 1972-73, 1976 to current year.

REMARKS.--Flow regulated by Norris Lake (station 03532500) above site.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)
NOV 20...	0830	7400	240	7.9	18.0	7	1	5.5	?	--
FFR 19...	0830	7950	210	7.9	5.0	6	2	9.2	5	--
MAR 20...	1215	5670	230	8.0	6.0	7	5	11.8	--	<1.0
MAY 16...	1105	3000	210	7.5	8.7	8	2	10.0	--	<1.0
JUL 11...	1105	4100	210	7.3	11.3	6	1	6.1	--	1.3
SFP 12...	1330	8220	260	--	16.8	5	1	4.8	--	2.4

DATE	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
NOV 20...	--	30	9.6	3.2	1.1	98	22	3.0	150	.20
FFR 19...	--	30	7.5	3.5	1.3	92	22	3.0	130	.18
MAR 20...	100	--	--	--	--	86	20	3.0	130	.18
MAY 16...	100	--	--	--	--	86	17	3.0	140	.19
JUL 11...	100	--	--	--	--	84	18	4.0	130	.18
SFP 12...	120	--	--	--	--	--	20	3.0	150	.20

TENNESSEE RIVER BASIN

03533000 CLINCH RIVER BELOW NORRIS DAM, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DFG. C. SUS- PENDE (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV 20...	3000	2	.28	.01	.06	.010	--	<200	<1	140
FEB 19...	2790	2	.68	.07	.06	.030	--	<200	<1	10
MAR 20...	1990	2	.85	.06	.12	.020	.01	--	<1	<10
MAY 16...	1130	2	--	--	--	--	--	--	<1	<10
JUL 11...	1440	<1	1.1	.05	.08	.010	.03	--	<1	20
SEP 12...	3330	3	.45	.07	.42	.010	<.01	--	<1	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
NOV 20...	170	--	11	80	--	.8	<10	60	1.5	--
FEB 19...	160	--	<10	20	--	<.2	<10	80	2.5	--
MAR 20...	--	<50	<10	--	<10	<.2	--	20	--	1.7
MAY 16...	--	<50	<10	--	20	<.2	--	80	--	--
JUL 11...	--	<50	<10	--	30	.2	--	20	2.4	--
SEP 12...	--	<50	<10	--	410	.3	--	30	3.6	--

03533500 CLINCH RIVER AT COAL CREEK, TN

LOCATION.--Lat 36°12'23", long 84°06'30", Anderson County, Hydrologic Unit 06010207, at former gaging station on left bank, 300 ft (90 m) upstream from Massengill Bridge, 0.9 mi (1.4 km) upstream from Coal Creek, 3.0 mi (4.8 km) southeast of intersection of U. S. Highway 25 and State Highway 116 in Lake City, and at mile 75.9 (122.1 km).

DRAINAGE AREA.--2,921 mi² (7,565 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: March 1976 to September 1979 (discontinued).

INSTRUMENTATION.--Single point water temperature recorder since March 1976.

REMARKS.--Clock stopped Aug. 7-10, Aug. 31-Sept. 14 (range in temperature not available). Flow regulated by Norris Lake (station 03532500) 3.9 mi (6.3 km) upstream.

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 23.5°C July 2, 1976; minimum, 1.0°C Feb. 6, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 21.5°C many days in October; minimum, 3.5°C Feb. 18.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	21.0	19.5	20.0	21.0	17.0	20.0	18.0	15.5	17.0	12.0	10.5	11.0
2	21.0	20.0	20.5	21.0	17.0	20.0	17.0	15.5	16.5	10.5	8.5	10.0
3	21.0	20.0	20.5	20.5	16.5	19.5	17.0	15.5	16.5	10.5	6.5	9.5
4	21.0	20.0	20.5	20.5	16.5	19.0	16.5	15.0	16.0	10.5	9.0	10.0
5	21.0	17.0	19.5	20.5	17.0	19.0	16.0	13.0	15.0	10.5	10.0	10.0
6	21.0	16.5	19.5	20.0	16.0	19.0	16.5	13.0	15.5	10.5	9.5	10.0
7	21.0	16.5	20.0	20.0	17.0	19.0	16.0	14.5	15.5	11.0	9.5	10.0
8	21.5	16.5	20.0	20.0	16.0	19.0	16.0	15.5	16.0	10.0	9.5	10.0
9	21.5	16.5	20.0	20.0	16.5	19.0	15.5	13.5	15.0	10.0	9.5	9.5
10	21.5	17.0	19.5	20.0	16.5	19.0	15.5	11.0	13.5	9.5	9.0	9.5
11	21.5	18.0	20.0	20.0	17.0	19.0	15.5	13.5	15.0	9.5	9.5	9.5
12	21.5	17.0	20.0	19.5	16.5	18.0	15.0	13.0	14.5	9.5	9.0	9.5
13	21.5	18.0	20.0	19.5	16.0	18.5	15.0	13.5	14.5	9.0	9.0	9.0
14	21.0	18.0	20.0	19.5	17.0	19.0	14.5	12.0	14.0	9.0	8.5	9.0
15	21.5	16.0	20.0	19.5	18.5	19.0	14.5	11.5	13.5	9.0	8.5	8.5
16	21.5	16.5	20.0	19.0	18.0	19.0	14.0	13.5	14.0	8.5	8.5	8.5
17	21.5	16.0	20.0	19.5	18.0	19.0	13.5	11.0	13.0	8.5	8.5	8.5
18	21.5	16.5	20.0	19.0	17.0	18.5	13.5	11.0	13.0	8.5	8.0	8.0
19	21.5	16.5	20.0	19.0	16.0	17.0	13.5	13.5	13.5	8.5	8.0	8.5
20	21.5	17.0	20.0	19.0	15.5	18.0	13.5	13.0	13.5	8.5	8.0	8.5
21	21.5	16.5	20.0	19.0	16.5	18.5	13.0	13.0	13.0	8.5	8.0	8.0
22	21.5	17.0	20.0	18.5	16.5	18.0	13.0	12.0	13.0	8.0	8.0	8.0
23	21.5	18.0	20.5	18.5	16.5	18.0	12.0	11.0	11.5	8.0	7.0	7.0
24	21.5	18.5	20.5	18.5	16.0	17.0	12.0	11.0	11.5	7.0	7.0	7.0
25	21.5	17.0	20.0	18.0	14.0	16.5	12.0	10.5	11.5	7.0	7.0	7.0
26	21.0	18.5	20.5	18.0	14.5	15.5	11.5	10.5	11.0	7.0	7.0	7.0
27	21.5	18.0	20.0	18.0	14.0	16.5	11.5	10.0	11.0	7.0	7.0	7.0
28	21.5	17.0	20.0	18.0	16.0	17.0	11.5	10.5	11.0	7.0	6.5	7.0
29	21.5	16.5	19.5	18.0	15.5	17.0	11.0	8.5	10.5	6.5	6.5	6.5
30	21.5	17.0	20.0	18.0	15.5	17.0	11.0	10.5	11.0	6.5	6.0	6.5
31	21.0	17.0	20.0	---	---	---	12.0	10.5	11.0	6.5	6.0	6.5
MONTH	21.5	16.0	20.0	21.0	14.0	18.5	18.0	8.5	13.5	12.0	6.0	8.5

TENNESSEE RIVER BASIN

03533500 CLINCH RIVER AT COAL CREEK, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	6.0	6.0	6.0	5.0	5.0	5.0	8.5	6.5	7.0	9.0	7.0	8.0
2	6.0	5.5	6.0	5.0	5.0	5.0	8.5	6.5	7.0	9.5	8.0	8.5
3	6.0	6.0	6.0	5.0	5.0	5.0	8.5	6.5	7.0	9.0	8.0	8.5
4	6.0	5.5	6.0	5.5	5.0	5.0	8.5	6.5	7.0	10.0	8.0	9.0
5	6.0	5.5	5.5	5.5	5.0	5.5	8.0	7.0	7.0	9.0	8.0	8.5
6	6.0	5.5	5.5	5.5	5.0	5.5	8.0	6.5	7.0	9.5	8.0	9.0
7	5.5	5.5	5.5	5.5	5.0	5.5	7.0	6.0	6.5	9.5	8.0	8.5
8	5.5	5.5	5.5	5.5	5.5	5.5	8.0	6.5	7.0	9.5	8.0	8.5
9	5.5	5.0	5.5	6.0	5.5	5.5	7.0	6.5	7.0	9.0	8.0	8.5
10	5.0	4.5	5.0	6.0	6.0	6.0	7.0	6.5	7.0	9.5	8.0	8.5
11	5.0	4.5	5.0	6.0	6.0	6.0	8.0	7.0	7.0	9.5	8.0	8.5
12	5.0	4.5	5.0	6.5	6.0	6.0	8.0	7.0	7.0	9.5	8.0	8.5
13	5.0	4.5	5.0	6.0	5.5	6.0	8.0	7.0	8.0	9.0	8.0	8.5
14	5.0	4.5	5.0	6.5	6.0	6.0	8.5	7.0	8.0	9.5	8.0	9.0
15	5.0	5.0	5.0	6.5	6.0	6.0	8.5	7.0	8.0	9.5	8.0	9.0
16	6.5	5.0	5.5	6.5	6.0	6.5	9.0	7.0	8.0	9.5	8.0	9.0
17	5.5	4.0	5.0	6.5	6.0	6.0	9.0	7.0	8.0	10.0	8.0	9.0
18	5.0	3.5	4.5	6.5	6.0	6.0	9.0	7.0	8.0	10.0	8.0	9.0
19	5.5	4.0	4.5	6.5	6.0	6.0	9.0	7.0	8.0	9.5	8.0	8.5
20	5.0	4.0	4.5	7.0	6.0	6.5	9.0	8.0	8.0	9.5	8.0	8.5
21	5.5	5.0	5.0	8.0	6.0	6.5	9.0	7.0	8.0	9.5	8.5	9.0
22	6.0	5.0	5.0	8.0	6.0	6.5	8.5	7.0	8.0	9.0	8.5	8.5
23	6.0	5.0	5.5	8.0	6.0	6.5	8.5	7.0	8.0	10.0	8.5	9.0
24	6.0	4.5	5.5	8.5	6.0	6.5	8.5	7.0	8.0	13.5	9.0	11.0
25	7.0	4.5	5.5	7.0	6.0	6.5	8.5	7.0	8.0	12.0	11.0	11.5
26	5.0	4.5	5.0	6.5	6.0	6.5	9.0	8.0	8.5	11.5	8.5	10.0
27	5.5	5.0	5.0	7.0	6.5	6.5	9.0	8.0	8.5	9.5	8.5	9.0
28	5.5	5.0	5.0	7.0	6.0	6.5	11.5	8.0	9.0	10.5	8.5	9.0
29	---	---	---	8.0	6.5	7.0	9.0	7.0	8.5	10.0	8.5	9.0
30	---	---	---	9.5	4.0	8.0	9.0	7.0	8.5	9.5	8.5	9.0
31	---	---	---	8.5	6.5	7.0	---	---	---	10.0	8.5	9.0
MONTH	7.0	3.5	5.5	9.5	4.0	6.0	11.5	6.0	7.5	13.5	7.0	9.0
JUNE			JULY			AUGUST			SEPTEMBER			
1	15.0	8.5	10.5	11.0	10.0	10.5	13.0	12.0	12.0	---	---	---
2	16.5	8.5	11.0	11.0	10.0	10.5	13.0	12.0	13.0	---	---	---
3	14.0	9.0	10.5	11.0	10.0	10.5	13.5	12.0	13.0	---	---	---
4	11.0	9.0	9.5	13.0	10.5	11.0	14.0	12.0	13.0	---	---	---
5	11.0	8.5	9.5	13.0	10.5	11.0	13.5	12.0	13.0	---	---	---
6	13.5	9.0	9.5	12.0	10.5	11.0	13.5	13.0	13.0	---	---	---
7	11.0	9.0	9.5	11.0	10.5	10.5	---	---	---	---	---	---
8	10.0	9.0	9.5	11.5	10.5	11.0	---	---	---	---	---	---
9	10.5	9.0	9.5	11.5	10.5	11.0	---	---	---	---	---	---
10	10.0	9.0	9.5	11.5	10.5	11.0	---	---	---	---	---	---
11	13.0	9.5	10.0	12.0	10.5	11.0	14.0	13.5	13.5	---	---	---
12	11.5	9.5	10.0	11.5	10.5	11.0	14.0	13.5	13.5	---	---	---
13	14.0	9.0	10.0	12.0	10.5	11.0	14.0	13.0	13.5	---	---	---
14	12.0	9.5	10.0	12.0	10.5	11.0	14.0	13.5	13.5	---	---	---
15	11.5	9.5	10.0	12.0	11.0	11.0	14.0	13.5	14.0	19.0	18.0	18.5
16	10.0	9.0	9.5	15.5	11.0	11.5	14.5	13.5	14.0	19.0	18.0	18.5
17	10.0	9.5	9.5	14.0	11.0	11.5	14.5	14.0	14.0	19.0	18.0	18.5
18	11.0	9.5	9.5	11.5	11.0	11.5	14.5	14.0	14.5	19.0	18.0	18.5
19	10.0	9.5	10.0	14.5	11.0	11.5	14.5	14.0	14.5	19.0	18.0	18.5
20	11.0	9.5	10.0	12.0	11.0	11.5	14.5	14.0	14.5	19.0	16.5	18.5
21	11.5	9.5	10.0	14.0	11.0	13.0	14.5	14.0	14.5	19.0	18.5	19.0
22	10.5	10.0	10.0	15.5	14.0	14.5	15.0	14.0	14.5	19.0	18.0	19.0
23	10.5	10.0	10.0	18.0	11.0	13.5	15.0	14.0	14.5	19.5	18.0	19.0
24	10.5	10.0	10.0	11.5	11.0	11.0	15.5	14.0	15.0	19.5	18.5	19.0
25	10.5	10.0	10.0	12.0	11.5	11.5	15.5	14.5	15.0	19.5	18.5	19.0
26	11.0	10.0	10.5	13.0	11.5	11.5	15.5	15.0	15.5	19.5	18.5	19.0
27	10.5	10.0	10.0	12.0	11.5	11.5	15.5	15.0	15.5	19.5	18.0	19.0
28	10.5	10.0	10.0	13.0	11.5	12.0	15.5	15.0	15.5	20.0	18.5	19.0
29	10.5	10.0	10.5	12.0	11.5	12.0	15.5	15.0	15.5	20.5	18.5	19.5
30	11.0	10.0	10.5	13.0	11.5	12.0	16.5	15.0	15.5	21.0	18.0	19.0
31	---	---	---	13.0	11.5	12.0	---	---	---	---	---	---
MONTH	16.5	8.5	10.0	18.0	10.0	11.5	16.5	12.0	14.0	21.0	16.5	19.0

TENNESSEE RIVER BASIN

03535000 BULLRUN CREEK NEAR HALLS CROSSROADS, TN

LOCATION.--Lat 36°06'52", long 83°59'16", Knox County, Hydrologic Unit 06010207, on left bank on downstream side of bridge on U. S. Highway 441, 2.1 mi (3.4 km) downstream from Smith Branch, 4 mi (6 km) northwest of Halls Crossroads, and at mile 16.3 (26.2 km).

DRAINAGE AREA.--68.5 mi² (177.4 km²)

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 854.91 ft (260.577 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--22 years, 104 ft³/s (2.945 m³/s), 20.62 in/yr (524 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,300 ft³/s (518 m³/s) Apr. 4, 1977, gage height, 13.28 ft (4.048 m), from rating curve extended above 5,000 ft³/s (142 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 2.5 ft³/s (0.071 m³/s) Aug. 12, 1974, caused by regulation upstream of unknown origin.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1230	2100 59.5	8.38 2.554	Feb. 25	2130	1570 44.5	7.93 2.417
Jan. 7	1730	1820 51.5	8.16 2.487	Mar. 4	1900	2480 70.2	8.64 2.633
Jan. 21	0630	2120 60.0	8.39 2.557	July 21	2300	*7040 199	10.62 3.237

Minimum discharge, 8.6 ft³/s (0.244 m³/s) Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	9.4	46	385	108	370	90	72	445	52	92	25
2	12	9.4	32	1040	95	285	106	65	213	36	79	31
3	11	9.4	42	265	93	220	753	64	752	39	68	25
4	11	9.4	503	155	89	1630	451	299	422	45	61	24
5	11	9.1	204	120	83	931	289	210	252	33	54	22
6	9.9	9.1	99	150	76	373	201	141	184	28	49	21
7	9.4	9.7	67	1280	82	260	154	109	149	30	46	21
8	9.4	12	219	949	73	242	132	92	130	32	43	20
9	9.4	12	1360	296	70	182	248	81	115	39	40	19
10	9.4	11	279	191	66	196	179	74	208	89	38	18
11	9.4	9.9	138	144	64	260	146	66	197	61	43	18
12	9.4	9.7	99	120	65	200	199	60	86	53	81	18
13	9.4	9.7	79	108	66	164	459	97	70	42	42	17
14	9.4	9.4	64	96	68	162	366	86	60	101	36	17
15	9.7	9.9	54	77	110	132	249	65	53	143	33	17
16	9.7	23	49	68	187	113	182	57	49	142	32	16
17	9.1	53	46	65	140	103	143	51	47	73	30	16
18	9.1	46	39	61	119	96	119	47	44	53	29	16
19	9.1	22	39	56	102	91	104	45	40	43	28	17
20	9.4	16	41	663	93	86	94	46	37	637	27	16
21	9.4	15	166	1640	171	84	86	74	35	2120	27	28
22	9.4	14	110	506	271	76	79	51	35	2330	29	46
23	9.4	41	82	289	308	218	74	169	60	354	30	22
24	8.8	60	72	376	718	439	70	547	46	276	28	19
25	9.1	29	79	277	1080	235	66	241	38	201	27	18
26	9.4	23	62	207	1130	161	95	158	32	167	59	17
27	9.7	45	53	188	513	137	197	125	29	231	80	29
28	9.9	41	47	196	436	124	115	112	27	262	36	55
29	9.9	58	43	153	---	109	93	101	26	200	31	33
30	9.4	92	45	135	---	99	81	86	148	138	29	24
31	9.4	---	118	125	---	92	---	675	---	111	29	---
TOTAL	302.0	727.1	4376	10381	6476	7870	5621	4166	4029	8161	1356	685
MEAN	9.74	24.2	141	335	231	254	187	134	134	263	43.7	22.8
MAX	12	92	1360	1640	1130	1630	753	675	752	2330	92	55
MIN	8.8	9.1	32	56	64	76	66	45	26	28	27	16
CFSM	.14	.35	2.06	4.89	3.37	3.71	2.73	1.96	1.96	3.84	.64	.33
IN.	.16	.39	2.38	5.64	3.52	4.27	3.05	2.26	2.19	4.43	.74	.37
CAL YR 1978	TOTAL	34358.0	MEAN	94.1	MAX	1810	MIN	8.8	CFSM	1.37	IN	18.66
WTR YR 1979	TOTAL	54150.1	MEAN	148	MAX	2330	MIN	8.8	CFSM	2.16	IN	29.41

TENNESSEE RIVER BASIN

03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN
(National stream-quality accounting network station)

LOCATION.--Lat 35°53'07", long 84°18'03", Loudon County, Hydrologic Unit 06010207, at downstream side of Melton Hill Dam, 1.4 mi (2.2 km) downstream from Hope Creek, and at mile 23.1 (37.2 km).

DRAINAGE AREA.--3,343 mi² (8,658 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1936 to January 1941 (published as "near Wheat"), February 1941 to September 1960 (published as "near Scarboro"), October 1960 to September 1964 (published as "at Melton Hill Dam"), October 1967 to September 1968 (published as "near Oak Ridge"), October 1978 to current year. Equivalent record for the period October 1964 to December 1978 published in annual reports of Tennessee Valley Authority entitled "Operation of TVA Reservoirs".

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to February 1941, at site 8.7 miles (14.0 km) downstream at datum 717.36 ft (218.651 m) higher. February 1941 to September 1962 at site 15.9 miles (25.6 km) upstream at datum 753.35 ft (229.621 m) higher. October 1962 to September 1964, headwater gage at upstream side of dam at present datum. October 1967 to September 1968, at site 8.6 miles (13.8 km) downstream at datum 731.62 ft (222.998 m) higher.

REMARKS.--Records good.

COOPERATION.--Records furnished by Tennessee Valley Authority.

AVERAGE DISCHARGE.--30 years, (1936-64, 1967-68, 1978-79), 4,654 ft³/s (132 m³/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 39,600 ft³/s (1,121 m³/s) Feb. 18, 1937; minimum daily, no flow, many days in 1963, 1964, and Dec. 2, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 24,900 ft³/s (705 m³/s) Mar. 10; minimum daily, no flow, Dec. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4740	2260	3790	1890	16300	18700	3690	3190	8450	5850	8920	7560
2	6110	2210	0	7330	13700	21500	6100	2690	3500	6720	8020	6560
3	3250	2110	20	8360	13600	21800	4830	2870	2810	5440	8450	7770
4	3000	1710	3260	6770	12400	21800	7810	4920	7230	5290	8590	8730
5	2180	871	5820	8840	13700	17200	7700	5140	8980	4800	8250	7870
6	2140	2350	5260	5740	11400	21700	6810	1760	5770	5310	8510	7560
7	2370	2560	2850	8930	12900	22200	5600	2850	6920	5500	6360	7280
8	3720	3050	2760	10100	10000	22600	7770	7070	6090	4120	5490	7670
9	3970	3410	10400	13500	10400	24300	8930	4600	6660	6320	7860	7540
10	2310	3520	6890	11800	9460	24900	10900	2980	6590	5980	10500	7620
11	1730	3570	7600	10600	6430	24200	11000	2840	6620	5770	8160	7680
12	1550	2510	7430	11100	6630	23800	11900	2980	5550	6760	5360	8000
13	1500	5800	5340	9640	9400	14700	11400	2200	5110	8730	8680	6760
14	1370	5210	7020	10000	9200	17100	11300	3070	5730	7040	7580	5320
15	1040	5820	7890	10500	9440	15800	7400	3420	5140	5560	7400	6730
16	1910	3800	5930	11600	6630	9910	7850	3970	5390	5290	8920	6310
17	4890	3280	5200	13700	9550	7780	6040	4250	5360	6210	11200	6760
18	5480	20	3890	12900	8710	2170	5370	3980	5160	6330	7700	6870
19	4000	20	2830	8590	9760	9860	4210	2520	9730	6540	6680	6590
20	2750	2200	7350	9950	10100	5650	3530	2860	6240	7720	7800	5780
21	1220	3270	10800	15000	9030	5940	2170	4090	6750	9250	7770	5590
22	695	3630	8820	10800	8670	5730	1960	4300	6490	10400	9020	6750
23	1630	1150	8870	11600	7420	6390	3170	2000	4970	9870	9370	6220
24	1410	2120	6090	14000	3710	7370	3290	4110	4530	9290	8800	6740
25	1520	2340	7240	11200	7070	5930	2240	2770	6370	9270	8430	7120
26	1430	787	7140	14900	16400	7670	2220	3020	6770	9300	8750	5820
27	2680	4360	5780	18800	11900	6460	2620	2670	7740	9570	9250	3770
28	2500	8510	4300	18900	17200	5710	2640	2790	7450	8370	8920	3630
29	2640	8260	4740	19200	---	6470	2490	4300	6340	10600	8390	4000
30	2510	4810	3620	19800	---	4800	3440	4030	6490	10800	7770	3460
31	2120	---	3950	20600	---	3980	---	9420	---	9290	7540	---
TOTAL	80365	95518	172880	366640	291110	414120	176380	113660	186930	227290	254440	196060
MEAN	2592	3184	5577	11830	10400	13360	5879	3666	6231	7332	8208	6535
MAX	6110	8510	10800	20600	17200	24900	11900	9420	9730	10800	11200	8730
MIN	695	20	0	1890	3710	2170	1960	1760	2810	4120	5360	3460

WTR YR 1979 TOTAL 2575393 MEAN 7056 MAX 24900 MIN 0 MEAN‡ 7498 CFSM‡ 2.24 IN‡ 30.45

‡ Adjusted for change in contents in Norris and Melton Hill Lakes, furnished by Tennessee Valley Authority.

TENNESSEE RIVER BASIN

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03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1973 to current year.

REMARKS.--Site located in Watts Bar Lake. Flow regulated by Melton Hill Lake (station 03535900) and Norris Lake (station 03532500) above site.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
NOV 20...	0745	21200	260	7.6	16.0	--	7.7	--	--	--	--	--
FEB 13...	0800	20600	220	7.9	5.0	--	--	--	--	--	--	--
APR 09...	1100	9900	225	7.4	11.0	8.0	8.8	21	<1	110	8	30
23...	1330	50	210	6.8	14.5	7.0	9.2	K11	K5	100	11	28
JUN 11...	1200	10200	200	8.1	18.0	10	--	K14	K5	100	16	29
20...	1015	1200	180	8.0	19.0	5.0	8.6	K9	K4	100	16	29
JUL 10...	1030	50	215	7.9	17.5	2.0	--	K12	K4	110	16	30
AUG 08...	1100	50	220	7.7	20.5	4.0	--	20	K16	110	28	31
20...	1130	18000	215	7.7	19.0	7.0	--	K4	29	110	16	31
SEP 11...	1215	10000	232	7.9	22.0	5.0	6.8	<1	<1	120	19	33
19...	1200	9900	220	7.6	21.0	4.0	5.3	K12	K5	120	21	33
28...	1115	50	238	7.8	20.5	2.0	--	K10	K2	120	23	34

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
NOV 20...	--	--	--	--	--	100	21	3.0	--	--	150	--
FEB 13...	--	--	--	--	--	100	24	3.0	--	--	130	--
APR 09...	8.0	2.9	5	.1	1.2	100	17	3.0	.0	4.4	132	127
23...	7.5	2.6	5	.1	1.3	90	18	2.7	.1	4.8	119	119
JUN 11...	6.7	2.4	5	.1	1.5	84	15	2.6	.1	4.9	128	113
20...	7.4	2.6	5	.1	1.6	87	16	2.8	.1	4.0	123	116
JUL 10...	7.7	2.8	5	.1	1.3	91	17	2.8	.1	4.9	134	121
AUG 08...	8.2	2.8	5	.1	1.2	83	17	3.1	.1	5.5	146	119
20...	8.0	2.6	5	.1	1.2	94	17	2.6	.1	5.1	134	124
SEP 11...	8.9	3.1	5	.1	1.2	100	16	2.5	.0	4.9	146	132
19...	9.0	3.2	5	.1	1.2	98	14	2.2	.1	4.6	134	128
28...	9.0	3.0	7	.1	1.3	99	17	2.6	.1	4.7	132	133

K--Results based on colony count outside acceptable range (non-ideal colony count)

TENNESSEE RIVER BASIN

03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+N03 TOTAL (MG/L AS N)	NITRO- GEN, NO2+N03 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 20...	.20	8590	.25	--	.06	.10	--	--	--	.020	--	2.9
FEB 13...	.18	7230	.53	--	.02	.12	--	--	--	.010	--	2.1
APR 09...	.18	3530	.66	--	.00	.16	.16	.00	.82	.020	.000	--
23...	.16	16.1	.55	--	.00	.24	.24	.15	.79	.010	.000	1.3
JUN 11...	.17	3530	.47	--	.03	.18	.21	.18	.68	.020	.010	2.7
20...	.17	399	.54	--	.04	.69	.73	.24	1.3	.000	.000	2.3
JUL 10...	.18	18.1	.61	--	.00	.21	.21	.07	.82	.020	.000	--
AUG 08...	.20	19.7	.56	--	.02	.27	.29	.14	.85	.020	.000	--
20...	.18	6510	.56	--	.01	.21	.22	.02	.78	.010	.000	2.1
SEP 11...	.20	3940	.49	.52	.01	.29	.30	.14	.79	.010	.000	--
19...	.18	3580	.45	.48	.09	.20	.29	.25	.74	.010	.000	.4
28...	.18	17.8	.42	.42	.04	.08	.12	.12	.54	.010	.010	--

DATE	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 20...	--	--	--	--	--	--	--	--	--	--	--
FEB 13...	--	--	--	--	--	--	--	--	--	--	--
APR 09...	3.0	.4	--	--	--	--	--	--	12	321	93
23...	--	--	1000	--	--	--	--	--	7	.94	93
JUN 11...	--	--	3300	--	--	--	--	--	19	523	76
20...	--	--	9900	--	--	--	--	--	10	32	62
JUL 10...	2.1	.2	600	--	--	--	--	--	14	1.9	61
AUG 08...	2.3	.5	2000	102	31.6	33.4	17.7	.510	14	1.9	66
20...	--	--	300	--	--	--	--	--	16	778	72
SEP 11...	--	--	3000	--	--	--	--	--	4	108	90
19...	--	--	730	--	--	--	--	--	8	214	67
28...	1.9	--	840	--	--	--	--	--	6	.81	69

03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
NOV 20...	--	--	--	--	<1	--	--	--	--
FEB 13...	--	--	--	--	<1	--	--	--	--
APR 09...	3	1	0	0	0	0	10	10	1
JUL 10...	3	1	--	50	1	1	30	<10	0
AUG 08...	3	1	--	30	0	1	20	10	0
SEP 28...	1	1	--	30	0	0	20	<10	3

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
NOV 20...	--	30	--	620	--	<10	--	40	--
FEB 13...	--	<10	--	160	--	<10	--	30	--
APR 09...	0	1	1	330	10	1	1	50	2
JUL 10...	0	3	2	310	0	5	2	30	1
AUG 08...	0	5	1	180	0	2	0	30	1
SEP 28...	0	6	1	170	170	6	2	20	1

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 20...	2.3	--	--	--	--	--	40	--
FEB 13...	<.2	--	--	--	--	--	<10	--
APR 09...	.5	.5	0	0	2	0	30	10
JUL 10...	<.5	<.5	0	1	0	0	20	8
AUG 08...	<.5	<.5	0	0	0	0	20	6
SEP 28...	<.5	<.5	1	0	--	0	10	0

TENNESSEE RIVER BASIN

03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	APR 23,79 1330	JUN 11,79 1200	JUN 20,79 1015	JUL 10,79 1030	AUG 8,79 1100					
TOTAL CELLS/ML	1000	3300	9900	600	2000					
DIVERSITY: DIVISION	1.3	0.3	0.9	1.2	0.9					
..CLASS	1.3	0.3	0.9	1.2	0.9					
...ORDER	1.4	0.4	1.2	1.3	1.0					
...FAMILY	1.5	0.4	1.4	2.0	1.0					
....GENUS	2.3	0.4	1.5	2.1	1.1					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHLOROCOCCACEAE										
.....CHLOROCOCCUM	--	-	--	-	--	-	--	-	--	-
....COELASTRACEAE										
.....COELASTRUM	--	-	--	-	570	6	310#	51	--	-
....MICRACTINIAEAE										
.....GOLENKINIA	--	-	--	-	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	--	-	--	-	28	1
....OOCYSTACEAE										
.....ANKISTRODESMUS	--	-	--	-	*	0	13	2	42	2
....CHLORELLA	--	-	--	-	--	-	--	-	--	-
.....CHODATELLA	14	1	--	-	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	51	1	--	-	--	-
.....KIRCHNERIELLA	400#	39	--	-	--	-	64	11	14	1
....OOCYSTIS	--	-	--	-	--	-	--	-	--	-
....TETRAEDRON	--	-	*	0	--	-	--	-	--	-
....TREUBARIA	--	-	*	0	--	-	--	-	28	1
....SCENEDESMACEAE										
.....SCENEDESMUS	29	3	--	-	51	1	26	4	--	-
..VOLVOCALES										
....CHLAMYDOMONADACEAE										
.....CHLAMYDOMONAS	14	1	*	0	64	1	--	-	70	3
....VOLVOCAEAE										
....GONIUM	--	-	--	-	51	1	--	-	--	-
....PANDORINA	--	-	--	-	--	-	--	-	--	-
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
....COSCINODISCACEAE										
.....COSCINODISCUS	14	1	--	-	--	-	--	-	--	-
....CYCLOTELLA	270#	27	--	-	240	2	13	2	70	3
....MELOSIRA	200#	20	65	2	77	1	26	4	83	4
....STEPHANODISCUS	14	1	52	2	77	1	--	-	--	-
..PENNALES										
....ACHNANTHACEAE										
.....ACHNANTHES	--	-	--	-	90	1	--	-	--	-
....COCCONEIS	--	-	--	-	*	0	--	-	--	-
....CYMBELLACEAE										
.....AMPHORA	--	-	--	-	*	0	--	-	--	-
....CYMBELLA	--	-	--	-	77	1	--	-	--	-
....FRAGILARIAEAE										
.....FRAGILARIA	--	-	--	-	51	1	26	4	--	-
....SYNEDRA	--	-	26	1	360	4	--	-	--	-
....NAVICULACEAE										
.....NAVICULA	--	-	--	-	*	0	--	-	--	-
....NITZSCHIAEAE										
.....NITZSCHIA	--	-	--	-	260	3	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
....CRYPTOCHRYSIDACEAE										
.....CHROOMONAS	--	-	--	-	--	-	--	-	--	-
....CRYPTOMONADACEAE										
.....CRYPTOMONAS	--	-	--	-	--	-	--	-	14	1
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
.....AGMENELLUM	--	-	--	-	--	-	--	-	--	-
....ANACYSTIS	--	-	--	-	100	1	--	-	--	-
....HORMOGONALES										
....OSCILLATORIAEAE										
.....OSCILLATORIA	--	-	3100#	94	7700#	78	130#	21	1700#	83
....SCHIZOTHRIX	--	-	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

TENNESSEE RIVER BASIN

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03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	APR 23,79 1330		JUN 11,79 1200		JUN 20,79 1015		JUL 10,79 1030		AUG 8,79 1100	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
.....EUTREPTIA	--	-	--	-	--	-	--	-	--	-
.....TRACHELOMONAS	14	1	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
..DINOPHYCEAE										
...PERIDINIALES										
....GLENODINIACEAE										
.....GLENODINIUM	43	4	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

TENNESSEE RIVER BASIN

03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	AUG 20,79 1130	SEP 11,79 1215	SEP 19,79 1200	SEP 28,79 1115				
TOTAL CELLS/ML	300	3000	730	840				
DIVERSITY: DIVISION	1.5	1.5	1.7	1.4				
..CLASS	1.5	1.5	1.7	1.4				
...ORDER	1.8	2.0	2.4	2.0				
...FAMILY	2.0	2.3	2.4	2.4				
....GENUS	2.4	2.8	2.8	2.5				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHLOROCOCCACEAE								
.....CHLOROCOCCUM	--	-	77	3	--	-	--	-
....COELASTRACEAE								
.....COELASTRUM	--	-	--	-	--	-	100	12
....MICRACTINIAEAE								
.....GOLENKINIA	26	9	--	-	--	-	--	-
.....MICRACTINIUM	--	-	44	1	--	-	--	-
....OOCYSTACEAE								
.....ANKISTRODESMUS	13	4	180	6	110#	15	--	-
.....CHLORELLA	--	-	420	14	--	-	--	-
.....CHODATELLA	--	-	--	-	--	-	--	-
.....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
.....KIRCHNERIELLA	--	-	--	-	27	4	--	-
.....OOCYSTIS	13	4	22	1	--	-	--	-
.....TETRAEDRON	--	-	44	1	--	-	--	-
.....TREUBARIA	--	-	--	-	--	-	--	-
....SCENEDESMACEAE								
.....SCENEDESMUS	--	-	66	2	--	-	52	6
..VOLVOCALES								
....CHLAMYDOMONADACEAE								
.....CHLAMYDOMONAS	--	-	*	0	27	4	26	3
....VOLVOCAEAE								
.....GONIUM	--	-	--	-	--	-	--	-
....PANDORINA	--	-	--	-	--	-	210#	25
CHRYSPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
....COSCINODISCACEAE								
.....COSCINODISCUS	--	-	--	-	--	-	--	-
.....CYCLOTELLA	--	-	170	6	55	8	13	2
.....MELOSIRA	140#	48	300	10	110#	15	330#	40
....STEPHANODISCUS	26	9	--	-	--	-	13	2
..PENNALES								
....ACHNANTHACEAE								
.....ACHNANTHES	--	-	*	0	14	2	--	-
....COCCONEIS	--	-	--	-	--	-	--	-
....CYMBELLACEAE								
.....AMPHORA	--	-	--	-	--	-	--	-
....CYMBELLA	--	-	--	-	--	-	--	-
....FRAGILARIACEAE								
.....FRAGILARIA	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	33	1	--	-	--	-
....NAVICULACEAE								
.....NAVICULA	--	-	--	-	--	-	--	-
....NITZSCHIAEAE								
.....NITZSCHIA	26	9	--	-	--	-	13	2
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOCHRYSIDACEAE								
.....CHROOMONAS	--	-	--	-	--	-	26	3
....CRYPTOMONADACEAE								
.....CRYPTOMONAS	26	9	*	0	14	2	26	3
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
.....AGMENELLUM	--	-	350	12	--	-	--	-
.....ANACYSTIS	26	9	--	-	180#	25	26	3
...HORMOGONALES								
....OSCILLATORIACEAE								
.....OSCILLATORIA	--	-	--	-	180#	25	--	-
....SCHIZOTHRIX	--	-	1200#	42	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

TENNESSEE RIVER BASIN

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03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN--Continued
PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	AUG 20,79 1130		SEP 11,79 1215		SEP 19,79 1200		SEP 28,79 1115	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
....EUGLENACEAE								
.....EUTREPTIA	--	-	22	1	--	-	--	-
.....TRACHELOMONAS	--	-	--	-	14	2	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...PERIDINIALES								
....GLENODINIACEAE								
.....GLENODINIUM	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%.
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%.

TENNESSEE RIVER BASIN

03535915 CLINCH RIVER NEAR EATON CROSSROADS, TN

LOCATION.--Lat. 35°53'15", long 84°19'28", Roane County, Hydrologic Unit 06010207, on right bank 100 ft (30 m) downstream from bridge on State Highway 95, 1.5 mi (2.4 km) downstream from Melton Hill Dam, and at mile 21.6 (34.8 km).

DRAINAGE AREA.--3,346 mi² (8,666 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1974 to August 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder since October 1974.

REMARKS.--Recorder malfunction Dec. 10-15 (range in temperature 10.5 to 12.0°C). Flow regulated by Norris Lake (station 03532500) and Melton Hill Lake (station 03535900).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.

WATER TEMPERATURES: Maximum 23.0°C Sept. 4, 1975; minimum, 2.0°C Jan. 19, 20, 1977.

EXTREMES FOR CURRENT YEAR:

WATER TEMPERATURES: Maximum during period October 1978 to August 1979, 20.5°C Oct. 1-4; minimum, 3.5°C Feb. 11, 18-20.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	20.5	20.0	20.0	17.0	16.5	16.5	14.5	14.0	14.0	9.5	8.5	9.0
2	20.5	20.0	20.0	18.0	16.5	16.5	14.0	13.5	14.0	8.5	7.0	8.5
3	20.5	20.0	20.0	16.5	15.5	16.0	13.5	13.5	13.5	8.0	7.0	8.0
4	20.5	20.0	20.0	17.0	15.5	16.0	14.0	13.5	13.5	8.0	7.0	7.0
5	20.0	19.5	20.0	17.0	16.0	16.5	13.5	13.0	13.5	7.0	6.5	7.0
6	20.0	19.5	19.5	16.5	16.0	16.0	13.5	13.0	13.0	7.0	6.5	6.5
7	20.0	19.5	20.0	16.0	15.5	16.0	13.0	13.0	13.0	7.0	6.5	6.5
8	20.0	19.5	19.5	16.0	15.5	16.0	13.5	13.0	13.0	7.0	6.0	6.5
9	19.5	19.0	19.5	16.5	15.5	16.0	13.5	12.0	13.0	6.0	5.5	6.0
10	19.5	19.0	19.0	16.5	16.0	16.0	---	---	---	6.5	5.5	6.0
11	19.5	19.0	19.0	16.5	15.5	16.0	---	---	---	6.0	5.5	6.0
12	19.5	19.0	19.0	16.0	15.5	16.0	---	---	---	6.0	5.0	5.5
13	19.5	19.0	19.0	16.0	15.5	16.0	---	---	---	6.5	6.0	6.0
14	19.0	18.5	19.0	16.0	15.5	16.0	---	---	---	6.5	6.0	6.0
15	19.0	18.0	18.5	16.0	16.0	16.0	---	---	---	6.5	5.5	6.0
16	18.5	18.0	18.5	16.5	16.0	16.0	10.5	10.0	10.5	6.5	6.0	6.5
17	19.0	18.0	18.5	16.5	16.0	16.5	10.0	9.5	9.5	7.0	6.5	6.5
18	18.5	18.0	18.0	16.0	15.5	16.0	9.5	9.0	9.0	7.0	6.5	6.5
19	18.5	18.0	18.0	15.5	15.0	15.5	9.5	9.0	9.0	6.5	6.5	6.5
20	18.5	17.0	18.0	16.0	15.0	15.5	9.5	9.0	9.0	7.0	6.5	6.5
21	18.5	17.0	18.0	16.0	15.5	15.5	10.0	9.0	9.5	7.0	6.5	6.5
22	18.0	17.0	17.0	15.5	15.0	15.5	10.5	9.5	10.0	7.0	6.0	6.5
23	18.0	17.0	17.0	15.5	15.5	15.5	10.5	10.0	10.0	6.5	6.0	6.0
24	18.0	17.0	17.0	15.5	15.0	15.5	10.0	10.0	10.0	6.5	5.5	6.0
25	18.0	16.5	17.0	15.5	15.0	15.5	10.0	9.5	10.0	6.0	5.0	5.5
26	18.0	17.0	17.0	15.5	15.0	15.0	10.0	9.5	10.0	6.0	5.0	5.5
27	18.5	17.0	17.0	15.0	15.0	15.0	10.0	9.5	9.5	6.0	5.5	6.0
28	18.0	16.5	17.0	15.0	14.5	15.0	9.5	9.0	9.0	5.5	5.5	5.5
29	18.0	16.5	17.0	14.5	14.5	14.5	9.5	8.5	9.0	5.5	5.0	5.5
30	18.0	16.5	17.0	14.5	14.0	14.5	9.5	9.0	9.0	5.5	5.0	5.0
31	18.0	16.5	16.5	---	---	---	9.0	9.0	9.0	5.5	5.0	5.0
MONTH	20.5	16.5	18.5	18.0	14.0	16.0	14.5	8.5	11.0	9.5	5.0	6.5

TENNESSEE RIVER BASIN

03535915 CLINCH RIVER NEAR EATON CROSSROADS, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	5.0	4.5	5.0	6.5	6.0	6.0	9.5	9.0	9.0	14.0	12.0	13.0
2	5.5	4.5	5.0	6.0	5.5	6.0	9.0	8.5	9.0	14.0	13.5	13.5
3	5.5	4.5	5.0	6.0	5.5	5.5	10.0	9.0	9.5	13.5	13.0	13.0
4	5.5	4.5	4.5	5.5	5.5	5.5	10.0	9.5	10.0	13.5	13.0	13.0
5	4.5	4.0	4.5	6.0	5.5	5.5	10.5	9.5	10.0	14.5	13.5	14.0
6	4.5	4.0	4.5	6.5	5.5	6.0	11.0	10.0	10.5	15.0	14.5	14.5
7	5.0	4.0	4.5	8.0	6.5	7.0	11.5	10.5	11.0	14.5	14.0	14.5
8	4.5	4.5	4.5	7.0	5.5	6.0	11.0	10.5	10.5	15.0	14.0	14.5
9	5.0	4.0	4.5	6.0	5.0	5.5	10.5	10.5	10.5	15.0	14.5	14.5
10	6.5	4.0	5.0	5.5	5.5	5.5	11.0	10.5	10.5	15.0	14.5	14.5
11	5.0	3.5	4.0	5.5	5.5	5.5	11.0	10.0	10.5	16.0	15.0	15.0
12	4.5	4.0	4.0	5.5	5.0	5.0	10.5	10.0	10.5	15.5	14.5	15.0
13	4.5	4.0	4.5	5.5	5.0	5.5	10.0	9.5	9.5	15.0	14.5	15.0
14	4.5	4.0	4.0	6.0	5.5	5.5	9.5	9.0	9.0	15.5	14.5	15.0
15	5.0	4.0	4.5	6.5	6.0	6.0	9.5	9.0	9.0	16.0	15.0	15.5
16	5.0	4.0	4.5	7.0	6.0	6.5	9.5	9.0	9.0	16.5	15.0	16.0
17	4.5	4.0	4.5	8.0	6.5	7.0	10.0	9.0	9.5	18.0	16.5	17.0
18	4.5	3.5	4.0	8.0	6.5	7.0	10.5	9.5	10.0	16.5	15.0	16.0
19	4.5	3.5	4.0	8.0	6.5	6.5	11.0	10.0	10.5	16.0	14.5	15.5
20	4.5	3.5	4.0	7.0	6.5	6.5	11.0	10.0	10.5	15.0	14.5	14.5
21	5.0	4.0	4.5	8.5	6.5	7.0	11.5	11.0	11.0	14.5	14.5	14.5
22	5.0	4.5	4.5	8.5	7.0	8.0	11.5	11.0	11.5	15.0	14.5	14.5
23	5.5	4.5	5.0	8.5	7.0	8.0	13.0	11.5	12.0	15.0	14.5	14.5
24	6.0	5.0	5.5	8.0	8.0	8.0	12.0	11.5	11.5	14.5	14.0	14.5
25	6.5	5.5	6.0	8.5	8.0	8.0	12.0	11.5	12.0	14.5	14.0	14.0
26	6.0	5.0	5.5	8.5	8.0	8.5	13.0	12.0	12.0	14.5	13.5	14.0
27	6.0	5.5	5.5	8.5	8.5	8.5	13.5	12.0	13.0	14.5	14.0	14.0
28	6.0	5.5	6.0	8.5	8.5	8.5	13.5	12.0	13.0	14.5	14.0	14.0
29	---	---	---	8.5	8.5	8.5	13.0	11.5	12.0	15.0	13.5	14.0
30	---	---	---	9.5	8.5	9.0	13.5	12.0	13.0	15.0	14.5	14.5
31	---	---	---	9.0	9.0	9.0	---	---	---	15.0	15.0	15.0
MONTH	6.5	3.5	4.5	9.5	5.0	7.0	13.5	8.5	10.5	18.0	12.0	14.5
JUNE			JULY			AUGUST			SEPTEMBER			
1	16.0	15.0	16.0	16.5	15.5	16.0	17.0	16.0	16.5			
2	16.0	15.5	16.0	16.5	16.0	16.0	17.0	16.0	16.5			
3	16.0	15.5	16.5	17.0	16.5	16.5	18.0	16.5	17.0			
4	16.5	15.5	16.5	17.0	15.5	16.5	18.0	17.0	18.0			
5	17.0	16.0	16.5	18.0	15.5	16.5	18.0	17.0	17.0			
6	16.5	16.5	17.0	18.0	16.5	17.0	18.0	17.0	17.0			
7	17.0	16.5	16.5	16.5	16.0	16.5	18.0	17.0	17.0			
8	18.0	17.0	16.0	16.5	16.0	16.0	18.0	16.5	17.0			
9	18.0	17.0	16.0	16.0	15.5	16.0	17.0	16.5	16.5			
10	18.0	16.0	16.0	16.0	16.0	16.0	18.0	15.5	16.5			
11	19.0	16.0	16.0	16.0	15.5	16.0	18.0	17.0	17.0			
12	18.0	16.0	16.0	16.5	15.5	16.0	18.5	16.5	17.0			
13	17.0	16.0	16.0	16.5	15.5	16.0	18.0	16.5	17.0			
14	17.0	16.0	16.5	16.5	16.0	16.5	17.0	16.5	16.5			
15	18.0	16.0	16.5	17.0	16.0	16.5	17.0	16.5	16.5			
16	17.0	16.5	16.5	17.0	16.5	16.5	17.0	16.5	16.5			
17	17.0	16.0	16.5	17.0	16.5	16.5	17.0	16.5	16.5			
18	16.5	16.0	17.0	18.0	16.5	17.0	16.5	16.0	16.0			
19	17.0	16.0	18.0	18.5	17.0	18.0	16.5	16.0	16.0			
20	17.0	16.0	17.0	18.0	16.5	17.0	16.5	16.0	16.0			
21	16.5	15.5	16.5	17.0	16.0	16.5	16.5	16.0	16.0			
22	16.5	15.5	16.5	16.5	16.0	16.5	16.5	16.0	16.0			
23	17.0	16.0	16.5	16.5	16.0	16.5	---	---	---			
24	17.0	16.0	16.5	16.5	16.0	16.5	---	---	---			
25	18.5	16.0	16.0	16.5	16.0	16.0	---	---	---			
26	17.0	16.5	16.5	16.5	16.0	16.5	---	---	---			
27	17.0	16.0	17.0	18.0	16.5	17.0	---	---	---			
28	17.0	16.5	17.0	18.0	17.0	17.0	---	---	---			
29	17.0	16.5	16.5	17.0	16.5	16.5	---	---	---			
30	16.5	16.0	16.0	16.5	16.0	16.0	---	---	---			
31	---	---	---	16.5	16.0	16.0	---	---	---			
MONTH	19.0	15.0	16.5	18.5	15.5	16.5	18.5	15.5	16.5			

TENNESSEE RIVER BASIN

03538225 POPLAR CREEK NEAR OAK RIDGE, TN

LOCATION.--Lat 35°59'55", long 84°20'23", Roane County, Hydrologic Unit 06010207, on right bank, 1,000 ft (300 m) upstream from county road bridge, 0.4 mi (0.6 km) downstream from Indian Creek, 8.2 mi (13.2 km) southwest of intersection of State Highways 95 and 62 in Oak Ridge, and at mile 13.8 (22.2 km).

DRAINAGE AREA.--82.5 mi² (213.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 743.50 ft (226.619 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--19 years, 182 ft³/s (5.154 m³/s), 29.96 in/yr (761 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft³/s (323 m³/s) Apr. 5, 1977, gage height, 27.93 ft (8.513 m) from floodmarks, from rating curve extended above 8,000 ft³/s (227 m³/s); minimum, 5.0 ft³/s (0.14 m³/s) Oct. 27, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 29, 1928, at site about 5.0 mi (8.0 km) upstream, drainage area, 55.9 mi² (144.8 km²), discharge, about 14,000 ft³/s (396 m³/s) was the greatest known since at least 1900, from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s (51.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	1900	3500 99.1	17.85 5.441	Feb. 25	2230	2630 74.5	16.07 4.898
Dec. 9	1700	3590 102	18.02 5.492	Mar. 4	1800	2690 76.2	16.20 4.938
Jan. 2	1000	2950 83.5	16.75 5.105	May 31	2300	*5160 146	20.63 6.288
Jan. 7	2100	2930 83.0	16.71 5.093	July 22	0130	5030 142	20.42 6.224
Jan. 21	0900	2910 82.4	16.67 5.081	July 28	0630	2550 72.2	15.87 4.837

Minimum discharge, 6.3 ft³/s (0.18 m³/s) Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	11	128	935	145	295	131	69	3410	41	207	150
2	11	11	78	2490	124	235	156	64	784	34	171	115
3	8.0	10	44	742	127	213	651	76	1220	32	142	94
4	7.7	11	2340	348	126	1900	600	384	861	31	122	76
5	7.4	11	1450	262	114	1270	425	334	424	81	107	62
6	6.9	9.9	343	285	107	463	293	210	276	39	95	53
7	6.9	10	227	2000	125	327	294	150	207	80	87	49
8	7.1	10	637	1730	120	281	192	116	169	91	80	44
9	6.9	10	2730	522	118	215	412	96	139	122	74	40
10	6.9	10	1420	339	109	222	325	114	121	152	69	37
11	6.9	9.9	389	259	104	247	250	87	163	96	68	35
12	7.1	9.9	265	218	106	210	388	83	102	107	149	34
13	7.2	9.9	206	197	116	190	892	179	86	99	78	34
14	6.9	9.7	172	176	118	234	809	130	76	283	66	35
15	7.2	10	145	136	165	201	462	88	69	329	61	36
16	7.2	37	139	119	259	182	306	71	63	241	58	33
17	7.4	71	139	115	209	168	231	61	63	136	53	33
18	7.7	69	114	112	187	154	188	54	60	91	51	33
19	7.2	23	118	107	166	142	158	51	54	69	50	33
20	7.5	17	143	983	158	133	136	52	50	793	35	32
21	8.2	15	447	2530	275	133	119	89	47	2930	34	79
22	7.9	14	325	890	380	116	106	60	52	3870	41	162
23	8.6	233	235	435	373	248	99	266	66	796	96	62
24	8.6	304	202	422	614	558	92	956	73	443	54	43
25	7.9	91	187	318	1600	388	86	344	68	345	51	36
26	8.2	57	146	262	1600	263	152	222	46	506	876	33
27	9.9	104	125	247	583	213	114	193	40	770	356	121
28	9.7	115	111	246	385	188	93	234	37	2030	172	438
29	10	144	104	197	---	163	82	186	35	739	248	253
30	9.9	264	113	178	---	143	75	141	43	385	248	136
31	11	---	365	171	---	130	---	2580	---	273	250	---
TOTAL	258.0	1711.3	13637	17971	8621	9825	8317	7740	8904	16034	4249	2421
MEAN	8.32	57.0	440	580	308	317	277	250	297	517	137	80.7
MAX	17	304	2730	2530	1600	1900	892	2580	3410	3870	876	438
MIN	6.9	9.7	78	107	104	116	75	51	35	31	34	32
CFSM	1.10	6.69	5.33	7.03	3.73	3.84	3.36	3.03	3.60	6.27	1.66	0.98
IN.	0.12	0.77	6.15	8.10	3.89	4.43	3.75	3.49	4.01	7.23	1.92	1.09

CAL YR 1978	TOTAL	53624.1	MEAN 147	MAX 2840	MIN 6.9	CFSM 1.78	IN 24.18
WTR YR 1979	TOTAL	99688.3	MEAN 273	MAX 3870	MIN 6.9	CFSM 3.31	IN 44.95

TENNESSEE RIVER BASIN

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03538225 POPLAR CREEK NEAR OAK RIDGE, TN--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--May to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY 24...	1600	916	131	7.5	16.0	--	--	--	--	--
JUL 16...	1500	211	210	7.5	27.5	--	--	--	--	--
SEP 06...	1630	55	278	8.1	22.5	120	48	31	10	4.7

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
MAY 24...	--	--	--	36	24	--	--	--	84	--
JUL 16...	--	--	--	68	--	--	--	--	145	--
SEP 06...	8	.2	1.7	78	44	2.0	.1	8.2	168	145

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	.11	208	2600	70	280	160	101	250	79
JUL 16...	.20	82.6	--	--	--	--	75	43	92
SEP 06...	.23	24.9	570	30	210	190	12	1.8	--

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
SEP 06...	.48	.080	3	0	100	0	<10	20	10	20	3	20

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CYANIDE TOTAL (MG/L AS CN)
SEP 06...	25000	0	360	1100	<.5	.00	0	0	1	20	100	.00

03538250 EAST FORK POPLAR CREEK NEAR OAK RIDGE, TN

LOCATION.--Lat 35°57'58", long 84°21'30", Roane County, Hydrologic Unit 06010207, near left bank, on upstream side of county road bridge, 0.3 mi (0.5 km) north of State Highway 95, 1.7 mi (2.7 km) upstream from Bear Creek, 5.8 mi (9.3 km) southwest of intersection of State Highways 95 and 62 in Oak Ridge, and at mile 3.3 (5.3 km).

DRAINAGE AREA.--19.5 mi² (50.5 km²).

PERIOD OF RECORD.--August 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 754.16 ft (229.868 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow includes effect of operations of the Department of Energy's Y-12 Plant, which may add up to 20 ft³/s (0.57 m³/s), and the west end sewage treatment plant of the City of Oak Ridge, which may add up to 10 ft³/s (0.28 m³/s). Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--19 years, 53.2 ft³/s (1.507 m³/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,100 ft³/s (116 m³/s) Nov. 28, 1973, gage height, 16.0 ft (4.88 m) from floodmarks, backwater from low steel on bridge, on basis of runoff comparison with nearby stations; minimum daily, 14 ft³/s (0.40 m³/s) Oct. 8, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1944, the greatest known since 1900, reached a discharge of about 4,600 ft³/s (130 m³/s) at site 5.1 mi (8.2 km) upstream, from report of the Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Dec. 4	1130	751	21.3	6.58	2.006	Mar. 4	1200	959	27.2	7.55	2.301
Dec. 9	1045	893	25.3	7.25	2.210	May 31	1800	1390	39.4	9.33	2.844
Jan. 1	2330	729	20.6	6.47	1.972	June 3	0730	783	22.2	6.73	2.051
Jan. 20	2400	704	19.9	6.35	1.935	July 21	2000	*2050	58.1	11.38	3.469
Feb. 25	1615	772	21.9	6.68	2.036						

Minimum daily discharge, 14 ft³/s (0.40 m³/s) Oct. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	19	35	245	49	70	42	26	234	27	51	43
2	18	19	29	361	44	59	57	32	137	24	44	39
3	21	18	43	114	44	57	187	66	622	23	40	34
4	21	18	390	77	43	518	112	90	243	23	35	30
5	17	16	128	65	41	156	79	70	109	40	32	28
6	17	16	71	93	39	97	63	52	77	20	30	27
7	15	20	54	445	40	76	54	46	62	45	29	25
8	14	26	71	206	41	75	49	37	54	34	28	24
9	15	18	469	105	40	60	94	34	50	48	27	23
10	16	18	123	83	36	70	60	30	43	51	26	23
11	16	18	78	74	35	72	53	24	42	32	44	23
12	16	16	61	73	38	60	125	21	36	37	62	23
13	16	16	51	72	42	54	249	50	34	30	28	22
14	18	17	44	66	42	81	162	38	32	142	25	25
15	15	19	40	60	58	60	99	33	31	88	24	22
16	16	59	40	57	70	53	77	27	30	55	24	20
17	17	44	38	55	55	48	62	24	31	43	23	21
18	18	42	33	54	50	45	55	32	28	35	22	22
19	18	21	36	55	52	43	50	28	27	31	22	21
20	16	18	40	332	49	42	46	27	27	185	21	21
21	16	18	130	347	97	39	43	43	26	840	22	73
22	15	18	69	122	87	38	39	29	29	377	26	53
23	16	104	55	84	96	102	38	178	32	140	30	26
24	18	49	52	103	141	122	37	314	32	90	24	24
25	18	29	49	73	393	76	35	100	28	76	24	26
26	18	24	41	64	203	59	63	68	25	72	119	26
27	18	43	38	67	116	53	38	64	25	185	39	77
28	18	31	36	66	86	48	36	58	24	288	46	98
29	16	64	34	58	---	45	30	49	24	144	53	53
30	18	54	37	53	---	42	27	43	29	78	106	40
31	18	---	103	53	---	40	---	709	---	61	61	---
TOTAL	549	892	2518	3782	2127	2460	2161	2442	2223	3364	1187	1012
MEAN	17.7	29.7	81.2	122	76.0	79.4	72.0	78.8	74.1	109	38.3	33.7
MAX	40	104	469	445	393	518	249	709	622	840	119	98
MIN	14	16	29	53	35	38	27	21	24	20	21	20
CAL YR 1978	TOTAL	17024	MEAN 46.6	MAX 470	MIN 14							
WTR YR 1979	TOTAL	24717	MEAN 67.7	MAX 840	MIN 14							

TENNESSEE RIVER BASIN

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03539800 OBED RIVER NEAR LANCING, TN

LOCATION.--Lat 36°04'53", long 84°40'15", Morgan County, Hydrologic Unit 06010208, on left bank at Alley Ford, 2.9 mi (4.7 km) southwest of Lancing, 3.0 mi (4.8 km) downstream from Clear Creek, and at mile 1.5 (2.4 km).

DRAINAGE AREA.--518 mi² (1,342 km²).

PERIOD OF RECORD.--October 1956 to September 1968, March 1973 to current year. Prior to May 1957, monthly discharge only, published in WSP 1726.

GAGE.--Water-stage recorder. Datum of gage is 891.91 ft (271.854 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--18 years (water years 1957-68, 1974-79), 1,089 ft³/s (30.84 m³/s), 28.55 in/yr (725 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 105,000 ft³/s (2,970 m³/s) May 27, 1973, gage height, 29.51 ft (8.995 m), cross line in gage well, 30.5 ft (9.30 m), from floodmarks, from rating curve extended above 33,000 ft³/s (935 m³/s) on basis of slope conveyance study at gage height 22.40 ft (6.828 m), and slope-area measurement of peak flow; minimum, 0.4 ft³/s (0.011 m³/s) Oct. 31, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 23, 1929, reached a stage of 33.9 ft (10.33 m), 35 ft (11 m) downstream from gage, from high water marks by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge recorded, 19,400 ft³/s (549 m³/s), Jan. 1, gage height, 13.52 ft (4.121 m) but was probably higher on July 21. No other peaks recorded above base of 13,000 ft³/s (368 m³/s) but several probably occurred during period of missing record; minimum discharge, 2.8 ft³/s (0.079 m³/s) Nov. 2-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	3.2	434	8330	850	2500	950	356	1520	109	600	196
2	33	2.9	324	12000	800	2200	1200	316	1100	126	500	139
3	32	2.8	283	4880	750	1900	2500	315	1400	93	400	106
4	33	2.8	3160	2750	700	7000	5000	5170	2920	71	300	88
5	33	2.8	3890	2010	650	5000	4000	4770	1780	60	200	77
6	34	3.0	2110	1800	600	3500	3000	2770	1110	58	130	71
7	33	4.0	1290	10000	588	2500	2200	1860	756	530	100	63
8	27	5.6	1330	9000	568	1900	1700	1340	551	3580	90	54
9	21	7.3	7280	4000	504	1600	3500	1000	464	2350	80	46
10	16	8.3	4890	2500	502	1400	3700	809	397	1740	70	41
11	13	9.4	2470	1800	550	2500	2310	702	308	1100	65	37
12	11	11	1590	1400	600	2000	3020	545	249	900	75	33
13	9.8	14	1170	1200	600	1800	6860	444	194	850	70	29
14	9.2	17	886	1000	700	1800	5120	391	156	5000	60	35
15	8.6	16	695	850	900	1800	3220	323	127	9000	55	34
16	8.0	20	610	800	3000	1400	2230	265	106	3000	50	65
17	7.5	34	796	800	2300	1300	1640	218	90	1500	45	63
18	6.9	134	774	750	1800	1200	1300	185	80	1100	40	52
19	6.9	111	711	750	1500	1050	1020	160	71	850	35	44
20	6.0	87	738	5000	1300	950	802	142	63	1500	30	38
21	6.0	69	2120	15000	1600	950	635	194	54	10000	27	42
22	5.4	57	2680	7000	2600	900	538	256	48	9000	39	61
23	4.9	64	1800	4000	2300	1300	488	1060	44	4000	34	135
24	3.9	228	1360	3000	4000	2500	503	8510	46	2700	29	117
25	3.3	363	1170	23000	11000	2100	440	4420	45	2600	27	88
26	3.9	228	943	1900	9000	1900	504	2950	65	5000	60	70
27	4.3	193	754	1600	5000	1700	624	1990	74	4500	112	115
28	3.9	282	622	1300	3500	1800	541	1690	58	4700	228	5390
29	3.9	288	534	1100	---	1500	454	1310	47	2000	729	3820
30	3.9	352	524	1000	---	1200	399	919	43	1000	320	1640
31	3.4	---	2770	900	---	1000	---	1080	---	700	240	---
TOTAL	427.7	2620.1	50708	131420	58762	62150	60398	46460	13966	79717	4840	12789
MEAN	13.8	87.3	1636	4239	2099	2005	2013	1499	466	2572	156	426
MAX	34	363	7280	23000	11000	7000	6860	8510	2920	10000	729	5390
MIN	3.3	2.8	283	750	502	900	399	142	43	58	27	29
CFSM	.03	.17	3.16	8.18	4.05	3.87	3.89	2.89	.90	4.97	.30	.82
IN.	.03	.19	3.64	9.44	4.22	4.46	4.34	3.34	1.00	5.72	.35	.92

CAL YR 1978 TOTAL 305413.8 MEAN 837 MAX 15400 MIN 2.8 CFSM 1.62 IN 21.93
WTR YR 1979 TOTAL 524257.8 MEAN 1436 MAX 23000 MIN 2.8 CFSM 2.77 IN 37.65

NOTE.--No gage height record Jan. 6 to Feb. 6; Feb. 11 to Apr. 10; July 11 to Aug. 21.

TENNESSEE RIVER BASIN

03540500 EMORY RIVER AT OAKDALE, TN

LOCATION.--Lat 35°58'59", long 84°33'29", Morgan County, Hydrologic Unit 06010208, on left bank, at Oakdale, 1,000 ft (300 m) downstream from highway bridge, 1,100 ft (340 m) downstream from Mud Lick Creek, and at mile 18.3 (29.4 km).

DRAINAGE AREA.--764 mi² (1,979 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1927 to current year. Prior to October 1929, published as Emery River at Harriman and October 1929 to September 1934 as Emery River at Oakdale.

REVISED RECORDS.--WSP 823: Drainage area. WSP 923: 1940. WSP 1386: 1928-30(M), 1932, 1943, 1945(P).

GAGE.--Water-stage recorder. Datum of gage is 761.38 ft (232.069 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1929, nonrecording gage at site 5.8 mi (9.3 km) downstream at datum 43.60 ft (13.289 m) lower, and Oct. 1, 1929, to Dec. 29, 1969, water-stage recorder at present site at datum 2.00 ft (0.610 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--52 years, 1,475 ft³/s (41.77 m³/s), 26.21 in/yr (666 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 195,000 ft³/s (5,520 m³/s) Mar. 23, 1929, gage height, 41.2 ft (12.56 m), present site and datum, and 61.1 ft (18.62 m), site and datum then in use, from floodmarks and flood profile, from rating curve extended above 85,000 ft³/s (2,410 m³/s), confirmed by slope-area measurement of May 28, 1973, flood at gage height 38.68 ft (11.790 m); no flow at times in 1944, 1952-53.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1857, that of Mar. 23, 1929, from report of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 19,000 ft³/s (538 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 2	0030	30700	869	Feb. 25	1830	33000	935
Jan. 7	1630	26900	762	July 14	2230	27700	784
Jan. 21	0200	28100	796	July 21	1900	*44000	1250

Minimum discharge, 5.4 ft³/s (0.153 m³/s) Nov. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	6.7	768	12300	1310	3550	1300	720	4830	93	1030	614
2	48	6.0	618	19400	1070	2710	1500	632	2770	230	795	427
3	50	7.2	539	7020	1090	2230	6400	605	2430	184	647	331
4	52	8.4	4800	3820	1030	12200	7820	5470	4270	144	528	264
5	49	8.0	5390	2700	997	8170	5800	6970	2770	116	435	197
6	46	7.1	2900	2290	919	4480	3790	3950	1800	102	350	184
7	46	6.6	1790	15300	936	3160	2700	2650	1310	145	285	159
8	45	6.3	1820	12100	929	2500	2120	1920	1010	3340	236	135
9	40	6.1	11100	5490	841	2000	4610	1500	811	2440	197	101
10	31	6.0	7010	3440	685	1850	4750	1260	937	2000	171	88
11	24	5.7	3450	2520	701	2990	3270	1120	696	1270	157	81
12	20	5.9	2220	2030	789	2520	3940	955	563	967	211	73
13	17	7.1	1650	1750	790	2090	9910	800	442	920	177	62
14	27	10	1330	1550	904	1950	7380	780	360	8660	159	75
15	30	15	1100	1250	1420	1960	4610	677	294	11400	151	84
16	28	28	976	1070	3820	1670	3180	567	250	4030	125	93
17	24	63	1120	993	3040	1490	2390	446	213	2100	102	105
18	20	149	1140	974	2320	1330	1910	366	184	1360	91	90
19	18	214	1080	966	1900	1210	1570	324	163	932	81	90
20	16	164	1120	8400	1620	1120	1330	288	144	2390	69	85
21	16	130	2950	24200	2060	1130	1120	377	123	15800	63	100
22	13	104	3740	10700	3470	1030	990	486	109	14700	269	350
23	11	144	2530	5320	3090	1550	903	1170	107	5280	173	300
24	11	476	1920	4350	5750	4040	886	10900	127	3060	139	260
25	13	661	1660	3630	18300	3330	827	5950	167	3040	106	213
26	11	446	1380	2770	14300	2500	920	3830	137	7000	555	173
27	9.8	379	1170	2330	6590	2060	1090	2680	155	6280	1220	368
28	11	529	1010	2250	4650	2210	1000	2270	140	6450	811	7780
29	11	567	893	1910	---	1980	890	1800	106	3190	1900	5510
30	8.9	675	850	1640	---	1660	800	1300	93	1950	886	2600
31	7.4	---	3300	1480	---	1440	---	7000	---	1390	892	---
TOTAL	800.1	4841.1	73324	165943	85321	84110	89706	69763	27511	110963	13011	20992
MEAN	25.8	161	2365	5353	3047	2713	2990	2250	917	3579	420	700
MAX	52	675	11100	24200	18300	12200	9910	10900	4830	15800	1900	7780
MIN	7.4	5.7	539	966	685	1030	800	288	93	93	63	62
CFSM	.03	.21	3.10	7.01	3.99	3.55	3.91	2.95	1.20	4.69	.55	.92
IN.	.04	.24	3.57	8.08	4.15	4.10	4.37	3.40	1.34	5.40	.63	1.02

CAL YR 1978	TOTAL	445160.2	MEAN	1220	MAX	22800	MIN	5.7	CFSM	1.60	IN	21.68
WTR YR 1979	TOTAL	746285.2	MEAN	2045	MAX	24200	MIN	5.7	CFSM	2.68	IN	36.34

TENNESSEE RIVER BASIN

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03540500 EMORY RIVER AT OAKDALE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-67, 1974 to current year.

REMARKS.--Miscellaneous samples prior to 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CF5)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
JAN										
09...	1245	3320	50	6.3	3.0	--	--	--	--	--
MAR										
28...	0915	2290	47	6.5	8.0	17	--	--	--	--
MAY										
16...	0930	521	64	6.7	18.0	24	--	--	--	--
25...	1145	6250	45	6.4	14.0	--	--	--	--	--
JUN										
27...	1145	157	140	7.4	24.0	--	--	--	--	--
JUL										
18...	1200	1330	49	6.9	23.0	20	--	--	--	--
30...	1330	1970	58	7.6	26.5	--	--	--	--	--
SEP										
06...	1300	173	125	8.3	26.0	43	22	11	3.7	2.8
12...	1100	90	140	6.5	23.5	51	--	--	--	--

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
JAN										
09...	--	--	--	6	13	2.0	--	--	20	--
MAR										
28...	--	--	--	10	12	3.0	--	--	30	--
MAY										
16...	--	--	--	10	14	2.0	--	--	40	--
25...	--	--	--	8	7.7	--	--	--	--	--
JUN										
27...	--	--	--	18	43	--	--	--	--	--
JUL										
18...	--	--	--	9	18	2.0	--	--	40	--
30...	--	--	--	10	14	--	--	--	42	--
SEP										
06...	12	.2	1.5	18	29	2.1	.0	4.2	79	67
12...	--	--	--	20	40	4.0	--	--	80	--

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
JAN									
09...	.03	179	250	50	60	60	--	--	--
MAR									
28...	.04	185	--	<50	--	50	--	--	--
MAY									
16...	.05	56.3	--	70	--	60	--	--	--
25...	--	--	860	50	70	40	18	304	68
JUN									
27...	--	--	340	40	120	90	4	1.7	85
JUL									
18...	.05	144	--	<50	--	40	--	--	--
30...	.06	223	500	110	80	70	13	69	--
SEP									
06...	.11	36.9	410	50	150	130	9	4.2	--
12...	.11	19.4	--	100	--	70	--	--	--

TENNESSEE RIVER BASIN

03540500 EMORY RIVER AT OAKDALE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
JAN 09...	.30	.010	--	--	<1	--	<10
MAR 28...	.21	<.010	--	--	<1	--	40
MAY 16...	.24	<.010	--	--	<1	--	20
JUL 18...	.22	.010	--	--	<1	--	10
SEP 06...	.31	.000	4	0	2	<10	5
12...	.13	<.010	--	--	<1	--	<10

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
JAN 09...	<10	<.2	--	--	<10	--
MAR 28...	<10	<.2	--	--	70	--
MAY 16...	<10	<.2	--	--	20	--
JUL 18...	<10	<.2	--	--	<10	--
SEP 06...	2	<.5	0	1	10	.00
12...	<10	<.2	--	--	20	--

TENNESSEE RIVER BASIN

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03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN
(National stream-quality accounting network station)

LOCATION.--Lat 35°37'13", long 84°47'00", Rhea County, Hydrologic Unit 06020001, on right bank in powerhouse at Watts Bar Dam, 6.5 mi (10.4 km) southeast of Spring City, and at mile 529.9 (852.6 km).

DRAINAGE AREA.--17,310 mi² (44,830 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1934 to February 1940 (published as "at Breedenton"), October 1974 to current year. Equivalent record for period January 1942 to December 1974 published in annual reports of Tennessee Valley Authority entitled "Operation of TVA Reservoirs".

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to March 1940 at site 6.7 mi (10.8 km) downstream at datum 666.22 ft (203.064 m) higher.

REMARKS.--Flow regulated since 1936 by many reservoirs above station (see p.308) and Water Resources Data for North Carolina, 1979).

COOPERATION.--Records furnished by Tennessee Valley Authority.

AVERAGE DISCHARGE.--10 years (water years 1935-39, 1975-79), 29,720 ft³/s (841.7 m³/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 202,000 ft³/s (5,720 m³/s) Mar. 28, 1936; minimum daily, 4,200 ft³/s (119 m³/s) Jan. 29, 30, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 111,000 ft³/s (3,140 m³/s) Mar. 9; minimum daily, 7,560 ft³/s (214 m³/s) Nov. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10300	14300	21900	27700	55500	80000	26900	22900	51100	34000	43500	44500
2	16100	11600	16500	47000	46800	81900	28500	22200	46800	24200	37300	44500
3	18200	9760	10600	47100	46600	92300	31900	25200	31000	26900	37300	35900
4	14400	8050	24500	47100	38900	95400	31300	28000	34100	16900	37300	32000
5	14800	7560	24300	56700	42800	93500	24900	36700	39700	16900	36400	29900
6	14100	10700	28800	46400	37900	101000	33000	25200	35100	24400	39400	32400
7	14000	11600	18600	46000	34900	103000	26000	22300	31800	31500	33900	31500
8	14600	10800	22300	56700	37900	108000	22900	26900	29600	32300	34200	32400
9	17700	12700	27900	68800	37000	111000	25600	26800	30300	29800	34000	31700
10	17300	13000	37100	68500	40200	101000	23600	26200	26000	20600	34800	35100
11	15600	12500	37400	63500	30400	94100	30300	27000	26900	26800	41800	33400
12	13800	8650	39400	55500	28700	87400	36800	26200	23600	29500	43300	35900
13	12300	13600	35700	48400	28800	78000	33100	21900	23700	35400	37500	36400
14	11900	10500	32700	46600	28000	73400	27900	23400	24000	37400	30700	27500
15	10600	9920	35300	43000	28500	71200	37400	25300	23400	40600	30300	25700
16	15800	9590	29500	46100	26200	60200	37600	26100	33900	46200	33700	24900
17	15300	12300	20800	42800	25300	48400	37600	26700	30600	37000	31300	31200
18	20000	11900	26600	38500	29200	47500	37700	25300	28400	31000	42800	33600
19	22300	11500	27300	38300	28200	36700	33600	22600	22900	31800	41600	32300
20	14200	18000	29000	40900	29600	34500	27400	22800	24700	31000	30300	28500
21	11900	19400	33000	76000	28300	32900	27400	24600	22700	50700	32500	31100
22	11500	22200	31100	76600	31700	36600	18200	30200	25300	75100	28800	36700
23	10800	12800	29600	76400	34400	38200	22900	26600	34200	68200	31600	37500
24	13300	11800	27700	75800	42900	35100	22100	37700	28300	59200	35600	34000
25	10500	14900	28200	71800	50300	48200	21300	27600	26700	54300	42000	32000
26	9660	12400	26200	68200	63800	39300	21800	26400	22900	57300	43300	32400
27	10200	19200	28100	68200	75000	33400	22700	28400	21800	55400	32300	32600
28	12000	22300	26700	67900	80600	30300	21300	19900	23900	53800	29800	37900
29	8800	19100	30700	65700	---	33500	19400	27800	23300	52500	29500	37600
30	13700	21900	34500	63500	---	27400	20000	30100	32900	46000	33100	33600
31	14600	---	33700	63500	---	28300	---	38200	---	45800	29200	---
TOTAL	430260	404530	875700	1749200	1108400	1981700	831100	827200	879600	1222500	1099100	1004700
MEAN	13880	13480	28250	56430	39590	63930	27700	26680	29320	39440	35450	33490
MAX	22300	22300	39400	76600	80600	111000	37700	38200	51100	75100	43500	44500
MIN	8800	7560	10600	27700	25300	27400	18200	19900	21800	16900	28800	24900
CAL YR 1978 TOTAL	9397770			MEAN 25750	MAX 79500	MIN 6040						
WTR YR 1979 TOTAL	12413990			MEAN 34010	MAX 111000	MIN 7560						

TENNESSEE RIVER BASIN

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1976 to current year.

WATER TEMPERATURE: February 1976 to current year.

INSTRUMENTATION: Water-quality monitor since February 1976.

REMARKS.--Flow regulated by many reservoirs above station (see p. 308 and Water Resources Data for North Carolina, 1979.).

EXTREMES FOR PERIOD OF DAILY RECORD.

SPECIFIC CONDUCTANCE: Maximum, 270 micromhos July 27, 1978; minimum, 88 micromhos June 14, 1979.

WATER TEMPERATURE: Maximum, 28.5°C July 26, Aug. 31 and several days in September 1977; minimum, 2.0°C Jan. 23, 29, 1977, Feb. 7-10, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 252 micromhos October 11; Minimum, 88 micromhos June 14.

WATER TEMPERATURE: Maximum, 26.0°C September 5; minimum 3.5°C February 14.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT												
10...	1330	23300	190	6.3	23.0	3.0	8.0	K3	K8	80	16	22
NOV												
07...	1330	10000	185	6.6	19.0	5.0	5.8	<1	36	78	15	22
DEC												
06...	1210	32000	180	8.0	15.0	4.0	6.2	K5	21	71	14	20
JAN												
29...	1130	68300	160	6.0	5.0	17	12.6	120	140	69	19	20
FEB												
27...	1200	69300	155	7.1	6.0	7.0	12.0	28	76	71	15	20
MAR												
29...	1035	34500	145	7.2	10.0	9.0	8.8	94	--	62	17	18
APR												
30...	1345	26900	120	6.4	16.5	4.0	9.1	K4	K4	56	12	16
MAY												
30...	1430	35000	130	7.2	20.0	1.0	6.7	350	K19	56	7	16
JUL												
12...	1245	28000	160	7.7	23.0	5.0	--	65	24	69	5	20
AUG												
30...	1130	41500	165	7.7	25.5	4.0	--	41	<1	73	9	21
SEP												
26...	1230	34500	180	7.7	22.5	4.0	--	K19	K10	73	14	21

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)
OCT												
10...	6.2	7.5	17	.4	1.4	64	17	8.9	.1	5.2	111	107
NOV												
07...	5.5	8.1	18	.4	1.5	63	16	9.1	.1	3.9	114	104
DEC												
06...	5.2	8.1	19	.4	1.7	57	17	8.8	.1	4.6	108	100
JAN												
29...	4.7	5.8	15	.3	1.4	50	16	6.9	.1	5.1	95	90
FEB												
27...	5.1	4.2	11	.2	1.1	56	13	4.8	.1	5.0	90	87
MAR												
29...	4.2	3.8	11	.2	1.2	45	12	4.6	.0	6.0	81	77
APR												
30...	3.8	2.8	10	.2	1.1	44	8.5	3.1	.1	5.1	70	67
MAY												
30...	3.8	3.8	13	.2	1.1	49	11	4.3	.1	4.6	78	74
JUL												
12...	4.6	4.4	12	.2	1.2	64	11	4.9	.1	5.0	102	90
AUG												
30...	4.9	5.9	15	.3	1.3	64	13	6.3	.1	5.4	103	96
SEP												
26...	5.1	7.7	18	.4	1.4	59	13	6.8	.1	5.4	94	98

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+N03 TOTAL (MG/L AS N)	NITRO- GEN, NO2+N03 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 10...	.15	6980	.24	--	.04	.15	.19	--	.43	.020	.010	--
NOV 07...	.16	3080	.21	--	.01	1.9	1.9	.14	2.1	.010	.000	3.6
DEC 06...	.15	9330	.24	--	.06	.12	.18	.18	.42	.020	.030	3.3
JAN 29...	.13	17500	.53	--	.04	.20	.24	.08	.77	.050	.020	--
FEB 27...	.12	16800	.55	--	.03	.07	.10	.10	.65	.030	.010	1.8
MAR 29...	.11	7550	.55	--	.03	.14	.17	.17	.72	.030	.020	5.3
APR 30...	.10	5080	.32	--	.03	.09	.12	.07	.44	.020	.020	--
MAY 30...	.11	7370	.29	--	.04	.17	.21	.14	.50	.020	.010	6.5
JUL 12...	.14	7710	.33	--	.09	.09	.18	.17	.51	.020	.000	--
AUG 30...	.14	11500	.36	--	.05	.16	.21	.11	.57	.030	.000	7.4
SEP 26...	.13	8760	.53	.52	.06	.26	.32	.05	.85	.030	.010	3.2

DATE	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 10...	--	--	--	--	--	--	--	--	8	503	92
NOV 07...	--	--	2400	--	--	--	--	--	6	162	89
DEC 06...	--	--	--	--	--	--	--	--	6	518	98
JAN 29...	3.3	.3	--	--	--	--	--	--	14	2580	97
FEB 27...	--	--	--	--	--	--	--	--	10	1870	85
MAR 29...	--	--	970	--	--	--	--	--	9	838	95
APR 30...	2.1	.5	--	--	--	--	--	--	4	291	92
MAY 30...	--	--	3000	--	--	--	--	--	11	1040	33
JUL 12...	1.8	--	2500	--	--	--	--	--	15	1130	79
AUG 30...	--	--	22000	--	--	--	--	--	5	560	96
SEP 26...	--	--	1400	8.04	1.34	1.57	28.6	.000	12	1120	77

TENNESSEE RIVER BASIN

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03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
OCT 10...	0	0	0	0	0	0	10	0	2
JAN 29...	1	1	0	0	0	0	10	1	2
APR 30...	3	3	0	0	0	0	20	10	1
JUL 12...	2	1	100	30	2	1	30	20	0

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 10...	0	1	1	240	10	8	5	50	10
JAN 29...	2	0	0	410	0	4	1	50	20
APR 30...	1	3	1	300	10	7	5	20	3
JUL 12...	0	4	3	320	10	5	2	80	10

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 10...	<.5	<.5	0	0	0	2	20	0
JAN 29...	<.5	<.5	0	0	0	0	70	0
APR 30...	.5	.5	0	0	0	0	50	0
JUL 12...	<.5	<.5	0	0	0	0	60	30

TENNESSEE RIVER BASIN

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03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 7,78 1330		MAR 29,79 1035		MAY 30,79 1430		JUL 12,79 1245		AUG 30,79 1130		SEP 26,79 1230	
TOTAL CELLS/ML	2400		970		3000		2500		22000		1400	
DIVERSITY: DIVISION	0.8		1.0		0.9		1.4		0.6		1.4	
..CLASS	0.8		1.0		0.9		1.4		0.6		1.4	
..ORDER	0.9		1.3		1.3		1.6		1.3		1.8	
...FAMILY	1.3		1.4		1.3		1.8		1.9		2.1	
....GENUS	1.5		2.1		1.5		2.0		2.2		2.3	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
....CHARACIACEAE												
....SCHROEDERIA	--	-	--	-	--	-	--	-	* 0		--	-
....CHLOROCOCCACEAE												
....CHLOROCOCCUM	--	-	--	-	--	-	--	-	* 0		--	-
...COELASTRACEAE												
....COELASTRUM	120	5	--	-	--	-	860#	35	--	-	--	-
...HYDRODICTYACEAE												
....PEDIASTRUM	240	10	--	-	--	-	--	-	--	-	100	7
...MICRACTINIACEAE												
....MICRACTINIUM	--	-	--	-	--	-	--	-	210	1	--	-
...OOCYSTACEAE												
....ANKISTROUESMUS	58	2	5	1	26	1	--	-	* 0		13	1
....CHLORELLA	--	-	--	-	--	-	--	-	* 0		--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	* 0		52	4
....OOCYSTIS	--	-	20	2	--	-	38	2	* 0		--	-
....SELENASTRUM	--	-	--	-	--	-	--	-	--	-	--	-
....TETRAEDRON	--	-	5	1	--	-	--	-	* 0		26	2
...SCENEDESMACEAE												
....CRUCIGENIA	58	2	--	-	--	-	--	-	--	-	--	-
....SCENEDESMUS	86	4	5	1	--	-	77	3	260	1	26	2
....TETRASTRUM	--	-	20	2	51	2	--	-	* 0		--	-
...TETRASPORALES												
...COCCOMYXACEAE												
....ELAKATOTHRIX	29	1	--	-	--	-	--	-	--	-	--	-
...PALMELLACEAE												
....GLOEOCYSTIS	--	-	--	-	--	-	--	-	* 0		--	-
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	--	-	150#	16	--	-	13	1	* 0		90	6
...ZYGNEATALES												
...DESMIDIACEAE												
....STAUSTRUM	--	-	5	1	--	-	--	-	--	-	--	-
CHRYSOPHYTA												
..BACILLARIOPHYCEAE												
...CENTRALES												
...COSCINODISCACEAE												
....CYCLOTELLA	43	2	200#	21	51	2	77	3	360	2	140	10
....MELOSIRA	1800#	74	500#	52	490#	16	150	6	130	1	130	9
....STEPHANODISCUS	--	-	--	-	51	2	64	3	--	-	--	-
...PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	-	--	-	--	-	--	-	* 0		--	-
...CYMBELLACEAE												
....CYMBELLA	--	-	5	1	--	-	--	-	--	-	--	-
...FRAGILARIACEAE												
....ASTERIONELLA	--	-	15	2	--	-	--	-	--	-	--	-
....FRAGILARIA	--	-	--	-	* 0		--	-	--	-	--	-
....SYNEDRA	--	-	--	-	* 0		38	2	540	2	13	1
...NITZSCHIIACEAE												
....NITZSCHIA	--	-	--	-	--	-	--	-	--	-	13	1

TENNESSEE RIVER BASIN

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 7,78 1330		MAR 29,79		MAY 30,79		JUL 12,79 1245		AUG 30,79		SEP 26,79	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROOCOCCALES												
...CHROOCOCCACEAE												
....ANACYSTIS	--	-	30	3	240	8	13	1	3700#	17	26	2
...HORMOGONALES												
...OSCILLATORIAEAE												
....OSCILLATORIA	--	-	--	-	2100#	69	1200#	46	1300	6	770#	55
....SCHIZOTHRIX	--	-	--	-	--	-	--	-	12000#	54	--	-
...RIVULARIAEAE												
...RAPHIDIOPSIS	--	-	--	-	--	-	--	-	3100	14	--	-
EUGLENOPHYTA (EUGLENIDS)												
..EUGLENOPHYCEAE												
...EUGLENALES												
...EUGLENACEAE												
....TRACHELOMONAS	--	-	5	1	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)												
..DINOPHYCEAE												
...PERIDINIALES												
...PERIDINIAEAE												
....PERIDINIUM	--	-	--	-	--	-	--	-	*	0	--	-

NOTE: * - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%.
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	208	194	200	190	178	184	191	182	186	192	183	186
2	208	193	198	189	177	183	190	180	184	188	182	186
3	206	191	197	191	180	187	191	186	188	190	183	188
4	208	191	200	193	180	187	191	177	183	188	186	187
5	206	190	199	195	178	187	183	179	180	188	183	186
6	204	190	196	190	175	182	184	181	183	183	165	175
7	201	188	193	186	179	183	188	182	185	164	155	158
8	199	188	194	185	174	180	191	179	185	156	153	155
9	197	189	192	184	174	179	192	182	186	156	153	154
10	204	178	185	185	176	180	192	187	190	157	155	156
11	252	176	200	187	175	181	193	191	192	157	150	152
12	245	167	196	189	172	182	194	189	191	150	148	149
13	236	175	200	190	175	182	190	185	188	153	149	152
14	245	175	201	186	175	183	188	183	185	155	153	154
15	220	180	198	190	177	186	186	177	181	158	153	155
16	214	179	191	188	178	184	184	171	175	159	155	157
17	205	182	193	186	173	180	179	169	173	165	159	163
18	215	186	195	189	176	184	178	168	172	168	162	165
19	210	184	192	185	177	182	175	168	170	168	165	166
20	204	184	194	186	177	182	174	167	169	168	161	165
21	217	183	194	185	175	179	177	169	172	170	161	167
22	204	179	190	187	178	182	183	175	179	171	169	170
23	208	182	195	188	177	181	191	181	185	171	161	167
24	218	183	196	189	178	184	197	186	189	161	151	156
25	222	184	200	186	180	182	198	187	191	151	145	148
26	229	186	200	191	178	187	204	188	193	149	145	147
27	203	183	192	189	178	183	191	186	188	158	148	152
28	196	181	189	190	180	184	187	183	185	161	158	160
29	199	180	190	192	183	186	186	180	183	162	157	159
30	197	181	187	190	182	186	182	180	181	157	153	155
31	189	180	184	---	---	---	189	181	183	161	154	156
MONTH	252	167	195	195	172	183	204	167	183	192	145	163

TENNESSEE RIVER BASIN

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03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	168	161	164	145	141	143	154	141	147	121	119	120
2	171	164	168	148	143	145	145	140	142	119	117	118
3	175	170	172	154	148	151	149	137	142	117	115	116
4	177	174	175	155	150	152	144	137	140	115	113	114
5	179	174	176	152	150	150	144	139	141	113	112	113
6	180	174	177	154	149	152	141	136	138	111	110	110
7	184	175	178	153	149	151	145	138	141	110	107	109
8	178	174	176	153	150	152	146	139	141	108	106	107
9	178	175	177	153	150	151	145	137	140	105	103	104
10	180	176	178	150	140	146	144	137	140	103	101	102
11	182	177	179	140	137	138	143	134	138	119	100	109
12	188	174	178	142	138	140	133	131	132	126	117	121
13	182	172	175	147	142	145	131	129	130	127	123	125
14	182	169	173	148	146	147	135	130	132	126	123	124
15	179	165	170	148	146	147	131	129	130	134	124	130
16	179	168	171	150	147	149	131	130	131	135	130	132
17	172	168	171	148	145	147	133	131	132	137	133	134
18	172	167	170	148	147	147	135	129	134	144	136	141
19	175	170	172	154	145	150	135	129	132	146	141	144
20	174	170	172	152	146	149	137	130	134	145	141	142
21	178	171	174	154	146	149	134	129	131	140	133	137
22	176	170	173	155	145	148	132	129	131	142	138	139
23	183	165	172	149	146	147	131	127	129	139	136	138
24	166	162	164	160	146	150	130	126	129	141	135	138
25	162	158	160	147	146	146	128	126	127	140	138	140
26	158	154	156	149	145	147	130	124	127	136	126	132
27	158	155	157	153	147	149	124	120	123	124	117	120
28	157	146	153	154	145	148	123	119	121	121	114	117
29	---	---	---	154	145	148	121	118	119	130	119	123
30	---	---	---	155	145	148	146	119	120	137	128	132
31	---	---	---	154	144	147	---	---	---	150	138	142
MONTH	188	146	171	160	137	148	154	118	133	150	100	125
JUNE			JULY			AUGUST			SEPTEMBER			
1	168	153	159	135	128	131	139	138	139	157	155	156
2	177	167	171	139	132	135	138	137	138	158	156	157
3	186	179	182	144	134	138	139	137	137	161	158	159
4	194	185	188	148	139	143	139	136	137	161	159	160
5	202	196	198	154	137	146	138	136	137	162	160	161
6	203	200	202	150	140	144	138	136	137	163	161	162
7	202	197	200	150	144	146	138	135	137	164	163	163
8	200	197	198	152	146	148	140	137	138	164	162	163
9	198	194	196	155	150	152	142	139	140	164	163	163
10	197	191	194	160	153	156	144	140	143	164	164	164
11	198	113	142	162	155	158	146	143	144	165	164	164
12	122	110	118	163	157	160	145	141	143	166	165	166
13	112	91	102	166	158	161	147	144	145	168	166	166
14	100	88	94	161	157	159	151	147	149	169	167	168
15	103	90	96	160	158	159	153	149	150	171	167	169
16	98	90	93	161	158	159	154	151	153	171	168	169
17	101	91	95	162	159	160	157	153	155	171	167	169
18	102	94	97	162	157	160	156	154	155	168	167	168
19	109	96	102	161	157	159	158	154	155	168	166	167
20	108	99	103	160	156	158	158	154	156	168	167	167
21	111	102	106	157	152	154	158	154	156	167	164	166
22	113	103	108	155	150	151	156	153	155	166	164	165
23	110	102	106	152	149	150	156	153	154	167	166	167
24	113	105	109	155	152	152	157	153	154	168	166	167
25	119	107	111	151	144	148	154	150	152	169	167	168
26	121	111	115	144	140	148	153	150	151	170	168	169
27	124	115	118	140	136	138	162	151	154	169	168	168
28	127	117	121	137	134	135	160	154	157	168	167	167
29	131	122	125	135	134	135	164	149	156	168	167	167
30	131	125	127	136	133	135	166	163	165	167	166	167
31	---	---	---	139	136	137	157	154	155	---	---	---
MONTH	203	88	136	166	128	149	166	135	148	171	155	165

TENNESSEE RIVER BASIN

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	25.5	25.0	25.5	19.5	19.0	19.5	15.5	15.0	15.5	9.0	9.0	9.0
2	25.5	25.0	25.0	19.5	19.0	19.0	15.5	15.5	15.5	9.0	8.5	9.0
3	25.0	25.0	25.0	19.5	19.0	19.0	15.5	15.5	15.5	8.5	8.5	8.5
4	25.0	24.5	25.0	19.0	19.0	19.0	15.5	15.0	15.5	8.0	8.0	8.0
5	24.5	24.5	24.5	19.0	19.0	19.0	15.0	15.0	15.0	8.0	8.0	8.0
6	24.5	24.0	24.5	19.0	19.0	19.0	15.0	14.5	15.0	8.0	8.0	8.0
7	24.0	24.0	24.0	19.0	18.0	19.0	15.0	14.5	14.5	8.0	8.0	8.0
8	23.5	23.5	23.5	19.0	18.5	18.5	14.5	14.5	14.5	8.0	7.5	7.5
9	23.5	23.0	23.0	19.0	18.0	18.5	14.5	14.5	14.5	7.5	7.0	7.0
10	23.0	22.5	23.0	18.5	18.0	18.0	14.5	14.0	14.0	6.5	6.5	6.5
11	22.5	22.5	22.5	18.5	17.5	18.0	14.0	13.5	13.5	6.5	6.0	6.5
12	22.5	22.5	22.5	18.5	17.5	18.0	13.5	13.0	13.0	6.5	6.0	6.5
13	22.5	22.0	22.5	18.0	18.0	18.0	13.0	12.5	13.0	6.5	6.0	6.5
14	22.5	22.0	22.0	18.0	17.5	18.0	12.5	12.5	12.5	6.5	6.0	6.5
15	22.0	22.0	22.0	18.5	17.5	18.0	12.5	12.0	12.0	6.0	6.0	6.0
16	21.5	21.5	21.5	18.0	18.0	18.0	12.0	11.5	11.5	6.0	5.5	5.5
17	21.0	20.5	21.0	18.5	17.5	18.0	11.5	11.5	11.5	5.5	5.5	5.5
18	20.5	20.5	20.5	18.0	17.5	18.0	11.0	11.0	11.0	6.0	5.5	6.0
19	20.5	20.0	20.5	18.0	17.5	17.5	11.0	11.0	11.0	6.0	6.0	6.0
20	20.0	20.0	20.0	18.0	17.0	17.5	11.0	10.5	11.0	5.5	5.5	5.5
21	20.0	20.0	20.0	17.5	17.0	17.5	11.0	10.5	11.0	6.0	5.5	5.5
22	20.0	19.5	20.0	17.5	17.5	17.5	11.0	10.5	10.5	6.0	5.5	6.0
23	20.0	19.5	20.0	17.5	17.0	17.0	10.5	10.0	10.5	6.0	5.5	6.0
24	20.0	20.0	20.0	17.0	17.0	17.0	10.5	10.0	10.5	6.0	5.5	6.0
25	20.0	19.5	20.0	17.0	16.5	17.0	10.5	10.0	10.0	5.5	5.5	5.5
26	19.5	19.5	19.5	16.5	16.5	16.5	10.0	9.5	10.0	5.5	5.0	5.5
27	20.0	19.5	19.5	16.5	16.5	16.5	10.0	9.5	9.5	5.5	5.5	5.5
28	20.0	19.5	19.5	16.5	16.0	16.0	9.5	9.5	9.5	5.5	5.0	5.5
29	19.5	19.0	19.5	16.0	16.0	16.0	9.5	9.0	9.5	5.0	5.0	5.0
30	19.5	19.0	19.5	16.0	15.5	16.0	9.0	9.0	9.0	5.0	5.0	5.0
31	19.5	19.0	19.5	---	---	---	9.0	9.0	9.0	5.0	5.0	5.0
MONTH	25.5	19.0	22.0	19.5	15.5	18.0	15.5	9.0	12.0	9.0	5.0	6.5
	FEBRUARY			MARCH			APRIL			MAY		
1	5.0	4.5	5.0	7.0	7.0	7.0	11.0	10.5	11.0	18.0	16.0	17.0
2	4.5	4.5	4.5	7.5	7.0	7.0	11.5	10.5	11.0	17.5	16.5	17.0
3	4.5	4.5	4.5	7.5	7.0	7.5	11.5	11.0	11.5	17.5	16.5	17.0
4	4.5	4.5	4.5	8.0	7.5	7.5	12.0	11.5	11.5	18.0	16.5	17.0
5	4.5	4.5	4.5	8.5	8.0	8.0	12.5	12.0	12.0	18.5	17.5	18.0
6	4.5	4.0	4.5	8.5	8.0	8.0	12.5	12.0	12.5	18.5	17.5	18.5
7	4.0	4.0	4.0	8.5	8.0	8.5	12.5	12.5	12.5	18.5	17.5	18.0
8	4.5	4.0	4.0	8.5	8.5	8.5	13.0	12.5	12.5	19.0	17.5	18.5
9	4.0	4.0	4.0	9.0	8.5	8.5	13.0	13.0	13.0	19.0	18.0	18.5
10	4.0	4.0	4.0	9.0	9.0	9.0	13.0	13.0	13.0	19.5	18.5	19.0
11	4.0	4.0	4.0	9.0	8.5	9.0	13.5	13.0	13.0	19.5	18.5	19.0
12	4.0	4.0	4.0	8.5	8.5	8.5	13.5	13.5	13.5	19.5	18.5	19.0
13	4.0	4.0	4.0	8.5	8.0	8.0	14.0	13.5	13.5	20.0	19.0	19.5
14	4.0	3.5	4.0	8.5	8.0	8.0	14.0	13.5	13.5	19.5	19.0	19.5
15	4.5	4.0	4.5	8.5	8.0	8.0	14.0	13.5	14.0	20.0	19.0	19.5
16	4.5	4.5	4.5	8.5	8.0	8.0	14.0	14.0	14.0	20.5	19.0	20.0
17	4.5	4.5	4.5	8.5	8.0	8.5	14.5	14.0	14.0	20.5	19.5	20.0
18	4.5	4.0	4.5	8.5	8.5	8.5	14.5	14.0	14.0	20.5	19.5	20.0
19	4.5	4.0	4.0	9.5	8.5	8.5	15.0	14.0	14.5	20.5	19.5	20.0
20	4.5	4.0	4.5	9.5	8.5	9.0	15.0	14.5	15.0	21.0	19.5	20.5
21	4.5	4.5	4.5	9.5	9.0	9.0	15.5	14.5	15.0	22.0	20.0	21.0
22	5.0	4.5	5.0	9.5	9.5	9.5	15.5	15.0	15.0	21.5	20.0	21.0
23	5.0	5.0	5.0	10.5	9.5	9.5	16.0	15.0	15.5	21.0	20.0	20.5
24	5.5	5.0	5.5	10.5	10.0	10.0	16.0	15.0	15.5	22.0	20.5	21.0
25	5.5	5.5	5.5	10.0	10.0	10.0	16.0	15.0	15.5	21.5	20.5	21.0
26	5.5	5.5	5.5	10.0	10.0	10.0	16.5	15.5	16.0	20.5	20.5	20.5
27	6.0	5.5	6.0	10.0	10.0	10.0	17.0	16.5	16.5	20.5	20.5	20.5
28	7.0	6.0	6.5	10.0	10.0	10.0	17.0	16.0	16.5	20.5	20.0	20.5
29	---	---	---	10.5	10.0	10.0	16.5	16.0	16.5	20.5	20.0	20.5
30	---	---	---	10.5	10.0	10.5	16.5	16.0	16.5	21.0	20.5	20.5
31	---	---	---	11.0	10.5	10.5	---	---	---	20.5	20.5	20.5
MONTH	7.0	3.5	4.5	11.0	7.0	9.0	17.0	10.5	14.0	22.0	16.0	19.5

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	21.0	20.5	20.5	24.0	23.0	23.5	23.5	22.5	23.0	25.0	24.5	24.5
2	21.5	20.5	21.0	24.0	23.0	23.5	23.5	23.0	23.0	25.0	24.5	24.5
3	20.5	20.0	20.5	24.0	23.0	23.5	23.5	23.0	23.5	25.5	24.5	25.0
4	21.5	20.0	20.5	24.0	23.0	23.5	23.5	23.0	23.5	25.5	24.5	25.0
5	21.0	20.5	20.5	24.5	23.0	23.5	24.0	23.5	23.5	26.0	25.0	25.5
6	21.0	20.0	20.5	24.0	23.5	23.5	24.0	23.5	23.5	25.5	24.5	25.0
7	21.0	20.0	20.5	23.5	23.0	23.5	24.0	23.0	23.5	25.5	24.5	25.5
8	20.5	20.0	20.5	23.5	23.0	23.5	24.5	23.0	24.0	25.5	25.5	25.5
9	21.0	20.0	20.5	23.5	23.0	23.0	24.5	23.0	24.0	25.5	25.0	25.5
10	22.0	20.0	20.5	23.0	23.0	23.0	24.0	23.0	23.5	25.5	25.0	25.0
11	23.5	21.5	22.5	23.0	23.0	23.0	24.5	23.5	24.0	25.5	25.0	25.0
12	22.5	21.5	22.0	23.0	---	---	25.5	24.0	25.5	25.5	25.0	25.0
13	22.5	21.0	22.0	23.0	22.5	23.0	25.0	24.0	24.5	25.0	24.5	25.0
14	22.5	21.5	22.0	23.0	22.5	23.0	25.0	23.5	24.5	24.5	24.5	24.5
15	23.0	20.5	22.0	23.5	23.0	23.0	25.0	24.0	24.5	24.5	24.0	24.5
16	23.0	21.5	22.0	23.5	23.0	23.5	24.5	24.0	24.5	24.5	24.0	24.0
17	23.0	21.5	22.0	23.5	22.5	23.0	24.5	24.0	24.0	24.0	24.0	24.0
18	23.0	21.5	22.5	24.0	22.0	23.0	24.5	24.0	24.5	24.0	24.0	24.0
19	23.5	22.0	22.5	23.5	22.5	23.0	24.5	24.0	24.5	24.0	24.0	24.0
20	23.0	22.0	22.0	23.5	22.5	23.0	24.5	24.0	24.0	24.0	23.5	24.0
21	22.5	22.0	22.0	23.5	23.0	23.0	25.0	24.0	24.0	23.5	23.5	23.5
22	23.5	22.0	22.5	23.5	22.5	23.0	24.5	24.0	24.0	23.5	23.5	23.5
23	23.5	22.5	23.5	23.5	23.0	23.5	24.5	23.5	24.0	23.5	23.0	23.0
24	24.0	22.5	23.0	23.5	23.0	23.0	24.5	24.0	24.0	23.0	23.0	23.0
25	24.0	23.0	23.5	23.5	23.0	23.0	24.5	24.0	24.5	23.0	23.0	23.0
26	24.0	23.0	23.5	23.0	22.5	23.0	25.0	24.5	24.5	23.0	23.0	23.0
27	24.0	23.0	23.5	23.0	22.5	22.5	25.5	24.0	24.5	23.0	22.5	23.0
28	24.0	23.0	23.5	23.0	22.5	23.0	25.5	24.5	25.0	22.5	22.5	22.5
29	24.0	23.0	23.5	23.5	23.0	23.0	25.5	24.0	24.5	22.5	22.5	22.5
30	24.0	23.0	23.5	23.5	23.0	23.0	25.5	24.5	25.0	23.0	22.0	22.5
31	---	---	---	23.0	23.0	23.0	25.5	24.5	24.5	---	---	---
MONTH	24.0	20.0	22.0	24.5	22.0	23.0	25.5	22.5	24.0	26.0	22.0	24.0

TENNESSEE RIVER BASIN

03543500 SEWEE CREEK NEAR DECATUR, TN

LOCATION.--Lat 35°34'53", long 84°44'53", Meigs County, Hydrologic Unit 06020001, on right bank, 0.3 mi (0.5 km) downstream from bridge on State Highway 58, 0.5 mi (0.8 km) downstream from Dry Fork, 5.0 mi (8.0 km) north of Decatur, and at mile 5.7 (9.2 km).

DRAINAGE AREA.--117 mi² (303 km²).

PERIOD OF RECORD.--May 1934 to current year. Prior to October 1935, published as Sweeney Creek near Decatur.

REVISED RECORDS.--WSP 1910: 1936(M), 1939(M), 1943(M), 1946, 1948(M), 1949, 1951, 1957, 1958(P). WSP 2110: 1951 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 694.32 ft (211.629 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--45 years, 196 ft³/s (5.551 m³/s), 22.75 in/yr (578 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,900 ft³/s (677 m³/s) Jan. 7, 1946, gage height, 23.97 ft (7.306 m), from floodmarks, from rating curve extended above 11,300 ft³/s (320 m³/s) on basis of slope-area measurement at gage height 22.81 ft (6.952 m); minimum, 11 ft³/s (0.31 m³/s) Sept. 24, 1935, Jan. 7-10, Oct. 4, 5, 7, 11, 12, 14, 15, 1940; minimum gage height, 0.15 ft (0.046 m) Sept. 2, 3, 7-9, 13, 20, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,300 ft³/s (65.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	0630	2840 80.4	7.48 2.280	May 24	0530	2610 73.9	7.00 2.134
Feb. 25	2000	2830 80.1	7.44 2.268	May 31	2130	*8720 247	16.18 4.932
Mar. 4	1700	4270 121	9.98 3.042				

Minimum discharge, 20 ft³/s (0.57 m³/s) Oct. 13, 14, 15: minimum gage height, 0.30 ft (0.091 m) Oct. 6-11, 13-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	26	47	972	165	415	137	94	3680	75	137	75
2	29	28	37	1680	145	336	179	89	859	68	118	67
3	26	26	40	627	140	310	944	89	588	64	102	68
4	24	26	447	410	137	3290	671	259	463	62	91	61
5	24	26	209	321	121	1290	460	188	373	64	84	61
6	23	26	101	302	111	704	363	145	301	64	79	58
7	22	28	74	1230	149	510	298	122	250	64	77	55
8	22	32	145	1090	169	426	272	107	208	68	73	54
9	22	30	1730	529	180	383	282	97	174	66	69	53
10	22	28	520	399	153	381	252	92	150	80	67	49
11	24	28	287	317	146	383	215	86	143	70	69	47
12	22	28	209	262	158	298	350	77	131	75	84	50
13	21	28	161	231	174	210	1220	88	111	75	66	51
14	20	26	134	198	172	220	875	89	99	80	62	48
15	20	27	111	158	177	196	534	75	90	170	61	45
16	22	36	111	140	172	170	403	70	84	140	59	47
17	22	51	128	130	149	155	351	67	81	110	55	45
18	23	51	101	122	139	147	301	64	80	112	54	46
19	24	34	91	110	131	138	269	63	80	131	53	47
20	26	27	91	1180	132	131	240	64	80	796	52	45
21	24	25	317	2320	469	250	204	87	75	1250	80	80
22	24	24	219	918	581	197	173	76	75	734	86	110
23	25	38	166	604	452	341	153	975	100	419	59	56
24	24	58	156	734	624	436	142	2110	170	352	54	49
25	24	38	183	520	1930	331	130	634	270	533	54	47
26	24	31	140	417	1340	258	168	402	150	572	206	46
27	28	35	117	363	708	214	165	298	110	426	172	219
28	27	28	101	309	511	187	131	310	80	396	89	800
29	26	53	91	242	---	167	111	209	79	270	157	373
30	26	91	111	209	---	150	101	194	68	203	86	207
31	27	---	431	193	---	138	---	4960	---	165	109	---
TOTAL	750	1033	6806	17237	9635	12762	10094	12280	9202	7754	2664	3059
MEAN	24.2	34.4	220	556	344	412	336	396	307	250	85.9	102
MAX	33	91	1730	2320	1930	3290	1220	4960	3680	1250	206	800
MIN	20	24	37	110	111	131	101	63	68	62	52	45
CFSM	.21	.29	1.88	4.75	2.94	3.52	2.87	3.39	2.62	2.14	.73	.87
IN.	.24	.33	2.16	5.48	3.06	4.06	3.21	3.90	2.93	2.47	.85	.97
CAL YR 1978	TOTAL	60440	MEAN 166	MAX 2500	MIN 20	CFSM 1.42	IN 19.22					
WTR YR 1979	TOTAL	93276	MEAN 256	MAX 4960	MIN 20	CFSM 2.19	IN 29.66					

TENNESSEE RIVER BASIN

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03544500 RICHLAND CREEK NEAR DAYTON, TN

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May to September 1979.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY 25...	1145	498	32	6.6	13.5	--	--	--	--	--
JUN 12...	0845	25	45	7.2	16.5	--	--	--	--	--
JUL 06...	0845	1.3	120	7.7	21.0	--	--	--	--	--
AUG 14...	0915	7.6	65	7.5	20.0	--	--	--	--	--
SEP 04...	1700	10	65	7.8	27.0	21	7	6.1	1.3	2.7

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
MAY 25...	--	--	--	4	4.6	--	--	--	--	--
JUN 12...	--	--	--	11	7.0	--	--	--	34	--
JUL 06...	--	--	--	40	16	--	--	--	68	--
AUG 14...	--	--	--	17	8.8	--	--	--	40	--
SEP 04...	21	.3	1.4	17	8.4	2.7	.0	5.3	48	36

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 25...	--	--	330	40	30	10	21	28	71
JUN 12...	.05	2.32	270	0	10	0	8	.55	71
JUL 06...	.09	.25	80	20	10	10	4	.01	--
AUG 14...	.05	.83	140	40	0	0	3	.06	--
SEP 04...	.07	1.31	430	70	10	10	7	.19	--

TENNESSEE RIVER BASIN

03544500 RICHLAND CREEK NEAR DAYTON, TN--Continued

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
SEP 04...	.19	.010	3	0	0	0	<10	<10	10	<10	2	<10
DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CYANIDE TOTAL (MG/L AS CN)
SEP 04...	12000	0	20	300	<.5	.00	0	0	1	0	30	.00

TENNESSEE RIVER BASIN

03556500 HIWASSEE RIVER NEAR MCFARLAND, TN

LOCATION.--Lat 35°10'48", long 84°26'36", Polk County, Hydrologic Unit 06020002, on left bank 0.2 mi (0.3 km) downstream from Smith Creek, 0.4 mi (0.6 km) downstream from Apalachia powerhouse of Tennessee Valley Authority, 2.8 mi (4.5 km) west of McFarland, and at mile 53.2 (85.6 km).

DRAINAGE AREA.--1,136 mi² (2,942 km²).

PERIOD OF RECORD.--October 1942 to current year.

GAGE.--Water-stage recorder. Datum of gage is 830.56 ft (253.155 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by four reservoirs (see Water Resources Data for North Carolina and Georgia, 1979). Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--37 years, 2,431 ft³/s (68.85 m³/s), 29.06 in/yr (738 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,100 ft³/s (1,330 m³/s) May 28, 1973, gage height, 15.34 ft (4.676 m), from rating curve extended above 15,000 ft³/s (425 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 30 ft³/s (0.85 m³/s) estimated, Sept. 18-20, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,400 ft³/s (351 m³/s) Mar. 4, gage height, 7.51 ft (2.289 m); minimum, 124 ft³/s (3.51 m³/s) many days in October and November, gage height, 1.47 ft (0.448 m); minimum daily, 346 ft³/s (9.80 m³/s) Nov. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2000	1840	1800	1030	3100	3160	1950	3000	3030	1640	2960	3060
2	2640	1790	1710	3200	3070	3120	1950	3000	3000	2620	2920	2930
3	2460	1350	1300	3160	2950	3070	2700	2830	3150	2570	2950	2930
4	2610	1220	2040	3140	2260	8290	2500	2860	3280	1750	2970	2920
5	2460	1160	1530	3140	2800	4180	2250	2890	3180	2510	2890	2970
6	2450	1640	782	3030	3070	4280	2150	2900	3180	2540	2890	3030
7	2200	1670	434	2440	3170	7270	1320	2910	3200	2160	2880	2930
8	2050	1420	1320	3660	3210	9170	1160	2910	3200	1650	2870	2890
9	2130	1730	1970	3330	3220	8850	1480	2570	3260	2540	2900	2890
10	1900	1500	2010	3220	3160	8820	1220	2550	3240	2600	2890	2870
11	1940	887	2030	3180	3150	9110	1280	2540	3260	2540	2810	2900
12	1820	878	2560	3150	3150	8370	1420	1700	2670	2700	1810	2890
13	1780	1390	1500	3050	2670	6630	3350	1300	2740	2780	2950	2990
14	1730	1320	1530	2070	2520	5910	2150	1590	2680	2400	2920	2920
15	1640	1140	1790	3040	1960	3130	1640	1710	2730	1680	2850	2850
16	1970	1020	658	3030	2170	3060	1800	1670	2290	2770	2930	2850
17	1950	1480	651	3070	2170	3040	2200	1850	2270	2870	2930	2900
18	2570	963	1830	3060	1770	3010	3300	2000	2770	2550	2930	2930
19	2600	924	1300	2810	1650	3000	3250	1920	2710	2570	2930	2940
20	2040	1470	1410	3790	1930	3000	3200	1240	2570	2650	2940	2930
21	1580	1420	1400	4540	1200	3040	3150	2030	2690	3040	2940	2980
22	1010	1480	1510	3430	860	4490	3150	2180	2730	2720	2940	1830
23	2080	1200	672	3230	1310	4670	3100	2530	2170	3070	3000	3020
24	2020	1160	706	3580	2540	3300	3100	2940	1650	3000	2970	2980
25	2120	1180	859	3320	2810	3200	3100	2830	2550	3060	2970	2970
26	1820	346	1780	3140	2450	3150	3200	2270	2260	3050	2990	2970
27	1910	1590	2540	2810	3230	3140	3150	1570	2680	3030	3020	3010
28	1620	1770	1900	2360	3200	3130	3100	1800	2760	3050	2940	3110
29	1560	2990	2640	3180	---	2690	2600	2110	2500	3020	2940	3230
30	1850	1620	2610	3170	---	2670	2850	2370	2040	2970	2960	3080
31	1850	---	1850	3170	---	2080	---	2720	---	2980	3010	---
TOTAL	62360	41548	48622	95530	70750	144030	72770	71290	82440	81080	89800	87700
MEAN	2012	1385	1568	3082	2527	4646	2426	2300	2748	2615	2897	2923
MAX	2640	2990	2640	4540	3230	9170	3350	3000	3280	3070	3020	3230
MIN	1010	346	434	1030	860	2080	1160	1240	1650	1640	1810	1830

CAL YR 1978 TOTAL 715625 MEAN 1961 MAX 9630 MIN 346
WTR YR 1979 TOTAL 947920 MEAN 2597 MAX 9170 MIN 346

NOTE.--No gage-height record Apr. 1 to May 2.

TENNESSEE RIVER BASIN

03557405 HIWASSEE RIVER NEAR BENTON, TN

LOCATION.--Lat 35°12'18", long 84°39'10", Polk County, Hydrologic Unit 06020003, at county road bridge on Patty Road, 1.5 mi (2.4 km) north of Benton, 800 ft (244 m) upstream from Ocoee River, and at mile 34.5 (55.5 km).

DRAINAGE AREA.--1,362 mi² (3,528 km²).

PERIOD OF RECORD.--October 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
JAN 16...	0920	4600	29	6.0	7.2	9	6	6.7	5	<1.0	600
APR 24...	0945	6400	36	6.5	13.0	7	4	10.6	--	<1.0	--
JUN 12...	0940	5000	41	6.1	15.0	4	5	9.9	--	<1.0	--
AUG 07...	0945	3100	50	6.5	18.0	4	1	9.1	--	2.0	--

DATE	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, TOTAL RECOV- ERABLE (TONS AC-FT)
JAN 16...	--	2.2	.8	1.2	.8	12	2.0	1.0	20	.03
APR 24...	16	--	--	--	--	12	2.0	1.0	40	.05
JUN 12...	16	--	--	--	--	14	5.0	2.0	20	.03
AUG 07...	13	--	--	--	--	14	12	1.0	40	.05

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
JAN 16...	248	2	.21	.03	.05	.010	--	250	<1	<10
APR 24...	691	1	.20	.02	.02	.010	.04	--	2	20
JUN 12...	270	5	.17	.05	.02	.010	.01	--	<1	<10
AUG 07...	335	4	.48	.03	.07	.010	<.01	--	<1	20

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
JAN 16...	430	<50	<10	40	<10	<.2	20	30	1.4	--
APR 24...	--	100	<10	--	10	<.2	--	90	1.3	--
JUN 12...	--	50	<10	--	20	<.2	--	10	1.7	--
AUG 07...	--	<50	<10	--	10	<.2	--	20	--	2.5

03563000 OCOEE RIVER AT EMF, TN

LOCATION.--Lat 35°05'48", long 84°32'07", Polk County, Hydrologic Unit 06020203, on left bank 700 ft (210 m) downstream from Tennessee Valley Authority powerplant, 0.8 mi (1.3 km) upstream from former village of Emf, 2.0 mi (3.2 km) downstream from Goforth Creek, and at mile 19.6 (31.5 km).

DRAINAGE AREA.--524 mi² (1,357 km²).

PERIOD OF RECORD.--October 1912 to current year. Prior to January 1913, monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1913-34. WSP 853: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 837.88 ft (255.386 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Blue Ridge Lake (station 03558500 in Water Resources Data for Georgia, 1979), Ocoee No. 3 Lake (station 03562500), and by powerplant above station. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--67 years, 1,252 ft³/s (35.46 m³/s), 32.45 in/yr (824 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft³/s (833 m³/s) July 10, 1916, gage height, 13.7 ft (4.18 m), from rating curve extended above 17,000 ft³/s (481 m³/s); minimum, 3.4 ft³/s (0.096 m³/s) Sept. 20, 1962, gage height, 2.12 ft (0.646 m); minimum daily, 4.6 ft³/s (0.13 m³/s) Sept. 14, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 19, 1906, discharge, 62,000 ft³/s (1,760 m³/s) was the greatest known since at least 1840, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,500 ft³/s (439 m³/s) Mar. 4; gage height, 10.39 ft (3.167 m); minimum not determined; minimum daily, 80 ft³/s (2.27 m³/s) Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	950	794	975	1400	976	1540	1510	1500	2310	1110	1510	1560	
2	950	785	674	2650	971	1540	1510	1500	1560	1000	1500	1550	
3	950	316	459	1570	992	1560	2500	1510	1630	1060	1500	1550	
4	800	580	859	1230	974	11100	3120	2250	1980	1210	1120	1530	
5	950	623	1100	1500	962	3940	2830	2590	1620	326	1440	1500	
6	950	841	1080	1520	966	2000	2150	1530	1990	485	1130	1510	
7	850	800	990	1110	1080	2410	1550	1520	1980	487	1130	1510	
8	1000	821	982	2120	1070	3180	1540	1510	1710	472	1060	1500	
9	850	788	1550	1560	1220	2980	2230	1510	1530	803	947	1510	
10	950	800	1390	1170	1490	2740	2730	1400	1530	1490	885	1520	
11	700	416	801	1160	997	2810	2350	1500	1550	1500	949	1510	
12	950	352	944	1140	975	2050	2410	1500	1530	2050	1190	1510	
13	950	745	930	915	982	2150	8470	1520	1520	1600	979	1510	
14	1000	798	933	787	898	2280	5700	1500	1130	1470	1170	1410	
15	800	457	952	1170	911	2460	3700	1520	1020	1500	1010	1480	
16	220	803	497	993	947	1870	3580	1500	1040	1490	1000	1520	
17	80	830	634	938	916	2290	3160	1230	1040	1490	1000	1400	
18	950	811	849	950	727	1890	3200	1200	1030	1490	1010	1520	
19	210	877	859	973	872	1890	2980	1140	1010	1500	1070	1030	
20	700	813	842	1790	1030	1900	2820	950	1050	1520	1010	1520	
21	750	801	910	4000	1000	1830	2820	1070	1470	2040	1010	1550	
22	650	812	868	1650	985	1520	2090	1200	1010	2330	1080	1710	
23	800	466	709	1550	1330	1580	1740	1270	1010	1480	1550	1530	
24	800	397	421	1930	3030	1880	2300	1990	1020	1510	1080	1520	
25	980	388	586	1940	3660	2040	1890	1940	1000	1510	1200	1520	
26	795	383	849	1190	2210	1560	2120	1550	1010	1520	1380	1540	
27	794	747	882	951	1640	1550	3130	1530	1010	1520	1300	1580	
28	613	816	874	1230	1560	1540	2400	1540	998	1530	1570	1670	
29	613	945	865	1160	---	1560	1890	1540	993	1550	1560	1610	
30	755	918	866	1050	---	1510	1680	1550	1000	1520	1540	1560	
31	1040	---	1030	979	---	1510	---	1920	---	1510	1550	---	
TOTAL	24350	20723	27160	44276	35371	72660	82100	47480	40281	42073	37430	45440	
MEAN	785	691	876	1428	1263	2344	2737	1532	1343	1357	1207	1515	
MAX	1040	945	1550	4000	3660	11100	8470	2590	2310	2330	1570	1710	
MIN	80	316	421	787	727	1510	1510	950	993	326	885	1030	
(†)	-13200	-7800	+800	+14300	+14000	+20900	+6700	+2000	-3000	-5500	-10800	-14700	
MEAN‡	360	431	902	1890	1763	3018	2960	1596	1243	1180	859	1025	
CFSM‡	.69	.82	1.72	3.61	3.36	5.76	5.65	3.05	2.37	2.25	1.64	1.96	
IN.‡	.79	.92	1.98	4.16	3.50	6.64	6.30	3.51	2.65	2.60	1.89	2.18	
CAL YR 1978	TOTAL	381423	MEAN	1045	MAX	5400	MIN 80	MEAN‡	1001	CFSM‡	1.91	IN.‡	25.92
WTR YR 1979	TOTAL	519344	MEAN	1423	MAX	11100	MIN 80	MEAN‡	1433	CFSM‡	2.73	IN.‡	37.12

† Change in contents, in cfs-days, in Blue Ridge Lake (Georgia), furnished by Tennessee Valley Authority.
‡ Adjusted for change in contents in lakes or reservoirs listed above.

TENNESSEE RIVER BASIN

03564500 OCOEE RIVER AT PARKSVILLE, TN

LOCATION.--Lat 35°05'48", long 84°39'15", Polk County, Hydrologic Unit 06020203, on right bank 0.4 mi (0.6 km) downstream from Lake Ocoee Dam and Ocoee No. 1 powerplant of Tennessee Valley Authority at Parksville, and at mile 11.5 (18.5 km).

DRAINAGE AREA.--595 mi² (1,541 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1911 to September 1916, March 1921 to current year.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1306: 1916, 1921-36 (adjusted runoff). WSP 1386: 1926.

GAGE.--Water-stage recorder. Datum of gage is 716.96 ft (218.529 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Blue Ridge Lake (station 03558500 in Water Resources Data for Georgia, 1979), Ocoee No. 3 Lake (station 03562500), and Lake Ocoee (station 03564000).

AVERAGE DISCHARGE.--63 years, 1,337 ft³/s (37.86 m³/s), 30.52 in/yr (775 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,700 ft³/s (615 m³/s), Mar. 29, 1951, gage height, 20.22 ft (6.163 m); minimum daily, 10 ft³/s (0.28 m³/s) Oct. 28, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 19, 1906, discharge, 65,000 ft³/s (1,840 m³/s) was the greatest known flood since at least 1840, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,300 ft³/s (348 m³/s) Apr. 13, gage height, 13.53 ft (4.124 m); minimum, 79 ft³/s (2.24 m³/s) Dec. 13, Feb. 13, May 7, 8, 9, gage height, 2.85 ft (0.869 m); minimum daily, 294 ft³/s (8.33 m³/s) Oct. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	991	1120	919	1250	1180	2700	1470	2680	2820	835	1670	1630
2	977	978	702	1250	1320	2730	1120	2070	2510	963	1670	1610
3	882	499	613	2670	714	2750	1900	2330	2560	1090	1600	1510
4	804	552	944	2170	1140	5480	2400	2730	2240	1040	1130	1490
5	817	600	1500	2290	1030	7070	2680	1380	2020	1080	1090	1660
6	833	773	1150	2110	980	3300	2120	599	2080	622	1230	1570
7	903	664	1120	1130	805	2660	1660	588	2100	913	1230	1510
8	889	1000	1170	1220	936	2700	1610	848	1970	615	941	1570
9	932	1050	1550	1630	1590	2750	1620	851	1600	688	944	1590
10	911	945	2450	1860	1830	2760	2150	1450	1510	1200	923	1500
11	899	485	2100	1830	1140	2890	2110	1380	1340	1510	832	1470
12	1050	439	2230	1740	1110	2800	2220	1330	1570	2470	828	1640
13	708	992	958	1460	631	2630	8730	1330	1520	1510	945	1950
14	833	903	715	1040	821	2720	8970	1330	1210	1100	1020	1670
15	831	704	535	1190	901	2750	4590	1590	1210	1040	1050	1330
16	294	850	339	961	801	2720	3070	1490	1080	1470	1200	1300
17	394	750	351	848	1040	2780	3280	1230	1040	1390	1190	1310
18	391	700	523	819	1000	2770	3330	1230	1110	1540	988	1480
19	382	700	1020	858	1040	2710	3260	1120	1090	1620	989	1030
20	666	700	1010	1840	1030	2170	3060	1010	1110	1660	989	1250
21	600	1350	1060	2750	1060	2700	2950	1070	1110	2450	1120	1790
22	615	1300	1600	2740	1180	2760	2830	1130	1090	3320	976	1450
23	703	330	811	2660	1610	2800	2720	2050	967	1950	1000	2100
24	955	350	436	2050	1840	1680	2540	2190	1110	1750	1450	1500
25	940	400	458	2730	2680	2430	2620	2660	1120	1520	1180	1450
26	896	400	1030	2280	2600	2800	2620	1990	1100	1440	1100	1400
27	827	950	1090	1780	2630	1890	2610	1760	987	1430	2020	1500
28	659	1100	986	1510	2630	1530	2670	1570	988	1560	1590	2600
29	647	900	1080	2090	---	1440	2670	1560	896	1550	1620	1500
30	401	930	1080	1060	---	1580	2690	2010	896	2070	2140	1200
31	517	---	1360	1080	---	1520	---	1990	---	1590	1460	---
TOTAL	23147	23414	32890	52896	37269	84970	88270	48546	43954	44986	38115	46560
MEAN	747	780	1061	1706	1331	2741	2942	1566	1465	1451	1230	1552
MAX	1050	1350	2450	2750	2680	7070	8970	2730	2820	3320	2140	2600
MIN	294	330	339	819	631	1440	1120	588	896	615	828	1030

CAL YR 1978 TOTAL 403158 MEAN 1105 MAX 2800 MIN 294 MEAN† 1060 CFSM† 1.78 IN.† 24.19
WTR YR 1979 TOTAL 565017 MEAN 1548 MAX 8970 MIN 294 MEAN† 1558 CFSM† 2.62 IN.† 35.53

† Adjusted for change in contents in Blue Ridge Lake (Georgia) and Lake Ocoee.

03564500 OCOEE RIVER AT PARKSVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971-72, 1975 to current year.

REMARKS.--Flow regulated by Blue Ridge Lake (station 03558500 in Water Resources Data for Georgia, 1979), Ocoee No. 3 Lake (station 03562500), and Lake Ocoee (station 03564000).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)
NOV 21...	1015	2650	120	7.3	15.0	5	1	9.4	1	<1.0	--	--
FEB 21...	1115	2060	120	6.6	15.0	6	4	12.3	1	<1.0	100	--
APR 04...	1100	2550	74	5.6	13.0	23	11	10.9	--	<1.0	--	46
JUN 12...	1100	2060	69	5.4	15.0	2	2	9.1	--	<1.0	--	25
AUG 07...	1050	2150	82	6.2	24.0	3	5	8.4	--	1.9	--	28
SEP 12...	1615	--	--	6.5	24.0	9	3	8.9	<1	<1.0	90	--

DATE	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
NOV 21...	13	1.4	1.2	.4	6	35	6.0	80	.11	572	2
FEB 21...	12	1.3	4.2	.9	5	33	8.0	70	.10	389	3
APR 04...	--	--	--	--	5	25	3.0	60	.08	413	5
JUN 12...	--	--	--	--	6	23	2.0	50	.07	278	2
AUG 07...	--	--	--	--	7	20	2.0	60	.08	348	2
SEP 12...	9.3	1.2	--	--	5	25	--	50	.07	--	1

TENNESSEE RIVER BASIN

03564500 OCOEE RIVER AT PARKSVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH DISSOL. (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV 21...	.09	.06	.02	.010	--	540	<2	40	<1	<5	50
FEB 21...	.14	.07	<.01	.010	--	<200	<2	80	<1	<5	30
APR 04...	.11	.06	.02	.010	.03	--	--	--	<1	--	40
JUN 12...	.12	.04	.05	.010	.01	--	--	--	<1	--	20
AUG 07...	.10	.02	.02	<.010	<.01	--	--	--	<1	--	50
SEP 12...	--	--	--	--	--	--	<2	--	<1	<5	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
NOV 21...	230	--	<10	40	--	.3	<10	1	<10	.7	--
FEB 21...	390	--	<10	170	--	<.2	<10	2	200	1.0	--
APR 04...	--	<50	10	--	160	<.2	--	--	140	.8	--
JUN 12...	--	140	<10	--	70	<.2	--	--	100	1.5	--
AUG 07...	--	90	<10	--	50	<.2	--	--	90	--	4.3
SEP 12...	290	<50	<10	50	20	<.2	--	<1	120	--	--

TENNESSEE RIVER BASIN

03565300 SOUTH CHESTUEE CREEK NEAR BENTON, TN

LOCATION.--Lat 35°10'02", long 84°42'59", Bradley County, Hydrologic Unit 06020002, on right bank 50 ft (15 m) downstream from county highway bridge, 0.2 mi (0.3 km) downstream from Climer Branch, 2.4 mi (3.9 km) south-west of Benton Station, 2.8 mi (4.5 km) north of Ocoee, 3.6 mi (5.8 km) west of Benton, and at mile 9.3 (15.0 km).

DRAINAGE AREA.--31.8 mi² (82.4 km²).

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 712.14 ft (217.060 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--22 years, 53.7 ft³/s (1.521 m³/s), 22.93 in/yr (582 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft³/s (340 m³/s) Mar. 16, 1973, gage height, 12.11 ft (3.691 m), from rating curve extended above 3,200 ft³/s (90.6 m³/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 2.1 ft³/s (0.059 m³/s) Aug. 31, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (22.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1345	1070 30.3	7.18 2.188	Apr. 13	1715	1340 37.9	7.44 2.268
Jan. 2	0400	857 24.3	6.95 2.118	May 24	0300	882 25.0	6.98 2.128
Jan. 21	0100	1290 36.5	7.39 2.252	May 31	1400	1690 47.9	7.72 2.353
Feb. 24	1600	1020 28.9	7.13 2.173	July 21	1930	*2660 75.3	8.35 2.545
Mar. 4	0930	2610 73.9	8.32 2.536				

Minimum discharge, 2.7 ft³/s (0.076 m³/s) Oct. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	4.2	5.8	265	34	80	28	30	421	12	33	14
2	3.9	4.3	4.7	499	33	65	36	27	129	11	32	14
3	3.4	4.2	7.0	101	33	77	376	32	186	11	28	14
4	3.5	2.9	30	63	34	1460	163	50	105	10	72	14
5	3.4	2.8	20	51	29	270	100	41	73	10	30	11
6	3.3	3.2	9.4	55	27	135	72	30	58	9.7	24	11
7	4.8	4.1	6.6	177	67	105	57	25	49	12	22	11
8	3.6	5.2	5.9	129	74	99	50	22	40	12	20	9.9
9	3.4	4.4	603	72	62	75	109	21	33	18	18	9.1
10	3.4	4.3	63	54	49	91	68	20	29	20	17	8.8
11	3.5	4.2	27	44	44	135	53	18	25	90	17	8.3
12	3.3	4.1	19	39	44	87	176	19	23	64	18	8.3
13	3.3	4.4	15	37	40	70	1200	52	22	29	15	8.3
14	3.9	4.2	13	33	36	85	423	32	20	36	14	8.8
15	3.4	4.5	11	25	34	67	149	21	19	27	14	9.9
16	3.4	5.1	13	23	31	54	107	18	17	32	13	8.3
17	3.3	5.8	15	22	28	48	83	16	17	19	12	8.6
18	3.4	9.2	12	22	31	45	68	15	16	15	12	9.6
19	3.4	5.6	11	21	32	42	56	15	15	25	12	9.6
20	3.4	4.6	11	566	35	39	48	14	14	220	11	9.4
21	3.3	4.5	68	806	118	40	43	46	14	1090	11	24
22	3.4	4.3	33	179	142	37	38	43	14	565	13	29
23	3.2	5.9	21	124	175	78	36	89	17	108	11	14
24	3.2	6.3	37	388	641	99	34	421	42	87	11	11
25	3.2	4.7	62	143	390	62	34	114	23	151	12	10
26	3.2	4.3	32	102	187	48	123	67	16	172	16	9.4
27	3.9	4.6	23	85	122	41	96	58	14	97	50	156
28	4.0	4.7	18	71	96	37	53	91	12	68	21	195
29	4.1	5.9	16	56	---	33	40	50	12	85	49	92
30	3.9	9.5	30	47	---	31	34	53	14	47	20	50
31	4.1	---	167	44	---	29	---	1190	---	40	18	---
TOTAL	111.7	146.0	1409.4	4343	2676	3664	3953	2740	1489	3192.7	666	796.3
MEAN	3.60	4.87	45.5	140	95.6	118	132	88.4	49.6	103	21.5	26.5
MAX	5.2	9.5	603	806	641	1460	1200	1190	421	1090	72	195
MIN	3.2	2.8	4.7	21	27	29	28	14	12	9.7	11	8.3
CFSM	.11	.15	1.43	4.40	3.01	3.71	4.15	2.78	1.56	3.24	.68	.83
IN.	.13	.17	1.65	5.08	3.13	4.29	4.62	3.21	1.74	3.73	.78	.93
CAL YR 1978	TOTAL	14897.7	MEAN 40.8	MAX 727	MIN 2.8	CFSM 1.28	IN 17.43					
WTR YR 1979	TOTAL	25187.1	MEAN 69.0	MAX 1460	MIN 2.8	CFSM 2.17	IN 29.46					

TENNESSEE RIVER BASIN

03565500 OOSTANAULA CREEK NEAR SANFORD, TN

LOCATION.--Lat 35°19'39", long 84°42'19", McMinn County, Hydrologic Unit 06020002, on right bank 20 ft (6 m) downstream from highway bridge, 1.3 mi (2.1 km) southeast of Sanford, 3.5 mi (5.6 km) northeast of Calhoun, and at mile 5.7 (9.2 km).

DRAINAGE AREA.--57.0 mi² (147.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 716.51 ft (218.392 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for July and August, which are fair.

AVERAGE DISCHARGE.--25 years, 97.1 ft³/s (2.750 m³/s), 23.13 in/yr (588 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft³/s (227 m³/s) Mar. 16, 1973, gage height, 13.43 ft (4.093 m); minimum, 16 ft³/s (0.45 m³/s) Oct. 13-28, 1954, Sept. 27, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	1945	853 24.2	5.61 1.710	June 1	1500	880 24.9	5.72 1.743
Mar. 5	0500	*1110 31.4	6.64 2.024	July 21	Unknown	Unknown	Unknown
Apr. 13	2145	695 19.7	5.09 1.551				

Minimum discharge, 21 ft³/s (0.59 m³/s) Oct. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	23	32	234	128	211	100	89	802	62	110	49
2	31	23	27	443	117	188	102	86	405	57	100	50
3	28	23	27	316	111	174	206	85	222	54	95	52
4	25	24	49	165	109	816	263	97	206	52	160	50
5	25	23	72	137	103	962	183	104	166	54	130	48
6	25	24	48	124	96	415	158	88	144	54	110	45
7	24	25	37	194	101	270	141	84	131	54	95	44
8	24	24	34	277	115	240	133	78	119	59	85	44
9	25	26	140	188	111	216	146	76	110	58	68	43
10	26	25	182	151	105	195	139	73	105	65	58	44
11	24	24	82	134	97	217	119	71	100	58	62	43
12	23	23	65	122	97	190	140	69	92	63	70	41
13	24	25	56	114	95	167	480	74	88	62	60	41
14	25	25	51	107	94	159	653	79	83	63	56	45
15	29	23	49	98	92	155	308	68	80	100	52	47
16	26	25	48	89	90	138	225	64	76	75	50	35
17	26	31	53	84	86	129	194	61	77	70	49	39
18	23	35	49	83	86	124	173	60	76	64	48	42
19	23	31	45	80	86	119	160	57	69	80	48	40
20	24	27	43	255	84	113	148	54	67	350	48	40
21	24	26	68	769	101	121	137	67	65	700	47	40
22	23	23	83	615	188	129	129	70	64	500	46	67
23	25	25	60	267	181	128	123	90	67	350	49	55
24	25	29	56	334	314	175	115	379	96	200	49	47
25	23	29	68	338	498	149	110	220	103	300	47	44
26	22	25	62	235	484	132	127	120	71	350	83	41
27	24	27	55	205	315	119	129	102	65	250	93	52
28	24	30	51	187	241	112	105	117	61	180	61	139
29	24	26	50	166	---	106	99	102	60	210	54	139
30	25	34	50	149	---	103	95	91	59	150	51	87
31	26	---	112	138	---	100	---	428	---	125	50	---
TOTAL	771	783	1904	6798	4325	6572	5340	3303	3929	4869	2184	1593
MEAN	24.9	26.1	61.4	219	154	212	178	107	131	157	70.5	53.1
MAX	31	35	182	769	498	962	653	428	802	700	160	139
MIN	22	23	27	80	84	100	95	54	59	52	46	35
CFSM	.44	.46	1.08	3.84	2.70	3.72	3.12	1.88	2.30	2.75	1.24	.93
IN.	.50	.51	1.24	4.44	2.82	4.29	3.48	2.16	2.56	3.18	1.43	1.04

CAL YR 1978 TOTAL 32331 MEAN 88.6 MAX 767 MIN 22 CFSM 1.55 IN 21.10
WTR YR 1979 TOTAL 42371 MEAN 116 MAX 962 MIN 22 CFSM 2.04 IN 27.65

NOTE.--No gage-height record July 17 to Aug. 16.

TENNESSEE RIVER BASIN

243

03565500 OOSTANAULA CREEK NEAR SANFORD, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT						
25...	1430	22	340	13.5	--	--
JAN						
11...	1315	135	260	5.5	--	--
FEB						
12...	1545	99	280	6.5	--	--
MAR						
27...	1550	115	250	10.0	--	--
MAY						
01...	1430	89	260	15.0	--	--
JUN						
06...	1015	137	--	17.5	--	--
JUL						
17...	1415	63	260	21.0	--	--
AUG						
16...	1515	52	310	19.0	26	3.7
23...	1445	59	270	21.0	39	6.2
SEP						
19...	1200	43	315	17.5	9	1.0

TENNESSEE RIVER BASIN

03566420 WOLFTEVER CREEK NEAR OOLTEWAH, TN

LOCATION.--Lat 35°03'43", long 85°03'59", Hamilton County, Hydrologic Unit 06020001, on right downstream wingwall of county road bridge, 0.6 mi (1.0 km) downstream from Southern Railway bridge, 0.9 mi (1.4 km) south of Ooltewah, 1.6 mi (2.6 km) upstream from Little Wolftever Creek, and at mile 16.1 (25.9 km).

DRAINAGE AREA.--18.8 mi² (48.7 km²).

PERIOD OF RECORD.--January 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 755.08 ft (230.148 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--15 years, 34.2 ft³/s (0.969 m³/s), 24.70 in/yr (627 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft³/s (207 m³/s) Mar. 16, 1973, gage height, 9.75 ft (2.972 m); minimum, 1.8 ft³/s (0.051 m³/s) part of each day Sept. 13-18, 1964, Oct. 10, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (19.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 4	0700	*1940 54.9	7.42 2.262	July 21	1815	798 22.6	5.21 1.588
Apr. 13	0045	1020 28.9	5.99 1.826	Sept. 28	1230	1140 32.3	6.31 1.923
May 31	1500	1100 31.2	6.21 1.893				

Minimum discharge, 2.3 ft³/s (0.065 m³/s) Oct. 13, 14, 15, Nov. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	2.9	4.2	269	18	50	21	23	136	13	17	12
2	3.4	3.0	3.5	227	15	40	26	20	83	11	20	12
3	3.1	3.1	4.8	66	17	71	177	28	106	10	15	43
4	3.6	2.5	31	42	17	848	100	37	62	9.4	15	32
5	3.3	2.8	12	34	14	137	65	27	47	11	14	14
6	3.0	2.9	6.3	36	14	90	49	22	33	9.4	12	11
7	2.8	4.0	5.2	134	39	70	40	19	28	10	12	10
8	2.7	3.6	5.1	79	41	57	36	17	22	11	11	9.0
9	2.8	3.3	122	45	37	46	74	16	19	19	11	8.6
10	2.8	3.2	20	35	27	61	45	15	16	16	11	8.6
11	2.9	2.8	11	29	24	63	37	17	14	19	12	8.2
12	2.8	3.0	8.6	26	23	47	221	20	12	22	12	8.2
13	2.7	3.0	7.6	23	21	40	709	128	11	15	10	9.0
14	2.6	3.3	6.7	20	19	52	179	50	9.8	13	9.8	15
15	2.7	3.4	6.1	15	18	40	101	31	9.8	14	9.0	8.2
16	2.8	3.4	8.7	14	16	34	71	23	9.0	15	9.0	7.9
17	2.8	6.7	8.6	14	13	31	56	18	9.0	11	9.0	7.5
18	2.8	4.6	7.1	13	17	29	45	16	8.6	10	9.0	7.9
19	2.8	3.3	6.7	12	18	27	39	14	8.2	17	9.0	7.9
20	2.9	3.1	6.4	211	20	25	34	14	7.9	143	9.0	7.5
21	2.6	3.0	23	245	110	28	29	59	8.6	528	9.0	40
22	2.8	3.0	12	100	98	24	26	57	9.0	137	9.8	23
23	2.9	5.4	9.3	76	84	88	24	108	14	62	12	13
24	2.8	3.9	15	127	277	65	22	126	42	49	9.4	11
25	2.8	3.0	17	68	208	47	25	67	17	165	10	10
26	3.1	3.0	12	52	116	38	76	47	12	140	48	9.0
27	3.2	3.7	9.1	44	77	32	74	58	10	71	80	418
28	2.8	3.3	8.0	35	59	28	39	64	9.8	44	24	688
29	2.9	7.3	7.4	28	---	25	31	42	9.4	33	22	143
30	2.9	6.0	67	24	---	23	26	51	33	26	18	76
31	2.9	---	164	22	---	21	---	551	---	20	16	---
TOTAL	94.1	109.5	635.4	2165	1457	2277	2497	1785	816.1	1673.8	494.0	1678.5
MEAN	3.04	3.65	20.5	69.8	52.0	73.5	83.2	57.6	27.2	54.0	15.9	56.0
MAX	7.1	7.3	164	269	277	848	709	551	136	528	80	688
MIN	2.6	2.5	3.5	12	13	21	21	14	7.9	9.4	9.0	7.5
CFSM	.16	.19	1.09	3.71	2.77	3.91	4.43	3.06	1.45	2.87	.85	2.98
IN.	.19	.22	1.26	4.28	2.88	4.51	4.94	3.53	1.61	3.31	.98	3.32

CAL YR 1978 TOTAL 8707.3 MEAN 23.9 MAX 349 MIN 2.5 CFSM 1.27 IN 17.23
WTR YR 1979 TOTAL 15682.4 MEAN 43.0 MAX 848 MIN 2.5 CFSM 2.29 IN 31.03

03566510 TENNESSEE RIVER AT CHICKAMAUGA DAM (TAILWATER), TN

LOCATION.--Lat 35°06'11", long 85°13'47", Hamilton County, Hydrologic Unit 06020001, on left downstream side of Chickamauga Dam, 0.1 mi (0.2 km) upstream from Chickamauga Creek, 1.1 mi (1.8 km) south of Hamillville, 3.3 mi (5.3 km) north of Chattanooga, and at mile 471.0 (757.8 km).

DRAINAGE AREA.--20,790 mi² (53,846 km²).

PERIOD OF RECORD.--Water years 1975 to current year.

REMARKS.--Site located in Nickajack Lake. Flow regulated by many reservoirs above site.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. UNINHIB (COLS. PER 100 ML)
NOV 22...	1100	40500	180	7.2	15.6	9	2	8.4	4	<1.0	10
FEB 15...	1410	35700	180	7.7	5.0	11	10	11.8	4	1.7	<100
MAR 28...	1500	43200	140	6.1	10.0	11	9	10.0	--	1.7	--
MAY 30...	1300	40200	170	7.5	18.0	12	5	7.6	--	1.7	--
JUL 24...	1320	79500	150	7.3	23.5	8	6	6.4	--	1.5	--
SEP 13...	1330	42100	160	7.4	24.0	5	4	6.8	--	1.7	--

DATE	HARD- NESS (MG/L AS CaCO ₃)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS Ca)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS Mg)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS Na)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LITY (MG/L AS CaCO ₃)	SULFATE DIS- SOLVED (MG/L AS SO ₄)	CHLO- RIDE, DIS- SOLVED (MG/L AS Cl)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
NOV 22...	--	14	4.6	9.5	1.3	53	17	11	140	.19
FEB 15...	--	20	5.0	6.2	1.1	51	22	7.0	120	.16
MAR 28...	58	--	--	--	--	48	14	7.0	110	.15
MAY 30...	49	--	--	--	--	48	15	5.0	80	.11
JUL 24...	61	--	--	--	--	52	14	6.0	100	.14
SEP 13...	68	--	--	--	--	--	17	8.0	100	.14

TENNESSEE RIVER BASIN

03566510 TENNESSEE RIVER AT CHICKAMAUGA DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DFG. C. SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
NOV 22...	15300	4	.22	.09	.05	.020	--	<200	4	30
FFR 15...	11600	4	.58	.07	.13	.030	--	<200	<1	20
MAR 28...	12800	4	.56	.07	.09	.030	<.01	--	<1	40
MAY 30...	8600	4	.26	.05	.10	.020	--	--	2	10
JUL 24...	21500	10	.32	.09	.11	.020	.02	--	<1	<10
SFP 13...	11400	8	--	--	--	--	.02	--	<1	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
NOV 22...	240	<50	<10	70	<10	.4	<10	30	4.2	--
FFR 15...	450	<50	<10	120	110	.3	<10	10	2.5	--
MAR 28...	--	<50	<10	--	20	<.2	--	50	--	2.2
MAY 30...	--	<50	<10	--	<10	<.2	--	20	3.0	--
JUL 24...	--	<50	<10	--	<10	<.2	--	<10	--	--
SFP 13...	--	<50	<10	--	<10	<.2	--	20	3.6	--

03568000 TENNESSEE RIVER AT CHATTANOOGA, TN

LOCATION.--Lat 35°05'12", long 85°16'43". Hamilton County, Hydrologic Unit 06020001, on right bank at Rivermont Golf and Country Club, 0.5 mi (0.8 km) downstream from South Chickamauga Creek, 3.0 mi (4.8 km) downstream from Chickamauga Dam, 3.5 mi (5.6 km) upstream from Walnut Street Bridge in Chattanooga, and at mile 467.6 (752.4 km).

DRAINAGE AREA.--21,400 mi² (55,430 km²), approximately.

PERIOD OF RECORD.--April 1874 to current year. Monthly discharges only for some periods, published in WSP 1306. July 1930 to December 1935, published as "at Hales Bar, near Chattanooga." Gage-height records collected in this vicinity since 1874 are contained in reports of U. S. Weather Bureau.

REVISED RECORDS.--WSP 353: 1874-1912. WSP 783: 1917. WSP 823: 1875(M). WSP 973: 1942. WSP 1306: 1916(M). WSP 1386: 1932-34 (station at Hales Bar near Chattanooga).

GAGE.--Water-stage recorder. Datum of gage is 621.12 ft (189.317 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 1, 1939, nonrecording or recording gages at several sites from 7.0 mi (11.3 km) upstream from Chattanooga to Hales Bar Dam 33 mi (53 km) downstream at or within 0.2 ft (0.06 m) of present datum, except nonrecording gage at Bridgeport, AL, 49.9 mi (80.3 km) downstream at different datum Oct. 22, 1913, to Feb. 28, 1915, and Oct. 1, 1918, to Jan. 5, 1921. Auxiliary gages at several sites parts of periods since Feb. 28, 1915. Present auxiliary gage at site 2.2 mi (3.5 km) downstream from base gage at same datum.

REMARKS.--Records excellent. Flow regulated since 1936 by increasing number of upstream reservoirs (see p. 308 and Water Resources Data for adjoining states, 1979).

AVERAGE DISCHARGE.--105 years, 37,240 ft³/s (1,055 m³/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 410,000 ft³/s (11,600 m³/s) Mar. 1, 1875, gage height, 53.8 ft (16.40 m), present datum, at Walnut Street, from rating curve extended above 250,000 ft³/s (7,080 m³/s); minimum daily, 1,200 ft³/s (34.0 m³/s) Nov. 1, 1953; minimum gage height, 0.0 ft (0.00 m) Sept. 11-14, 1881, Sept. 19, 1883.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 57.9 ft (17.65 m) Mar. 11, 1867, present datum at Walnut Street, discharge about 459,000 ft³/s (13,000 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 145,000 ft³/s (4,110 m³/s) Mar. 5, gage height, 27.59 ft (8.410 m); maximum gage height at Walnut Street, 25.85 ft (7.879 m) Mar. 5; minimum daily discharge, 12,400 ft³/s (351 m³/s) Nov. 5, minimum gage height, 11.16 ft (3.402 m) July 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16500	23400	24000	49600	66400	96000	38600	33300	92000	31400	52100	42700
2	19800	19000	18300	57600	56400	94300	33400	31100	79800	29300	48300	42600
3	21900	15200	18300	65100	51100	98700	36800	34700	58300	33000	46000	42000
4	18000	15100	29500	62000	51100	127000	43600	42400	49800	24300	43600	41300
5	19600	12400	32900	53600	46600	142000	26800	41300	50200	24900	40100	37100
6	18700	14600	33600	51300	43100	136000	26100	31500	46900	35300	42200	31900
7	18600	17400	29200	67000	41200	127000	28800	25700	38700	34800	41900	34300
8	18400	16100	26300	70000	44400	127000	29300	29200	36000	32700	38400	36200
9	25800	15200	29300	71800	42800	128000	27200	31300	36200	31200	40400	35000
10	30300	16400	48100	71500	44300	123000	28300	31800	41200	28400	35400	36900
11	23700	16300	48100	74200	41400	115000	35900	33300	38800	34400	38400	39900
12	18000	14000	44000	75200	36500	106000	41400	33500	32200	43700	39700	42300
13	18400	18100	42000	70700	37000	94800	49900	30100	30600	36100	41200	43200
14	17500	16100	39300	64700	31700	84100	54900	29900	36800	34700	41000	36500
15	15700	16000	43900	61200	35700	81200	69100	31400	32200	42900	41000	26400
16	24000	16100	33900	52600	32700	76600	65700	32200	32500	42800	40900	29400
17	20000	18400	24800	44600	31800	61000	55200	29700	26800	43100	39200	33600
18	23300	19100	32500	44300	34700	45400	50400	34300	33500	42100	41000	38600
19	27000	18200	34000	44500	33000	43500	43700	27300	31600	41700	39500	31900
20	19500	24600	35700	51800	34100	43500	32600	28000	31300	44000	36800	34400
21	17500	25600	32600	79200	33300	43900	42000	30000	33500	55200	35700	36300
22	15100	26600	35300	99400	42900	42200	29600	30700	30600	79800	39300	41900
23	17000	19900	39400	98800	44900	41900	29000	34000	35200	83300	41900	47000
24	18100	19000	33700	99600	51500	44300	32800	56900	26700	79300	41300	39500
25	17400	22100	28700	95800	65000	47400	28400	57000	32100	74700	38500	36200
26	16400	19200	29200	86000	78400	44300	26100	47000	30000	74300	37300	36100
27	15400	26200	33100	80100	90700	42600	34500	38100	30700	69200	37900	39300
28	16600	30600	37300	79300	98800	41700	32700	27500	32000	62000	41900	56100
29	14100	27700	37300	76700	---	43200	31000	30600	33900	61500	43300	61500
30	17800	23100	36900	73200	---	43400	29700	40900	31600	58700	41600	55800
31	21600	---	43100	71900	---	43400	---	58800	---	54700	43300	---
TOTAL	601700	581700	1054300	2143300	1341500	2428400	1133500	1093500	1171700	1463500	1269100	1185900
MEAN	19410	19390	34010	69140	47910	78340	37780	35270	39060	47210	40940	39530
MAX	30300	30600	48100	99600	98800	142000	69100	58800	92000	83300	52100	61500
MIN	14100	12400	18300	44300	31700	41700	26100	25700	26700	24300	35400	26400
CAL YR 1978 TOTAL	11734000	MEAN	32150	MAX	104000	MIN	11300					
WTR YR 1979 TOTAL	15468100	MEAN	42380	MAX	142000	MIN	12400					

TENNESSEE RIVER BASIN

03571000 SEQUATCHIE RIVER NEAR WHITWELL, TN

LOCATION.--Lat 35°12'22", long 85°29'48", Marion County, Hydrologic Unit 06020004, on right bank 15 ft (5 m) downstream from county road bridge, 1.5 mi (2.4 km) east of Whitwell, 3.0 mi (4.8 km) upstream from bridge on State Highway 27, 4.5 mi (7.2 km) downstream from Griffith Creek, and at mile 25.1 (40.4 km).

DRAINAGE AREA.--402 mi² (1,041 km²), includes 18 mi² (47 km²) without surface drainage.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1920 to current year. Prior to December 1920 monthly discharges only, published in WSP 1306.

REVISED RECORDS.--WSP 603: 1922(M). WSP 758: 1929(M). WSP 1033: 1943(M). WSP 1386: 1921-22, 1923-25(M), 1927-28(M), 1930(M), 1933(M). WSP 1910: Drainage area. WDR TN-76-1: 1973-75(P).

GAGE.--Water-stage recorder. Datum of gage is 632.73 ft (192.856 m) Tennessee Valley Authority datum. Prior to Sept. 18, 1927, nonrecording gage at same site at datum 0.03 ft (0.009 m) higher. Sept. 18, 1927, to Sept. 30, 1930, nonrecording gage at bridge 15 ft (5 m) upstream at present datum.

REMARKS.--Records good. Prior to 1950 some diurnal fluctuation caused by small mills above station.

AVERAGE DISCHARGE.--59 years, 750 ft³/s (21.24 m³/s), 25.34 in/yr, (644 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft³/s (920 m³/s) Mar. 16, 1973, gage height, 17.65 ft (5.380 m); minimum, 16 ft³/s (0.45 m³/s) Sept. 6-21, 27, 28, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1867 reached a stage of about 19 ft (5.8 m) from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,500 ft³/s (156 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	1330	8970 254	13.87 4.228	May 24	1130	6260 177	13.09 3.990
Jan. 22	0330	7830 222	13.57 4.136	June 1	0300	7980 226	13.61 4.148
Mar. 4	2400	*10800 306	a14.27 4.350	Sept. 29	0130	7580 215	13.50 4.115
Apr. 14	0430	6540 185	13.18 4.017				

a From Floodmark

Minimum discharge, 51 ft³/s (1.44 m³/s) Nov. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	56	118	3970	683	1890	636	523	6740	190	317	163
2	75	54	132	8210	601	1420	794	482	3160	169	282	205
3	74	54	121	6490	570	1300	2350	473	2750	166	272	230
4	75	54	164	3970	532	6060	3370	594	2360	163	234	220
5	73	54	421	2030	491	8120	2620	879	1640	158	211	204
6	71	53	611	1420	475	4610	1710	894	1300	158	196	177
7	69	53	420	2930	539	2630	1300	756	1040	151	185	159
8	68	53	295	4770	553	1810	1150	635	848	170	177	145
9	67	56	1380	3420	540	1350	1030	547	698	184	172	137
10	66	55	1670	2240	502	1150	944	488	598	282	172	131
11	65	52	1220	1500	491	1150	841	442	532	272	168	128
12	65	52	764	1160	483	1070	1390	431	479	242	165	125
13	63	53	528	992	518	968	5080	420	425	211	159	125
14	64	52	409	859	585	900	6060	396	386	211	159	154
15	64	52	337	716	698	879	4060	368	345	225	156	211
16	62	56	298	614	882	805	2440	340	314	387	150	179
17	61	62	287	553	904	742	1620	312	293	273	145	161
18	60	64	288	522	850	687	1260	289	275	220	142	152
19	62	65	281	508	731	646	1060	272	259	261	139	142
20	62	67	274	2450	644	613	915	260	243	529	136	134
21	60	67	464	6730	996	609	797	365	233	553	134	134
22	59	64	931	7170	2000	589	701	335	224	531	133	147
23	58	65	876	5420	1800	1150	632	2300	216	553	136	163
24	58	65	671	3350	1650	2880	581	5950	207	814	136	154
25	58	65	568	2430	2830	2200	544	3530	201	1160	130	145
26	56	76	483	1690	4720	1520	686	1870	196	995	130	142
27	57	83	411	1380	4030	1180	827	1260	190	845	134	312
28	56	77	356	1170	2770	993	770	1120	182	701	142	5250
29	56	79	316	994	---	858	659	973	177	547	156	4960
30	55	94	367	873	---	756	594	995	178	425	152	1690
31	55	---	1580	785	---	677	---	4730	---	345	168	---
TOTAL	1969	1852	17041	81316	33068	52212	47421	33229	26689	12091	5288	16379
MEAN	63.5	61.7	550	2623	1181	1684	1581	1072	890	390	171	546
MAX	75	94	1670	8210	4720	8120	6060	5950	6740	1160	317	5250
MIN	55	52	118	508	475	589	544	260	177	151	130	125
CFSM	.16	.15	1.37	6.53	2.94	4.19	3.93	2.67	2.21	.97	.43	1.36
IN.	.18	.17	1.58	7.52	3.06	4.83	4.39	3.07	2.47	1.12	.49	1.52

CAL YR 1978 TOTAL 208437 MEAN 571 MAX 5650 MIN 52 CFSM 1.42 IN 19.29
WTR YR 1979 TOTAL 328555 MEAN 900 MAX 8210 MIN 52 CFSM 2.24 IN 30.40

03571000 SEQUATCHIE RIVER NEAR WHITWELL, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May to September 1979.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY										
22...	1430	316	170	7.7	19.0	--	--	--	--	--
JUN										
11...	1700	532	170	7.8	19.5	--	--	--	--	--
JUL										
05...	1400	170	210	8.2	22.0	--	--	--	--	--
AUG										
13...	1500	162	220	8.0	21.5	--	--	--	--	--
SEP										
04...	1700	236	155	7.4	22.0	69	10	22	3.4	2.0

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
MAY										
22...	--	--	--	72	7.2	--	--	--	105	--
JUN										
11...	--	--	--	78	7.3	--	--	--	107	--
JUL										
05...	--	--	--	97	5.5	--	--	--	126	--
AUG										
13...	--	--	--	98	7.4	--	--	--	--	--
SEP										
04...	6	.1	.9	60	10	2.8	.0	4.8	100	81

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY									
22...	.14	89.6	60	20	30	30	26	22	82
JUN									
11...	.15	154	480	0	60	30	22	32	82
JUL									
05...	.17	57.8	290	20	40	20	10	4.6	--
AUG									
13...	--	--	390	30	40	50	10	4.4	--
SEP									
04...	.14	63.7	2000	20	70	20	45	29	--

TENNESSEE RIVER BASIN

03571000 SEQUATCHIE RIVER NEAR WHITWELL, TN--Continued

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
SEP 04...	.48	.030	3	0	0	1	<10	<10	<10	20	4	<10

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CYANIDE TOTAL (MG/L AS CN)
SEP 04...	14000	6	20	5000	<.5	.00	0	0	1	20	40	.00

TENNESSEE RIVER BASIN

251

03571200 SEQUATCHIE RIVER AT WHITWELL WATERWORKS, NEAR WHITWELL, TN

LOCATION.--Lat 35°11'53", long 85°30'31", Marion County, Hydrologic Unit 06020004, at Whitwell city limits, 0.9 mi (1.4 km) upstream from State Route 27 bridge, 2.3 mi (3.7 km) east of Mt. Olive, 3.9 mi (6.3 km) northeast of Victoria, and at mile 23.2 (37.3 km).

DRAINAGE AREA.--410 mi² (1,062 km²).

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	TURBIDITY (JTU)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)	SODIUM, TOTAL RECOVERABLE (MG/L AS NA)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K)	ALKALINITY (MG/L AS CaCO3)
JAN 08...	1210	110	7.1	8.0	14	29	2	17	2.3	1.0	1.1	30
DATE	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, RESIDUE AT 105 DEG. C. SUSPENDED (MG/L)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOVERABLE (UG/L AS B)
JAN 08...	17	3.0	70	.10	49	.59	.05	.11	.060	2100	<2	80
DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	
JAN 08...	<1	<5	20	2100	<10	120	.5	<10	<1	140	3.5	

TENNESSEE RIVER BASIN

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN
(National stream-quality accounting network station)

LOCATION.--Lat 35°00'41", long 85°41'51", Marion County, Hydrologic Unit 06030001, on right bank at South Pittsburg Ferry landing on Tennessee State Highway 156, 0.5 mi (0.8 km) downstream from Battle Creek, 0.5 mi (0.8 km) east of South Pittsburg, 4.6 mi (7.4 km) downstream from Sequatchie River, 6.5 mi (10.5 km) downstream from Nickajack Dam, and at mile 418.2 (672.9 km).

DRAINAGE AREA.--22,640 mi² (58,640 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1930 to current year. Published as "at Hales Bar, near Chattanooga, Tenn." July 1930 to July 1966.

REVISED RECORDS.--WSP 853: Drainage area. WSP 973: 1942. WSP 1306 (monthly runoff). WSP 1386: 1932-34.

GAGE.--Water-stage recorder. Datum of gage is 581.01 ft (177.092 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 13, 1932, at site 12.9 mi (20.8 km) upstream at datum 7.85 ft (2.393 m) higher. Feb. 13, 1932, to July 17, 1966, at site 11.5 mi (18.5 km) upstream at datum 7.50 ft (2.286 m) higher. Since Jan. 27, 1939, auxiliary water-stage recorder at site 10.6 mi (17.1 km) downstream.

REMARKS.--Records good. Flow regulated since 1936 by increasing number of reservoirs above station (see p. 308 and Water Resources Data for adjoining states, 1979).

AVERAGE DISCHARGE.--49 years, 37,900 ft³/s (1,073 m³/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 315,000 ft³/s (8,920 m³/s) Mar. 18, 1973, gage height, 34.33 ft (10.464 m); minimum daily, 2,900 ft³/s (82.1 m³/s) Nov. 1, 15, 1953; minimum gage height, 1.21 ft (0.369 m) Oct. 27, 1931, site and datum used 1932-65.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 44.6 ft (13.59 m) March 1867, site and datum used 1932-65. Flood of Mar. 8, 1917, reached a stage of 37.4 ft (11.40 m), site and datum used 1932-65, discharge, 320,000 ft³/s (9,060 m³/s), from rating curve extended above 225,000 ft³/s (6,370 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 181,300 ft³/s (5,130 m³/s), Mar. 5, gage height, 27.20 ft (8.291 m); minimum daily, 14,400 ft³/s (408 m³/s) Nov. 8; minimum gage height, 11.88 ft (3.364 m) Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18400	24500	26400	76600	77400	104000	42500	36600	116000	36000	58200	47100
2	22800	18900	18300	88900	67900	105000	38400	34800	101000	35800	51800	47400
3	22600	17800	21300	86900	59200	107000	44100	39300	68200	37500	48000	48500
4	21300	18200	33700	77400	58900	160000	50000	52200	62600	27300	45500	48000
5	21100	14900	37500	69800	57200	169000	35000	45300	55200	28300	43200	45000
6	19700	19400	38400	60500	47100	158000	35000	36000	53500	38800	47300	43300
7	19200	19100	34500	81800	46300	147000	35000	38800	52800	34400	47600	32200
8	19900	14400	32000	89200	48500	142000	35000	32500	48000	36400	47400	36100
9	25200	20400	37200	88800	48200	141000	40000	36300	44300	36600	46400	37800
10	32100	18700	56000	86200	49200	134000	35000	38500	42600	32400	41000	43400
11	27200	19600	56300	85400	46400	127000	50000	37100	37600	38400	41000	44900
12	20000	17400	51100	86600	41400	120000	60000	31800	36400	47800	40800	46400
13	20300	20600	50700	83000	40400	108000	75000	30400	34100	42900	44300	47700
14	19200	17300	45300	76400	36500	97500	80000	35800	40500	41300	44300	41600
15	15600	17600	48600	72000	40500	98000	85000	35700	35500	47200	46100	29400
16	24700	16000	38600	60600	40000	94900	77000	35700	35600	47000	43000	33700
17	21200	20900	27600	50700	36400	74400	67900	31300	30400	48400	41500	40200
18	26400	19800	36900	51400	37300	50700	58900	37500	39400	47800	46200	47900
19	28000	18300	40600	53600	37900	50000	49000	32000	39700	45900	44200	35900
20	22500	27300	41600	70300	39400	49800	36500	29000	37100	47900	41800	34300
21	18300	25800	38000	97300	38800	49900	44600	36700	35300	65500	40900	36800
22	16800	29700	41000	125000	51200	53900	33900	35000	35600	90600	39700	48100
23	19000	19000	49000	119000	54200	52800	35600	38600	35900	95000	46800	47800
24	19300	19100	39000	118000	69200	56500	37000	75900	26500	88800	44300	44900
25	18600	23600	36700	114000	87400	63000	31600	71700	34100	86100	45400	40500
26	18300	22200	35700	101000	100000	58400	31500	53800	32900	87300	41500	46000
27	17300	29900	41900	92700	98000	54200	37600	46500	33500	83300	44700	49800
28	19100	32000	43900	91500	108000	53900	37500	32800	36000	71100	47600	81800
29	17100	29400	44600	90500	---	54000	37500	39600	36600	68800	49700	81700
30	20000	25700	47200	82200	---	53700	35400	46900	35500	68900	47800	65500
31	24400	---	58800	86300	---	53800	---	75400	---	61700	43400	---
TOTAL	655600	637500	1248400	2613600	1562900	2841400	1391500	1279500	1352400	1665200	1401400	1373700
MEAN	21150	21250	40270	84310	55820	91660	46380	41270	45080	53720	45210	45790
MAX	32100	32000	58800	125000	108000	169000	85000	75900	116000	95000	58200	81800
MIN	15600	14400	18300	50700	36400	49800	31500	29000	26500	27300	39700	29400
CAL YR 1978 TOTAL	14122300			MEAN 38690		MAX 125000		MIN 14400				
WTR YR 1979 TOTAL	18023100			MEAN 49380		MAX 169000		MIN 14400				

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1975 to current year.

WATER TEMPERATURES: July 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since July 1975.

REMARKS.--Interruptions in record due to recorder malfunction. Flow regulated by many reservoirs (see p.308 and Water Resources Data for adjoining states, 1979).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 209 micromhos Oct. 3-5, 1978; minimum recorded, 94 micromhos Dec. 31, 1975.

WATER TEMPERATURES: Maximum recorded, 31.0°C Aug. 26-28, 30, 1975, June 15, 1978; minimum recorded, 2.0°C Jan. 22, 1977, Feb. 7, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 209 micromhos Oct. 3-5; minimum recorded, 106 micromhos Oct. 28.

WATER TEMPERATURES: Maximum recorded, 27.5°C Aug. 9, 10; minimum recorded, 4.5°C Feb. 3-7.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT												
11...	1200	31400	170	6.8	22.5	2.0	8.0	99	45	76	19	22
NOV												
20...	1300	29400	180	6.8	17.0	2.0	6.0	K15	K4	76	19	22
DEC												
14...	1145	48800	175	7.5	12.0	66	7.4	270	90	69	12	20
JAN												
30...	1200	85200	145	6.3	6.0	17	12.5	330	480	59	15	17
FEB												
28...	1200	113000	140	6.9	7.5	35	10.8	400	190	62	17	18
MAR												
28...	1300	55500	140	7.6	10.5	9.0	8.8	100	360	58	15	17
MAY												
03...	1130	37400	130	6.9	18.5	7.0	6.6	<1	<1	55	3	16
31...	1300	70900	125	--	20.0	3.0	6.5	2400	2600	50	2	15
JUL												
13...	0945	26800	145	7.7	24.0	5.0	--	1100	190	62	8	18
AUG												
29...	1600	48300	155	7.6	25.5	5.0	--	133	55	66	9	19

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT											
11...	5.2	8.8	20	.4	1.7	57	17	11	.1	5.8	112
NOV											
20...	5.1	10	22	.5	1.7	57	17	12	.1	5.0	112
DEC											
14...	4.7	7.8	19	.4	1.5	57	16	9.4	.1	4.6	110
JAN											
30...	4.0	5.4	16	.3	1.4	44	15	6.6	.1	5.3	89
FEB											
28...	4.1	4.3	13	.2	1.1	45	13	5.2	.1	5.0	85
MAR											
28...	3.7	4.1	13	.2	1.1	43	12	5.2	.0	5.6	78
MAY											
03...	3.6	3.7	13	.2	1.0	52	8.9	4.4	.1	5.1	81
31...	3.1	3.8	14	.2	1.1	48	10	4.6	.1	4.8	76
JUL											
13...	4.1	5.0	15	.3	1.2	54	10	5.9	.1	5.4	94
AUG											
29...	4.4	5.9	16	.3	1.3	57	11	6.5	.1	5.8	98

K--Results based on colony count outside acceptable range (non-ideal colony count)

TENNESSEE RIVER BASIN

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 11...	.15	9500	.31	.05	.16	.21	.10	.52	.030	.030	--
NOV 20...	.15	8890	.26	.07	.40	.47	.30	.73	.030	.020	2.8
DEC 14...	.15	14500	.34	.04	.16	.20	.16	.54	.030	.020	1.8
JAN 30...	.12	20500	.53	.05	.07	.12	.05	.65	.040	.010	--
FEB 28...	.12	25900	.49	.03	.16	.19	.11	.68	.060	.010	2.6
MAR 28...	.11	11700	.51	.02	.14	.16	.17	.67	.030	.030	4.2
MAY 03...	.11	8180	.33	.05	.09	.14	.08	.47	.030	.030	--
31...	.10	14500	.33	.04	1.3	1.3	.19	1.6	.050	.020	3.0
JUL 13...	.13	6800	.33	.07	.09	.16	.18	.49	.030	.020	--
AUG 29...	.13	12800	.37	.04	.15	.19	.14	.56	.040	.020	1.8

DATE	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	PERI- PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 11...	--	--	--	--	--	--	--	--	7	593	86
NOV 20...	--	--	300	--	--	--	--	--	10	794	81
DEC 14...	--	--	--	--	--	--	--	--	3	395	86
JAN 30...	1.7	.6	--	--	--	--	--	--	15	3450	97
FEB 28...	--	--	--	--	--	--	--	--	35	10700	92
MAR 28...	--	--	520	--	.320	.320	.160	.000	9	1350	95
MAY 03...	3.6	.3	--	--	--	--	--	--	8	808	85
31...	--	--	550	39.2	4.65	6.22	40.1	.000	49	9380	77
JUL 13...	3.4	--	810	--	--	--	--	--	16	1160	70
AUG 29...	--	--	1700	142	1.02	1.65	4.44	3.85	11	1440	79

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

WATER QUALITY DATA WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
OCT 11...	1	1	0	0	2	1	10	0	1
JAN 30...	1	1	0	0	0	0	10	2	2
MAY 03...	3	1	0	0	0	0	20	10	0
JUL 13...	2	0	100	30	2	0	20	10	1

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 11...	0	2	1	20	0	21	7	50	10
JAN 30...	2	0	0	510	20	1	0	70	20
MAY 03...	0	2	1	280	10	2	0	70	30
JUL 13...	1	5	2	320	10	6	2	60	9

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 11...	<.5	<.5	0	0	0	0	10	10
JAN 30...	.9	.6	0	0	2	0	0	0
MAY 03...	.5	.5	0	0	0	0	50	0
JUL 13...	<.5	<.5	0	0	0	0	50	10

TENNESSEE RIVER BASIN

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)
NOV 20...	ND	ND	--	ND	--	ND	--	ND	--	ND
FEB 28...	ND	ND	--	ND	--	ND	--	ND	--	ND
MAY 31...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 29...	ND	ND	--	ND	--	ND	--	ND	--	ND

DATE	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 20...	--	ND	--	ND	--	ND	ND	--	ND	--
FEB 28...	--	ND	--	ND	--	ND	ND	--	ND	--
MAY 31...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 29...	--	ND	--	ND	--	ND	ND	--	ND	--

DATE	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)
NOV 20...	ND	--	ND	--	ND	--	ND	--	ND
FEB 28...	ND	--	ND	--	ND	--	ND	--	ND
MAY 31...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 29...	ND	--	ND	--	ND	--	ND	--	ND

DATE	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 20...	--	ND	--	ND	--	ND	--	ND	--
FEB 28...	--	ND	--	ND	--	ND	--	ND	--
MAY 31...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 29...	--	ND	--	ND	--	ND	--	ND	--

TENNESSEE RIVER BASIN

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03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 20,78 1300	MAR 28,79 1300	MAY 31,79 1300	JUL 13,79 0945	AUG 29,79 1600
TOTAL CELLS/ML	300	520	550	810	1700
DIVERSITY: DIVISION	0.3	0.5	0.8	1.0	1.6
..CLASS	0.3	0.5	0.8	1.0	1.6
...ORDER	0.7	0.9	1.6	1.0	2.0
...FAMILY	0.8	1.1	1.7	1.0	2.3
....GENUS	1.7	1.5	2.3	1.0	2.8

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
...HYDRODICTYACEAE										
...PEDIASTRUM	--	-	--	-	--	-	--	-	53	3
...OOCYSTACEAE										
...ANKISTRODESMUS	14	5	5	1	--	-	--	-	38	2
...SELENASTRUM	--	-	--	-	--	-	--	-	*	0
...SCENEDESMACEAE										
...ACTINASTRUM	--	-	--	-	--	-	--	-	120	7
...CRUCIGENIA	--	-	--	-	51	9	--	-	--	-
...SCENEDESMUS	--	-	15	3	51	9	100	13	150	9
...TETRASPORALES										
...COCCOMYXACEAE										
...ELAKATOTHRIX	--	-	--	-	26	5	--	-	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
...CHLAMYDOMONAS	--	-	40	8	13	2	--	-	75	5
...ZYGNEATALES										
...DESMIDIACEAE										
...STAUSTRUM	--	-	--	-	--	-	--	-	15	1
CHRYSTOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
...COSCINODISCAEAE										
...CYCLOTELLA	130#	43	380#	73	--	-	38	5	420#	25
...MELOSIRA	130#	43	50	10	300#	53	--	-	110	6
...STEPHANODISCUS	--	-	--	-	39	7	--	-	--	-
...THALASSIOSIRA	--	-	--	-	--	-	--	-	*	0
...PENNALES										
...CYMBELLACEAE										
...CYMBELLA	--	-	5	1	--	-	--	-	--	-
...FRAGILARIACEAE										
...ASTERIONELLA	--	-	--	-	51	9	--	-	--	-
...FRAGILARIA	14	5	5	1	--	-	--	-	--	-
...SYNEDRA	--	-	--	-	13	2	--	-	*	0
...NAVICULACEAE										
...NAVICULA	--	-	5	1	--	-	13	2	--	-
...NITZSCHIAEAE										
...NITZSCHIA	14	5	10	2	13	2	--	-	53	3
...SURIRELLACEAE										
...SURIRELLA	--	-	5	1	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
...CRYPTOMONADACEAE										
...CRYPTOMONAS	--	-	--	-	--	-	--	-	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...HORMOGONALES										
...OSCILLATORIACEAE										
...OSCILLATORIA	--	-	--	-	--	-	640#	79	--	-
...SCHIZOTHRIX	--	-	--	-	--	-	--	-	590#	35
...SPIRULINA	--	-	--	-	--	-	--	-	15	1
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
...EUGLENACEAE										
...EUGLENA	--	-	--	-	--	-	13	2	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

TENNESSEE RIVER BASIN

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	208	203	206	172	159	161						
2	208	141	203	162	160	161						
3	209	196	205	---	---	---						
4	209	189	204	---	---	---						
5	209	196	203	---	---	---						
6	207	199	202	---	---	---						
7	208	198	204	---	---	---						
8	208	201	205	---	---	---						
9	208	200	205	168	161	166						
10	208	185	203	169	146	166						
11	206	165	180	170	108	163						
12	175	166	172	171	163	169						
13	174	163	170	173	169	171						
14	170	163	167	175	154	171						
15	169	161	166	176	166	173						
16	168	157	165	175	157	172						
17	167	158	164	177	114	173						
18	167	147	162	179	174	178						
19	165	155	162	181	177	180						
20	162	149	159	---	---	---						
21	161	152	158	---	---	---						
22	160	151	157	---	---	---						
23	158	117	153	---	---	---						
24	156	126	152	---	---	---						
25	155	144	152	---	---	---						
26	157	110	148	---	---	---						
27	156	151	154	---	---	---						
28	159	106	151	---	---	---						
29	156	151	154	---	---	---						
30	158	121	154	---	---	---						
31	160	159	159	---	---	---						
MONTH	209	106	174	181	108	170						
	FEBRUARY			MARCH			APRIL			MAY		
1	196			181	167	172	143	139	142			
2	212			184	128	167	143	118	140			
3	213			167	153	163	150	126	141			
4	395			167	159	163	143	119	137			
5	217			168	108	162	143	119	135			
6	215			168	109	162	144	114	137			
7	214			167	134	162	143	130	137			
8	218			167	160	164	140	131	136			
9	---			171	139	161	138	126	135			
10	---			165	134	157	139	120	136			
11	---			163	142	150	140	133	137			
12	---			161	110	154	138	114	130			
13	---			---	---	---	139	124	135			
14	---			---	---	---	140	126	134			
15	---			---	---	---	140	133	137			
16	---			---	---	---	---	---	---			
17	---			---	---	---	---	---	---			
18	---			---	---	---	---	---	---			
19	---			---	---	---	---	---	---			
20	---			---	---	---	---	---	---			
21	---			---	---	---	---	---	---			
22	---			---	---	---	---	---	---			
23	---			---	---	---	---	---	---			
24	---			---	---	---	---	---	---			
25	---			---	---	---	---	---	---			
26	---			---	---	---	---	---	---			
27	---			---	---	---	---	---	---			
28	---			---	---	---	---	---	---			
29	---			---	---	---	---	---	---			
30	---			144	116	138	---	---	---			
31	---			145	124	141	---	---	---			
MONTH	395			148	139	144	150	114	137			

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	6.5	5.5	6.0	---	---	---	13.5	11.0	12.5			
2	7.5	5.0	6.5	---	---	---	14.0	12.5	13.0			
3	6.5	5.0	6.0	---	---	---	14.5	13.0	13.5			
4	6.0	4.5	5.5	---	---	---	14.5	13.5	14.0			
5	6.0	4.5	6.0	---	---	---	15.0	14.0	14.5			
6	6.0	4.5	6.0	---	---	---	15.5	14.0	14.5			
7	7.5	4.5	7.0	---	---	---	15.5	14.5	15.0			
8	---	---	---	---	---	---	16.0	14.5	15.5			
9	---	---	---	---	---	---	16.0	14.5	15.5			
10	---	---	---	---	---	---	16.0	14.5	15.5			
11	---	---	---	---	---	---	16.0	14.0	15.0			
12	---	---	---	---	---	---	16.5	10.0	14.5			
13	---	---	---	---	---	---	16.5	14.5	15.0			
14	---	---	---	---	---	---	16.5	14.0	15.0			
15	---	---	---	---	---	---	15.5	14.5	15.0			
16	---	---	---	---	---	---	15.5	14.5	15.0			
17	---	---	---	---	---	---	15.0	14.5	15.0			
18	---	---	---	---	---	---	15.5	15.0	15.0			
19	---	---	---	---	---	---	15.5	15.5	15.5			
20	---	---	---	---	---	---	15.5	15.5	15.5			
21	---	---	---	---	---	---	16.0	15.5	15.5			
22	---	---	---	---	---	---	16.0	16.0	16.0			
23	---	---	---	---	---	---	16.0	16.0	16.0			
24	---	---	---	---	---	---	16.5	16.5	16.5			
25	---	---	---	---	---	---	16.5	16.5	16.5			
26	---	---	---	---	---	---	16.5	16.5	16.5			
27	---	---	---	---	---	---	17.0	17.0	17.0			
28	---	---	---	---	---	---	17.0	17.0	17.0			
29	---	---	---	11.5	10.5	11.0	17.5	17.5	17.5			
30	---	---	---	12.0	10.5	11.5	17.5	17.5	17.5			
31	---	---	---	12.5	11.0	11.5	---	---	---			
MONTH	7.5	4.5	6.0	12.5	10.5	11.5	17.5	10.0	15.5			
JUNE				JULY			AUGUST			SEPTEMBER		
1	20.0	19.0	20.0	26.0	24.5	25.0	25.5	24.5	24.5	25.5	25.0	25.5
2	21.0	19.5	20.5	25.5	24.5	25.0	26.0	24.5	25.0	25.5	25.0	25.0
3	21.5	20.0	21.0	26.0	24.5	25.0	26.0	25.0	25.5	25.5	25.0	25.0
4	21.5	20.5	21.5	26.0	24.5	25.5	26.0	25.5	25.5	25.5	25.0	25.0
5	22.0	21.0	22.0	26.0	25.0	25.5	26.5	25.5	26.0	25.5	25.0	25.0
6	22.0	21.5	22.0	26.0	25.5	25.5	26.5	25.5	26.0	25.5	25.0	25.5
7	22.0	21.5	22.5	25.5	25.0	25.5	27.0	25.5	26.0	25.5	25.0	25.5
8	22.5	21.5	22.5	25.0	24.5	25.0	27.0	26.0	26.5	25.5	25.0	25.0
9	23.5	22.0	23.0	25.0	24.5	24.5	27.5	26.0	26.5	25.5	24.5	25.0
10	23.5	22.5	23.5	24.5	24.0	24.0	27.5	26.0	26.5	25.5	24.5	25.0
11	23.5	22.0	23.5	24.0	24.0	24.0	27.0	26.0	26.5	25.5	24.5	25.0
12	23.5	22.5	23.5	24.0	24.0	24.0	26.5	26.0	26.0	25.0	24.5	25.0
13	24.0	23.0	24.0	24.5	23.5	24.0	26.5	25.5	26.0	24.5	24.5	24.5
14	24.0	23.0	24.0	25.0	24.0	24.0	26.5	25.5	26.0	24.5	23.5	23.5
15	24.0	23.5	24.5	25.5	24.0	24.5	26.0	25.5	25.5	24.0	23.0	23.5
16	24.5	23.5	24.5	25.5	24.5	25.0	26.0	25.0	25.5	23.5	22.5	23.0
17	24.5	23.5	24.0	26.0	25.0	25.5	26.0	25.0	25.5	23.0	23.0	23.0
18	25.0	23.5	24.0	26.0	25.5	25.5	26.0	25.0	25.5	23.0	22.5	22.5
19	25.5	24.0	24.5	26.5	25.5	26.0	26.0	25.0	25.5	23.0	22.5	22.5
20	25.5	24.0	24.5	26.0	25.5	26.0	26.0	25.5	25.5	22.5	22.0	22.5
21	24.5	24.5	24.5	26.0	25.5	25.5	26.0	25.5	26.0	22.5	22.0	22.5
22	25.5	24.0	24.5	25.5	25.0	25.5	26.0	25.5	26.0	22.5	22.0	22.0
23	26.0	24.5	25.0	25.0	24.5	24.5	26.0	25.5	26.0	22.0	21.5	22.0
24	25.0	24.5	24.5	24.5	24.0	24.5	26.5	26.0	26.0	22.0	21.5	21.5
25	24.5	24.0	24.5	24.0	23.0	24.0	26.0	25.5	26.0	22.0	21.0	21.5
26	25.0	24.0	24.5	23.5	23.0	23.0	26.0	25.5	25.5	22.0	21.0	21.5
27	25.5	24.0	24.5	23.5	22.5	23.0	26.0	25.5	25.5	21.5	20.5	21.5
28	25.5	24.5	25.0	24.0	23.0	23.5	26.0	25.5	25.5	20.5	18.0	19.5
29	25.5	24.5	25.0	24.5	23.5	24.0	25.5	25.0	25.5	19.5	18.5	19.0
30	26.0	24.5	25.0	24.5	24.0	24.0	25.5	25.0	25.5	20.0	19.0	19.5
31	---	---	---	25.0	24.0	24.5	26.0	25.0	25.5	---	---	---
MONTH	26.0	19.0	23.5	26.5	22.5	24.5	27.5	24.5	26.0	25.5	18.0	23.0

TENNESSEE RIVER BASIN

03578000 ELK RIVER NEAR PELHAM, TN

LOCATION.--Lat 35°17'48", long 85°52'12", Grundy County, Hydrologic Unit 06030003, on right bank at downstream side of bridge on U. S. Highway 41, 1.1 mi (1.8 km) southeast of Pelham, 1.8 mi (2.9 km) upstream from Caldwell Creek, and at mile 194.2 (312.5 km).

DRAINAGE AREA.--65.6 mi² (169.9 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1951 to current year. Prior to November 1951 monthly discharges only, published in WSP 1726.

REVISED RECORDS.--WRD TN 1973: 1963(P), 1965 (M), 1966(P), 1969(M), 1970-71(P).

GAGE.--Water-stage recorder. Datum of gage is 981.62 ft (299.198 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--28 years, 143 ft³/s (4.050 m³/s), 29.60 in/yr (752 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft³/s (447 m³/s) Mar. 16, 1973, gage height, 14.08 ft (4.292 m); minimum, 1.0 ft³/s (0.028 m³/s) Sept. 27, 28, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 1	2330	*3130 88.7	10.95 3.338	Apr. 13	0830	1890 53.5	9.99 3.045
Jan. 21	1400	2220 62.9	10.27 3.130	Sept. 28	1500	2070 58.6	10.16 3.097
Mar. 4	0930	3030 85.8	10.88 3.316				

Minimum discharge, 1.2 ft³/s (0.040 m³/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	1.7	16	1280	101	244	113	65	246	10	56	100
2	2.5	1.7	11	1990	86	190	340	59	149	9.5	52	156
3	2.4	1.7	7.7	648	85	229	714	57	160	9.1	52	222
4	2.4	1.7	37	277	93	2120	649	111	168	8.6	76	308
5	2.2	1.7	105	183	98	952	406	140	122	9.1	58	299
6	2.0	1.7	59	168	98	443	272	115	95	7.8	44	180
7	2.0	1.8	36	839	223	299	201	93	89	9.5	34	122
8	1.9	1.9	56	1010	198	212	162	79	71	9.1	27	86
9	1.9	1.8	416	370	172	163	149	68	56	10	23	66
10	1.8	1.8	356	193	143	182	133	60	47	11	19	55
11	1.7	1.9	151	158	134	272	110	52	41	11	32	47
12	1.8	2.1	97	126	134	210	551	46	35	11	82	41
13	2.0	2.3	73	106	164	170	1690	42	31	12	64	38
14	2.1	2.9	60	89	180	151	1040	40	27	14	46	65
15	1.8	3.1	52	71	260	141	516	36	24	16	35	73
16	1.8	5.1	49	62	368	118	307	32	21	13	29	52
17	1.7	6.6	79	58	262	102	224	28	20	12	24	44
18	1.8	8.0	75	67	201	91	158	25	18	10	20	40
19	1.8	9.2	67	69	165	85	137	23	16	10	17	38
20	1.9	7.4	61	438	147	86	114	22	15	67	15	36
21	1.8	6.0	260	1840	284	84	95	33	15	155	14	35
22	1.7	5.1	256	1040	437	78	83	57	15	106	76	48
23	1.5	6.4	140	444	289	299	76	360	15	68	60	48
24	1.5	7.5	96	501	324	589	73	833	15	54	185	41
25	1.6	11	92	364	947	443	69	383	14	140	578	35
26	1.8	12	72	253	944	282	81	199	13	545	382	33
27	1.8	12	59	211	415	211	105	140	13	243	667	162
28	1.8	14	50	192	311	171	94	256	12	125	413	1380
29	2.1	9.9	44	154	---	142	80	200	11	80	251	1010
30	1.6	18	83	130	---	121	72	146	11	58	168	363
31	1.6	---	619	119	---	103	---	346	---	62	145	---
TOTAL	59.4	168.0	3634.7	13450	7263	8983	8814	4146	1585	1905.7	3744	5223
MEAN	1.92	5.60	117	434	259	290	294	134	52.8	61.5	121	174
MAX	3.1	18	619	1990	947	2120	1690	833	246	545	667	1380
MIN	1.5	1.7	7.7	58	85	78	69	22	11	7.8	14	33
CFSM	.03	.09	1.78	6.62	3.95	4.42	4.48	2.04	.81	.94	1.85	2.65
IN.	.03	.10	2.06	7.63	4.12	5.09	5.00	2.35	.90	1.08	2.12	2.96

CAL YR 1978	TOTAL	32655.4	MEAN	89.5	MAX	1590	MIN	1.5	CFSM	1.36	IN	18.52
WTR YR 1979	TOTAL	58975.8	MEAN	162	MAX	2120	MIN	1.5	CFSM	2.47	IN	33.44

TENNESSEE RIVER BASIN

03578000 ELK RIVER NEAR PELHAM, TN--Continued

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--May to September 1979.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY 22...	1615	54	170	7.9	15.5	--	--	--	--	--
JUN 11...	1415	37	165	8.0	17.0	--	--	--	--	--
JUL 05...	1045	7.4	225	8.1	22.0	--	--	--	--	--
AUG 13...	1115	67	135	7.8	16.0	--	--	--	--	--
SEP 06...	1700	140	155	7.7	18.0	76	11	25	3.2	.9

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
MAY 22...	--	--	--	66	20	--	--	--	122	--
JUN 11...	--	--	--	69	18	--	--	--	111	--
JUL 05...	--	--	--	98	19	--	--	--	155	--
AUG 13...	--	--	--	57	11	--	--	--	--	--
SEP 06...	3	.0	.7	66	7.8	1.7	.0	5.3	96	84

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	.17	17.8	900	50	50	30	31	4.5	91
JUN 11...	.15	11.1	280	20	50	40	9	.90	80
JUL 05...	.21	3.12	330	50	90	60	9	.18	--
AUG 13...	--	--	530	80	30	40	10	1.8	--
SEP 06...	.13	36.3	400	50	50	40	13	4.9	--

TENNESSEE RIVER BASIN

03578000 ELK RIVER NEAR PELHAM, TN--Continued

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CR)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
SEP 06...	.47	.010	1	0	0	2	<10	<10	10	10	4	<10
DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CYANIDE TOTAL (MG/L AS CN)
SEP 06...	8800	4	30	480	<.5	.00	0	0	1	20	40	.00

03579100 ELK RIVER NEAR ESTILL SPRINGS, TN

LOCATION.--Lat 35°17'08", long 86°06'20", Franklin County, Hydrologic Unit 06030003, on left bank at bridge on Corn Mill Road, 1.7 mi (2.7 km) northeast of Estill Springs, 2.7 mi (4.3 km) downstream from Elk River Dam, 4.0 mi (6.4 km) upstream from U. S. Highway 41A bridge, and at mile 167.3 (269.2 km).

DRAINAGE AREA.--275 mi² (712 km²).

PERIOD OF RECORD.--October 1920 to current year. Monthly discharge only for some periods, published in WSP 1306 and 1726. Prior to January 1967 published as "at Estill Springs."

REVISED RECORDS.--WSP 803: 1929(M), 1934-35, WSP 1306: 1922(M).

GAGE.--Water-stage recorder. Datum of gage is 886.43 ft (270.184 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1926, nonrecording gage, and Oct. 1, 1926, to Dec. 31, 1966, water-stage recorder at site 4.0 mi (6.4 km) downstream at datum 27.33 ft (8.330 m) lower. Water-stage recorder at present site and datum since Nov. 22, 1966.

REMARKS.--Records good. Flow regulated by Woods Reservoir (station 03579000) 2.7 mi (4.3 km) upstream. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--59 years, 491 ft³/s (13.91 m³/s), 24.25 in/yr (616 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,100 ft³/s (1,080 m³/s) Mar. 16, 1973, gage height, 20.33 ft (6.197 m); minimum, 10 ft³/s (0.28 m³/s) Oct. 9, 10, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,850 ft³/s (194 m³/s) at 1800 hours Mar. 4, gage height, 11.03 ft (3.362 m); minimum, 26 ft³/s (0.74 m³/s) Oct. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	44	111	3760	349	786	439	280	425	35	154	326
2	35	51	111	3970	346	688	1280	284	503	36	162	1020
3	32	76	111	2480	346	891	2200	315	1140	36	420	728
4	32	72	118	1190	346	5560	2010	432	872	29	154	802
5	33	71	111	811	346	3950	1310	568	367	33	165	557
6	32	67	185	813	510	1570	584	481	303	39	170	698
7	30	64	286	2970	742	978	691	350	301	80	159	535
8	31	66	342	2160	648	706	767	314	301	118	156	310
9	31	61	1110	1380	649	697	763	222	302	121	149	70
10	29	57	590	847	475	700	533	222	204	111	143	83
11	29	55	492	679	349	924	418	222	108	107	142	328
12	28	52	363	641	348	738	2310	222	98	100	156	336
13	28	51	275	920	455	215	4300	222	80	95	161	586
14	31	48	220	574	764	843	3170	177	83	93	124	349
15	33	71	222	248	841	547	1640	106	85	98	56	63
16	32	149	224	190	555	440	1250	105	87	88	58	73
17	31	185	222	392	535	312	891	105	91	64	59	82
18	29	239	222	586	693	215	645	105	92	62	58	244
19	30	237	222	490	381	326	642	105	88	58	57	245
20	30	237	224	1390	346	211	500	108	88	500	59	88
21	29	237	436	3480	516	242	423	283	92	521	172	344
22	32	205	613	3940	1150	335	419	251	95	344	280	202
23	33	113	505	1770	1260	841	419	481	92	249	367	86
24	32	111	263	1280	1130	1570	419	1170	92	136	1050	211
25	38	109	294	1630	3040	678	327	1080	94	294	1550	101
26	50	111	296	1090	2670	509	284	483	85	815	1020	93
27	52	113	293	815	1600	731	284	613	77	920	887	1200
28	50	111	293	657	1210	554	283	604	62	495	887	3790
29	48	113	249	653	---	479	283	528	31	363	887	2890
30	47	111	181	651	---	479	283	424	32	256	830	1690
31	46	---	983	529	---	478	---	424	---	143	621	---
TOTAL	1078	3287	10167	42986	22600	28193	29767	11286	6370	6439	11313	18130
MEAN	34.8	110	328	1387	807	909	992	364	212	208	365	604
MAX	52	239	1110	3970	3040	5560	4300	1170	1140	920	1550	3790
MIN	28	44	111	190	346	211	283	105	31	29	56	63
(†)	-500	-1400	+500	-700	+300	+2500	+400	-200	0	+100	0	-100
MEAN‡	18.6	62.9	344	1364	818	990	1006	358	212	211	365	601
CFSM‡	.07	.23	1.25	4.96	2.97	3.60	3.66	1.30	.77	.77	1.33	2.18
IN.‡	.08	.26	1.44	5.72	3.10	4.15	4.08	1.50	.86	.88	1.53	2.44

CAL YR 1978 TOTAL 118864 MEAN 326 MAX 3410 MIN 24 MEAN‡ 327 CFSM‡ 1.19 IN.‡ 16.13
WTR YR 1979 TOTAL 191616 MEAN 525 MAX 5560 MIN 28 MEAN‡ 527 CFSM‡ 1.92 IN.‡ 26.04

† Change in contents, in cfs-days, in Woods Reservoir.

‡ Adjusted for change in contents.

TENNESSEE RIVER BASIN

03580750 ELK RIVER BELOW TIMS FORD DAM, TN

LOCATION.--Lat 35°11'32", long 86°16'52", Franklin County, Hydrologic Unit 06030003, on right bank 150 ft (50 m) upstream from bridge on State Highway 50, 0.3 mi (0.5 km) downstream from Tims Ford Dam, 3.6 mi (6.0 km) north of Lexie Crossroads, 9.5 mi (15.3 km) west of Winchester, and at mile 133 (214 km).

DRAINAGE AREA.--534 mi² (1,383 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES.--May 1971 to September 1979 (discontinued).

INSTRUMENTATION.--Temperature recorder since May 1971.

REMARKS.--Temperature recorder clock stopped July 11 to Aug. 1.

COOPERATION.--Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 25.0°C June 24, 25, 1971, July 23, 1972; minimum, 2.0°C Feb. 7, 8, Mar. 4, 5, 1978.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 19.5°C Aug. 24, 25; minimum, 4.5°C Feb. 1, 5, 9, 10, 17-20.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)
DEC 05...	1040	3800	190	7.1	12.0	9	2	2.7	4	--
FFB 13...	0840	3900	160	7.7	6.5	7	1	10.0	6	--
APR 10...	1015	3700	160	7.5	7.5	5	1	9.1	--	2.0
JUN 13...	1334	3620	160	7.4	9.0	4	1	6.0	--	1.0
AUG 23...	1530	3700	180	7.6	11.0	6	1	2.4	--	1.2

DATE	HARD- NESS (MG/L AS CAC03)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)
DEC 05...	--	32	3.5	1.7	1.0	79	11	4.0	80	.11
FFB 13...	--	27	3.7	4.1	.7	70	8.0	4.0	90	.12
APR 10...	74	--	--	--	--	63	8.0	5.0	90	.12
JUN 13...	74	--	--	--	--	67	9.0	4.0	90	.12
AUG 23...	78	--	--	--	--	67	9.0	4.0	90	.12

03580750 ELK RIVER BELOW TIMS FORD DAM, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
DEC 05...	821	4	.19	.31	.09	.020	--	720	<1	40
FFR 13...	948	2	.33	.04	.10	.010	--	<200	<1	<10
APR 10...	899	2	.56	.07	.21	.020	.03	--	<1	30
JUN 13...	880	2	.94	<.01	.13	.010	.01	--	<1	<10
AUG 23...	899	<1	.99	.05	.16	.010	<.01	--	<1	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
DEC 05...	320	--	<10	1500	--	<.2	120	70	2.9	--
FFR 13...	<50	--	<10	50	--	<.2	<10	20	2.1	--
APR 10...	--	<50	17	--	20	<.2	--	40	2.4	--
JUN 13...	--	<50	<10	--	70	<.2	--	10	2.7	--
AUG 23...	--	<50	<10	--	480	.2	--	150	--	2.5

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.0	8.5	8.5	13.0	10.0	11.5	13.0	8.5	10.5	11.0	10.0	10.5
2	15.0	8.5	10.5	12.0	8.5	10.5	12.0	8.5	10.5	9.5	6.5	8.5
3	14.5	9.0	10.5	12.0	9.0	10.5	13.5	8.5	11.0	9.5	6.5	8.0
4	14.5	9.0	10.5	13.5	9.0	10.5	13.5	9.0	11.0	9.0	8.0	8.5
5	14.0	9.0	10.5	13.0	9.0	10.0	12.0	9.0	11.0	8.0	7.0	8.0
6	13.5	9.0	10.5	12.0	9.0	10.5	12.0	9.0	11.0	8.5	8.0	8.0
7	14.0	9.0	10.0	11.5	9.0	10.5	13.0	9.0	11.5	8.0	6.5	8.0
8	14.5	9.0	10.5	12.0	9.0	10.5	13.5	9.0	11.5	8.5	5.5	8.0
9	14.0	9.0	11.0	12.0	9.5	11.0	9.5	7.0	8.5	8.5	6.0	8.0
10	14.0	9.0	10.5	12.0	9.5	11.0	12.0	6.0	11.0	8.0	8.0	8.0
11	15.0	9.0	11.0	14.0	9.5	11.5	13.5	8.0	11.5	8.5	8.0	8.5
12	14.5	9.0	11.0	14.0	9.5	11.5	12.0	9.0	11.5	8.0	8.0	8.0
13	13.0	9.0	11.0	11.5	9.5	11.0	12.0	9.5	11.5	9.0	8.0	8.5
14	13.0	9.5	11.0	12.0	9.5	11.0	12.0	9.5	11.5	8.0	6.0	7.0
15	14.0	9.0	11.0	12.0	9.5	11.5	12.0	9.5	11.5	8.5	5.5	8.0
16	14.5	9.5	11.0	13.0	9.5	11.5	12.0	9.5	11.5	8.5	7.0	8.0
17	14.5	9.0	11.0	13.0	9.5	11.5	11.0	8.5	10.0	8.5	8.0	8.0
18	14.5	9.0	12.0	14.0	9.5	11.5	12.0	8.5	11.0	8.5	7.0	8.0
19	14.5	9.5	11.0	13.5	9.0	11.5	12.0	9.5	11.5	8.5	8.5	8.5
20	15.0	9.5	11.5	13.0	9.5	11.5	12.0	9.5	11.0	9.5	8.5	9.0
21	15.0	9.5	11.5	12.0	10.0	11.5	12.0	10.0	11.5	9.5	7.0	8.5
22	15.0	9.5	11.5	13.0	10.5	11.5	11.5	9.0	10.5	8.5	8.5	8.5
23	14.0	9.5	11.5	13.5	10.0	12.0	11.5	9.0	11.0	8.5	8.0	8.0
24	13.5	9.5	11.5	14.0	10.0	11.0	10.5	8.5	9.5	8.0	8.0	8.0
25	14.5	9.5	11.0	13.5	9.5	12.0	10.0	8.0	9.0	8.0	8.0	8.0
26	13.5	9.5	11.0	12.0	9.5	11.5	11.0	7.0	10.5	8.0	7.0	8.0
27	14.5	10.0	12.0	13.0	10.0	12.0	11.0	8.0	10.0	8.0	7.0	7.0
28	14.5	9.5	11.5	13.0	10.0	12.0	10.5	8.0	10.0	8.0	6.0	7.0
29	14.5	9.5	11.5	13.0	10.0	11.5	10.5	8.5	10.0	8.5	6.0	7.0
30	12.0	10.0	11.0	13.0	10.0	12.0	9.0	9.0	9.0	8.0	6.5	7.0
31	12.0	9.5	11.0	---	---	---	10.5	9.0	10.0	7.0	5.5	6.5
MONTH	15.0	8.5	11.0	14.0	8.5	11.5	13.5	6.0	10.5	11.0	5.5	8.0

TENNESSEE RIVER BASIN

03580750 ELK RIVER BELOW TIMS FORD DAM, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	8.0	4.5	6.0	7.0	6.5	6.5	13.0	10.0	11.0	10.0	7.0	9.0
2	7.0	5.5	6.5	7.0	6.5	6.5	13.5	10.0	11.5	10.0	6.5	8.5
3	8.0	6.0	7.0	13.5	6.5	9.0	13.5	8.5	10.5	11.5	6.5	8.5
4	9.5	5.5	7.0	13.5	11.0	13.0	14.0	10.0	11.5	10.0	6.5	9.0
5	6.5	4.5	6.0	11.0	7.0	8.5	11.5	8.0	9.0	10.5	8.0	9.0
6	6.5	6.0	6.5	8.0	7.0	7.0	9.0	8.0	8.5	9.5	6.5	8.5
7	6.5	6.0	6.0	8.0	7.0	7.0	14.0	9.0	10.5	9.0	6.5	8.0
8	6.5	5.0	6.0	8.0	7.0	8.0	10.5	9.0	10.0	11.0	8.0	10.0
9	6.5	4.5	6.0	8.0	6.5	7.0	10.5	8.5	9.0	12.0	8.0	10.0
10	7.0	4.5	6.0	9.0	6.5	8.0	11.0	7.0	8.5	13.5	8.0	10.5
11	9.0	5.0	6.5	8.0	8.0	8.0	9.5	6.5	8.5	13.5	8.0	10.0
12	6.5	5.5	6.0	8.0	7.0	7.0	15.5	8.5	13.0	11.5	9.5	10.5
13	8.5	5.0	6.5	8.0	6.5	7.0	14.5	13.0	13.5	11.0	9.0	10.0
14	8.0	6.0	6.5	10.0	6.5	8.5	12.0	8.5	8.5	14.5	8.5	11.0
15	8.5	5.5	7.0	10.0	7.0	8.5	9.0	8.5	8.5	15.0	8.5	11.0
16	7.0	5.0	6.0	8.5	7.0	8.0	9.0	8.5	8.5	15.0	8.5	10.5
17	6.0	4.5	5.5	13.0	8.0	10.0	9.5	8.5	9.0	14.5	8.5	10.5
18	6.5	4.5	5.5	12.0	8.5	10.0	9.5	9.0	9.0	16.0	8.5	11.0
19	8.5	4.5	6.0	9.5	7.0	8.5	9.5	9.0	9.0	14.5	9.5	11.5
20	8.0	4.5	6.5	10.5	6.5	9.0	9.5	9.0	9.0	15.0	10.0	12.0
21	8.5	5.5	7.0	10.0	8.0	9.0	10.5	9.0	9.5	13.5	8.5	11.5
22	8.5	5.5	8.0	10.0	8.0	8.5	13.0	9.5	11.0	11.5	8.5	10.5
23	9.0	5.0	6.5	13.5	8.0	10.5	11.0	9.0	10.0	11.5	8.5	10.0
24	13.5	8.5	9.5	10.5	9.0	9.5	10.5	9.0	10.0	11.0	9.0	10.0
25	13.5	9.5	11.0	9.5	8.5	9.0	10.5	9.0	10.0	13.0	8.5	10.5
26	9.5	6.5	8.0	11.0	7.0	9.0	11.0	9.0	10.0	10.0	9.0	9.5
27	7.0	6.5	7.0	9.5	8.5	9.0	11.0	7.0	9.5	10.0	8.5	9.0
28	7.0	6.5	6.5	10.5	8.5	9.5	13.0	8.0	10.0	10.0	8.5	9.5
29	---	---	---	10.5	8.0	9.5	13.0	7.0	9.5	15.5	9.0	11.0
30	---	---	---	10.0	8.0	9.0	10.5	6.5	8.5	13.0	9.0	10.5
31	---	---	---	11.5	9.5	10.5	---	---	---	14.5	9.0	11.0
MONTH	13.5	4.5	6.5	13.5	6.5	8.5	15.5	6.5	10.0	16.0	6.5	10.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	15.0	8.0	11.0	9.5	8.5	9.0	---	---	---	11.5	9.5	10.0
2	18.5	8.0	9.0	11.0	9.5	10.0	15.0	9.0	10.5	10.5	8.5	9.5
3	18.0	8.0	9.5	14.0	8.5	11.0	14.5	8.5	10.5	10.5	9.0	10.0
4	13.5	8.0	9.0	10.0	8.5	9.5	11.0	9.0	10.0	11.5	11.0	11.5
5	11.5	8.0	9.0	13.0	8.5	11.0	10.0	8.5	9.5	12.0	10.0	11.0
6	11.0	8.0	9.5	13.5	8.5	10.5	15.5	8.5	10.5	11.0	8.5	10.0
7	14.0	8.0	9.0	11.0	8.5	9.5	15.5	8.5	11.0	11.0	8.5	10.0
8	13.5	8.0	9.5	10.5	8.5	9.5	14.5	8.5	10.5	11.0	9.0	10.0
9	10.0	8.0	9.0	13.5	8.5	11.0	15.5	8.5	11.0	10.5	8.5	9.5
10	11.0	8.0	9.0	11.0	8.5	9.5	15.0	9.0	11.0	12.0	8.0	10.0
11	14.0	8.0	9.5	---	---	---	14.0	9.0	11.0	12.0	8.5	10.5
12	14.5	8.0	9.5	---	---	---	12.0	9.0	10.0	11.0	8.5	10.5
13	14.5	8.0	9.5	---	---	---	16.0	9.0	11.5	15.5	11.0	13.0
14	14.5	8.0	9.5	---	---	---	15.5	9.0	11.5	13.5	9.0	11.0
15	14.5	8.5	9.5	---	---	---	14.5	9.0	11.5	11.0	9.0	10.0
16	10.0	8.5	9.0	---	---	---	16.0	9.5	12.0	10.5	8.5	10.0
17	9.5	8.5	9.0	---	---	---	16.0	9.5	11.5	11.5	8.5	10.5
18	15.5	8.5	10.0	---	---	---	11.5	9.0	9.5	14.5	9.5	11.5
19	15.0	8.5	10.0	---	---	---	9.5	9.0	9.0	15.5	10.5	13.0
20	12.0	8.0	10.0	---	---	---	16.0	9.0	11.0	14.0	10.5	13.0
21	14.0	9.0	10.5	---	---	---	15.0	9.5	11.5	15.5	11.0	14.0
22	16.0	8.5	11.0	---	---	---	14.5	9.5	11.5	14.5	11.0	13.0
23	10.5	8.5	9.5	---	---	---	14.5	9.0	11.5	13.0	10.5	12.0
24	10.5	8.5	9.5	---	---	---	19.5	9.5	13.5	14.5	11.0	13.0
25	13.0	8.5	11.0	---	---	---	19.5	9.0	9.5	16.5	11.0	13.5
26	13.5	8.5	10.5	---	---	---	9.5	9.0	9.5	17.0	11.0	14.0
27	13.5	8.5	10.5	---	---	---	17.0	9.0	11.5	19.0	13.5	15.5
28	13.5	8.0	10.5	---	---	---	15.5	9.5	12.0	18.5	11.0	15.0
29	13.5	8.5	10.5	---	---	---	15.0	9.5	11.5	15.0	11.0	13.5
30	10.5	8.5	9.5	---	---	---	12.0	9.0	11.5	14.5	11.5	13.5
31	---	---	---	---	---	---	12.0	9.5	11.0	---	---	---
MONTH	18.5	8.0	9.5	---	---	---	19.5	8.5	11.0	19.0	8.0	11.5

TENNESSEE RIVER BASIN

267

03582000 ELK RIVER ABOVE FAYETTEVILLE, TN

LOCATION.--Lat 35°08'04", long 86°32'23", Lincoln County, Hydrologic Unit 06030003, on right bank 100 ft (30 m) downstream from highway bridge, 1.8 mi (2.9 km) southeast of Fayetteville, 4.0 mi (6.4 km) upstream from Norris Creek, and at mile 93.9 (151.1 km).

DRAINAGE AREA.--827 mi² (2,142 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1934 to current year.

GAGE.--Water-stage recorder. Datum of gage is 650.58 ft (198.297 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Prior to August 1949, diurnal fluctuation at low flow caused by powerplants upstream. Flow regulated by Woods Reservoir since 1952 (see station 03579000), and Tims Ford Lake since December 1970 (see station 03580740).

AVERAGE DISCHARGE.--45 years, 1,454 ft³/s (41.18 m³/s), 23.88 in/yr (607 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,600 ft³/s (1,180 m³/s) Mar. 16, 1973, gage height, 28.63 ft (8.726 m); minimum, 67 ft³/s (1.90 m³/s) Dec. 9, 10, 11, 1970, gage height, 0.75 ft (0.229 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1842 reached a stage of 27.5 ft (8.38 m), discharge, 37,000 ft³/s (1,050 m³/s), and flood of Mar. 23, 1929, reached a stage of 27.2 ft (8.29 m), discharge, 36,000 ft³/s (1,020 m³/s), from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,500 ft³/s (354 m³/s) at 1300 hours Mar. 4, gage height, 17.76 ft (5.413 m); minimum, 151 ft³/s (4.28 m³/s) Oct. 8, Nov. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	253	1470	1160	6210	2230	4330	491	1130	1300	219	1240	2210
2	210	1290	1020	6320	2210	4160	2130	983	1650	229	1380	934
3	462	1260	531	3670	1850	4790	3120	1040	3550	622	1310	760
4	419	730	1510	3220	411	11200	2290	1890	1250	607	1440	822
5	419	427	2070	3510	611	3930	1680	996	2110	203	362	2410
6	400	645	1850	3310	1500	4680	2420	1050	2220	618	307	2460
7	407	1240	1730	7980	2070	5200	2450	1630	1840	649	1020	2480
8	419	1210	1830	3220	2610	5300	723	2400	1630	237	1040	1920
9	392	1200	4450	3520	2500	5110	1010	974	1500	229	1310	377
10	411	1160	1790	4310	2350	3710	2350	916	895	307	1030	328
11	462	973	2440	4220	1010	4210	2550	886	2110	703	1190	1460
12	407	462	2360	4100	758	3060	6520	672	1790	346	723	1530
13	427	575	3070	898	1000	3470	8520	313	1440	316	380	2370
14	446	988	3060	1780	889	3340	4250	393	1330	626	533	1620
15	419	745	2800	839	878	2610	4940	566	1260	237	508	1390
16	407	988	1630	2670	840	2230	4430	463	1220	248	512	484
17	411	1060	1310	2080	593	1830	4200	526	419	346	498	449
18	567	834	650	1630	335	537	4070	533	380	449	526	1820
19	624	495	2170	1630	383	784	3990	526	1080	562	251	1350
20	427	645	2390	4020	632	1330	3930	232	1100	3620	248	1270
21	407	1170	2700	7160	1500	1330	3130	512	1150	2630	494	1320
22	400	1260	2290	6310	1650	1300	2490	731	466	856	551	588
23	523	1050	1970	5230	1500	2020	895	1490	409	544	508	352
24	1280	547	1650	5250	1210	1240	2220	1560	293	637	703	328
25	725	483	392	4800	9690	809	1410	1020	301	1170	1580	801
26	745	504	575	3600	4980	925	1280	672	537	1750	760	797
27	780	735	1810	3200	4870	1720	1330	439	529	1350	1000	2160
28	673	1080	1710	1910	4540	1360	934	501	515	1480	934	6430
29	446	1150	1360	848	---	1310	403	480	519	393	1100	3660
30	467	1270	1570	1440	---	1090	727	814	526	463	1540	2300
31	1310	---	2560	1520	---	1100	---	1740	---	1650	2360	---
TOTAL	16145	27646	58408	110405	55600	90015	80883	28078	35319	24296	27338	47180
MEAN	521	922	1884	3561	1986	2904	2696	906	1177	784	882	1573
MAX	1310	1470	4450	7980	9690	11200	8520	2400	3550	3620	2360	6430
MIN	210	427	392	839	335	537	403	232	293	203	248	328

CAL YR 1978 TOTAL 374814 MEAN 1027 MAX 7060 MIN 170 MEAN‡ 1021 CFSM‡ 1.23 IN‡ 16.76
WTR YR 1979 TOTAL 601313 MEAN 1647 MAX 11200 MIN 203 MEAN‡ 1728 CFSM‡ 2.09 IN‡ 28.37

‡ Adjusted for change in contents in Wood Reservoir and Tims Ford Lake.

TENNESSEE RIVER BASIN

03582000 ELK RIVER ABOVE FAYETTEVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM 5 DAY (MG/L)	HARD- NESS (MG/L AS CAC03)
FEB 20...	1200	380	240	8.1	18.0	6	1	--	2	--	--
APR 10...	1300	1600	180	7.1	10.5	5	2	10.7	--	1.0	87
JUN 13...	1230	1580	180	7.5	14.2	4	24	9.1	--	1.0	91
AUG 15...	0955	900	--	7.7	20.0	9	8	7.6	--	<1.0	110

DATE	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, TOTAL DIS- SOLVED (TONS PER AC-FT)	SOLIDS, TOTAL DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
FEB 20...	34	4.4	3.1	.6	100	10	4.0	130	.18	133	3
APR 10...	--	--	--	--	68	8.0	4.0	100	.14	432	6
JUN 13...	--	--	--	--	78	10	4.0	110	.15	469	40
AUG 15...	--	--	--	--	--	10	4.0	140	.19	340	28

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
FEB 20...	1.3	.03	.05	.040	--	<200	<4	90	<1	<5	20
APR 10...	.69	.03	.05	.030	.05	--	--	--	<1	--	30
JUN 13...	.99	.01	.11	.060	.01	--	--	--	<1	--	<10
AUG 15...	.88	.08	.14	.130	.02	--	--	--	<1	--	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PR)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
FEB 20...	120	--	<10	30	--	<.2	30	<1	30	1.6	--
APR 10...	--	<50	<10	--	20	<.2	--	--	20	2.0	--
JUN 13...	--	80	<10	--	40	<.2	--	--	20	2.7	--
AUG 15...	--	150	<10	--	50	<.2	--	--	60	--	4.8

TENNESSEE RIVER BASIN

269

03584500 ELK RIVER NEAR PROSPECT, TN

LOCATION.--Lat 35°01'39", long 86°56'52", Giles County, Hydrologic Unit 06030004, on right bank 50 ft (15 m) upstream from county road bridge, 1.1 mi (1.8 km) downstream from Richland Creek, 3.2 mi (5.1 km) east of Prospect, 5.4 mi (8.7 km) upstream from Ford Creek, 7.9 mi (12.7 km) upstream from Tennessee - Alabama State line, and at mile 41.5 (66.8 km).

DRAINAGE AREA.--1,784 mi² (4,621 km²).

PERIOD OF RECORD.--July 1904 to February 1908, January 1919 to current year. Published as "near Elkmont, Ala." 1904-8, 1919-34. Record for both sites published January to March 1934.

REVISED RECORDS.--WSP 523: 1904-8, 1919-20. WSP 823: Drainage area. WSP 1436: 1920-22, 1923(M), 1924, 1927, 1929, 1931-32(M).

GAGE.--Water-stage recorder. Datum of gage is 563.29 ft (171.691 m) National Geodetic Vertical Datum of 1929. July 1, 1904, to Feb. 2, 1908, and Jan. 20, 1919, to Mar. 31, 1934, nonrecording gage 11.9 mi (19.1 km) downstream at datum 13.52 ft (4.121 m) lower.

REMARKS.--Records good. Flow regulated by Woods Reservoir (station 03579000) since May 1952, and Tims Ford Lake (station 03580740) since December 1970. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--63 years (1905-7, 1920-79), 3,090 ft³/s (87.51 m³/s), 23.52 in/yr (597 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 117,000 ft³/s (3,310 m³/s) Mar. 17, 1973, gage height, 40.12 ft (12.229 m), from rating curve extended above 63,000 ft³/s (1,780 m³/s) on basis of slope-area measurement at gage height 38.17 ft (11.634 m) and contracted-opening measurement at gage height 38.96 ft (11.875 m); minimum, 78 ft³/s (2.21 m³/s) Sept. 29, 1961 (caused by highway construction upstream).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1902 reached a stage of 40.9 ft (12.47 m), discharge, 130,000 ft³/s (3,680 m³/s), and may have been equaled by a flood in March 1897, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34,100 ft³/s (966 m³/s) at 1600 hours Jan. 2, gage height, 29.14 ft (8.882 m); minimum, 302 ft³/s (8.55 m³/s) Nov. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	609	1270	1960	19700	3340	7660	2310	1610	4750	778	1920	3680
2	754	1410	1680	31300	3540	6850	8910	1870	3770	510	1650	3970
3	484	1260	1300	25400	3470	8280	15900	2430	9310	490	1820	2370
4	516	1220	3590	8790	2530	19900	14500	6530	7250	836	1950	1620
5	537	762	4800	6370	1650	20300	8620	7520	4050	893	1650	2120
6	523	347	3570	6380	2040	10300	6350	4260	4190	594	669	2940
7	490	731	2980	17500	3380	8370	5890	3810	4380	853	587	2960
8	484	1290	3410	22900	4710	8120	4100	3820	3700	939	1260	2860
9	484	1230	15700	14900	4620	7500	3000	3430	3070	602	1400	1740
10	473	1210	16200	7600	4330	7080	3710	2290	2730	496	1520	670
11	479	1170	7050	7260	3830	5990	4000	2060	5790	523	1520	803
12	530	885	4610	6570	2430	6230	10900	1900	3810	931	2190	1780
13	551	450	4390	6200	2550	4970	23900	1520	2900	647	1110	3710
14	639	778	4510	4200	2470	5200	24500	1110	2450	1020	662	13400
15	647	853	4270	3030	2380	4490	12100	1060	2220	1060	747	10900
16	587	962	3500	3020	2280	3930	8580	1180	2060	654	685	5930
17	537	1920	3110	3610	2100	3590	7240	1040	1820	537	669	2190
18	516	2570	2110	3260	1760	2300	6510	1000	1020	530	624	2260
19	609	1230	2210	2970	1540	1650	6040	1020	993	616	654	2510
20	787	795	3400	11300	1610	2310	5700	977	1640	1640	439	2220
21	537	885	4830	21600	4130	2550	5440	762	1830	6450	375	5900
22	490	1340	5320	21800	6410	2470	4430	1120	1980	2710	1260	10800
23	479	1560	4160	13800	5540	3230	3060	2570	1120	1380	985	10300
24	662	1430	3550	11200	5210	4970	2730	6060	916	946	778	3380
25	1350	908	2680	10200	16200	3660	3030	3680	770	1090	931	2140
26	819	778	1470	8300	19700	2810	2440	2450	723	2240	2190	2170
27	828	1140	1760	6560	12500	2930	2420	1790	893	2290	1480	2290
28	819	1890	2660	5650	8790	3190	2330	1520	853	1940	1580	9090
29	700	1490	2400	3420	---	2670	1590	1510	811	1630	1740	9240
30	423	1980	2780	3020	---	2520	1170	2100	795	731	2130	5720
31	647	---	9710	3160	---	2400	---	5010	---	1110	3390	---
TOTAL	18990	35744	135670	320970	135040	178420	211400	79009	82594	37666	40565	131663
MEAN	613	1191	4376	10350	4823	5755	7047	2549	2753	1215	1309	4389
MAX	1350	2570	16200	31300	19700	20300	24500	7520	9310	6450	3390	13400
MIN	423	347	1300	2970	1540	1650	1170	762	723	490	375	670

CAL YR 1978 TOTAL 846442 MEAN 2319 MAX 32600 MIN 268 MEAN‡ 2313 CFSM‡ 1.30 IN.‡ 17.60
WTR YR 1979 TOTAL 1407731 MEAN 3857 MAX 31300 MIN 347 MEAN‡ 3938 CFSM‡ 2.21 IN.‡ 29.96

‡ Adjusted for change in contents in Woods Reservoir and Tims Ford Lake.

TENNESSEE RIVER BASIN

03588000 SHOAL CREEK AT LAWRENCEBURG, TN

LOCATION.--Lat 35°14'40", long 87°21'02", Lawrence County, Hydrologic Unit 06030005, on left bank at Lawrenceburg municipal water-supply intake, 500 ft (152 m) downstream from Little Shoal Creek, 0.5 mi (0.8 km) upstream from Crowson Creek, 0.9 mi (1.4 km) west of courthouse in Lawrenceburg, and at mile 55.9 (89.9 km).

DRAINAGE AREA.--55.4 mi² (143.5 km²).

PERIOD OF RECORD.--June 1932 to March 1934, March 1967 to current year.

REVISED RECORDS.--WSP 1306: Drainage area. WSP 2110: 1933.

GAGE.--Water-stage recorder. Datum of gage is 784.41 ft (239.088 m) National Geodetic Vertical Datum of 1929. June 7, 1932, to Mar. 31, 1934, nonrecording gage at site 500 ft (152 m) downstream at datum 4.01 ft (1.222 m) lower. Mar. 22, 1967, to Sept. 30, 1970, at site 1,300 ft (396 m) downstream at datum 7.71 ft (2.350 m) lower.

REMARKS.--Records poor. About 6 ft³/s (0.17 m³/s) were diverted by Lawrenceburg water plant, some of which was returned to the stream through sewage treatment plant 0.6 mi (1.0 km) downstream. Records of periodic water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--13 years (water years 1933, 1968-79), 111 ft³/s (3.144 m³/s), 27.21 in/yr (691 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft³/s (430 m³/s) Mar. 15, 1973, gage height, 18.71 ft (5.703 m), from rating curve extended above 6,700 ft³/s (190 m³/s) on basis of computation of peak flow over dam; minimum daily, 19 ft³/s (0.54 m³/s) Nov. 2, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1846, 20.0 ft (6.10 m) present site and datum, Mar. 28, 1902, discharge, 23,000 ft³/s (651 m³/s); flood of Mar. 21, 1955, reached a stage of 17.2 ft (5.24 m), present site and datum, discharge 18,000 ft³/s (510 m³/s), from report of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s (60.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 8	2130	3420 96.9	6.92 2.109	Apr. 12	0645	4290 121	7.72 2.353
Jan. 1	1100	5240 148	8.60 2.621	Sept. 13	2115	*8280 234	11.37 3.466
Jan. 7	0715	3340 94.6	6.84 2.085	Sept. 21	1100	3040 86.1	6.55 1.996
Apr. 2	0745	3430 97.1	6.93 2.112				

Minimum daily discharge, 20 ft³/s (0.57 m³/s) Nov. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	20	35	2650	96	122	168	90	76	42	57	93
2	27	20	31	302	92	113	1370	88	90	43	54	63
3	28	21	40	140	96	473	532	143	277	44	44	41
4	28	22	140	110	96	351	440	666	146	43	50	37
5	27	23	100	99	85	175	225	367	110	43	43	35
6	26	25	80	209	84	148	172	210	95	42	39	34
7	27	28	70	1750	117	138	152	168	86	41	36	33
8	26	25	897	381	103	130	142	138	76	50	35	33
9	23	23	654	199	98	117	144	119	69	44	79	32
10	23	23	92	127	88	159	128	105	66	42	37	32
11	24	25	65	106	88	131	119	94	62	42	38	31
12	24	26	54	98	95	113	1890	95	58	62	34	30
13	39	23	48	98	91	106	486	91	56	69	33	2260
14	23	24	44	95	87	104	380	83	53	47	31	600
15	23	30	41	80	84	97	290	78	51	43	31	107
16	22	50	45	76	80	93	220	73	49	40	31	79
17	22	90	41	75	78	92	184	70	49	38	31	70
18	21	80	38	75	79	91	160	68	48	39	32	64
19	21	52	37	77	77	95	142	70	46	43	32	60
20	21	42	49	549	77	105	130	70	45	122	37	49
21	23	37	94	638	271	93	120	70	65	49	32	1090
22	23	35	54	223	327	89	117	80	48	41	33	183
23	21	37	48	218	385	348	119	118	47	40	41	109
24	22	55	47	320	243	161	111	143	47	41	31	88
25	22	40	44	146	496	123	110	99	46	50	48	77
26	23	33	41	134	267	107	108	88	45	50	49	73
27	22	47	38	139	179	101	105	83	44	46	37	72
28	22	44	35	128	135	97	99	85	44	48	63	77
29	22	41	35	114	---	93	94	77	44	45	43	70
30	21	46	51	109	---	90	92	83	43	40	77	65
31	21	---	477	104	---	188	---	83	---	37	66	---
TOTAL	747	1087	3565	9569	4094	4443	8549	3895	2081	1466	1324	5687
MEAN	24.1	36.2	115	309	146	143	285	126	69.4	47.3	42.7	190
MAX	39	90	897	2650	496	473	1890	666	277	122	79	2260
MIN	21	20	31	75	77	89	92	68	43	37	31	30
CFSM	.44	.65	2.08	5.58	2.64	2.58	5.14	2.27	1.25	.85	.77	3.43
IN.	.50	.73	2.39	6.43	2.75	2.98	5.74	2.62	1.40	.98	.89	3.82

CAL YR 1978 TOTAL 29279 MEAN 80.2 MAX 1950 MIN 20 CFMS 1.45 IN 19.66
WTR YR 1979 TOTAL 46507 MEAN 127 MAX 2650 MIN 20 CFMS 2.29 IN 31.23

NOTE.--No gage-height record Nov. 6 to Dec. 6; Apr. 13 to June 18.

TENNESSEE RIVER BASIN

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03588400 CHISHOLM CREEK AT WESTPOINT, TN

LOCATION.--Lat 35°08'04", long 87°31'45", Lawrence County, Hydrologic Unit 06030005, on left bank at downstream side of pier of county road bridge, 0.3 mi (0.5 km) northeast of Westpoint, and at mile 1.2 (1.9 km).

DRAINAGE AREA.--43.0 mi² (111 km²).

PERIOD OF RECORD.--July 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 600.22 ft (182.947 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--17 years, 86.5 ft³/s (2.450 m³/s), 27.32 in/yr (694 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,900 ft³/s (507 m³/s) Mar. 15, 1973, gage height, 14.74 ft (4.493 m), from rating curve extended above 4,100 ft³/s (116 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 8.4 ft³/s (0.24 m³/s) July 28, 29, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1200 ft³/s (34.0 m³/s) and maximum (*), from rating curve extended above 4,100 ft³/s (116 m³/s) on basis of contracted-opening measurement:

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	0415	1980 56.1	7.97 2.429	Apr. 2	1145	3480 98.6	9.36 2.853
Jan. 1	1445	5070 144	10.48 3.194	Apr. 12	1015	4310 122	9.96 3.036
Jan. 7	1045	1860 52.7	7.81 2.380	Sept. 13	2345	*8370 237	12.00 3.658

Minimum daily discharge, 19 ft³/s (0.54 m³/s) Oct. 8, 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	23	34	2680	64	120	113	58	62	38	30	42
2	24	22	31	679	56	97	1640	57	67	38	31	56
3	22	21	37	295	59	386	557	181	265	38	29	41
4	23	22	458	173	60	474	400	532	123	36	57	38
5	21	22	177	126	53	225	270	282	99	36	53	35
6	20	20	97	125	53	168	185	176	88	35	35	32
7	20	24	85	1290	81	130	133	135	79	34	31	30
8	19	24	368	603	77	110	113	114	69	42	29	29
9	20	22	1170	310	77	92	106	101	62	49	28	28
10	20	22	340	120	72	98	90	91	58	41	29	28
11	19	22	171	96	71	88	84	82	54	38	30	27
12	19	22	111	80	69	82	1830	86	51	90	29	26
13	224	22	86	77	65	78	611	80	49	59	27	1700
14	77	22	71	72	62	76	295	73	46	46	26	1610
15	37	23	61	64	61	70	189	68	44	41	25	189
16	30	59	62	60	56	66	139	64	43	38	25	113
17	27	151	55	58	52	62	114	61	43	36	24	87
18	25	71	48	59	55	60	100	59	41	34	24	77
19	23	41	46	60	50	62	90	58	40	34	24	68
20	22	32	47	430	49	64	82	58	40	34	24	60
21	24	27	110	500	112	60	76	58	294	34	26	380
22	25	26	91	180	125	60	74	69	111	33	25	260
23	22	50	82	150	153	270	77	116	76	32	25	147
24	23	45	76	200	154	249	69	108	65	37	27	107
25	24	36	66	105	422	164	70	90	57	37	79	85
26	25	33	58	100	325	120	69	81	49	35	113	72
27	23	52	51	96	220	101	68	76	46	33	78	66
28	23	40	46	86	155	89	64	73	43	31	53	60
29	23	39	43	80	---	81	60	66	41	34	52	53
30	22	39	52	75	---	74	60	72	40	30	42	49
31	22	---	249	70	---	109	---	69	---	29	38	---
TOTAL	989	1074	4479	9099	2908	3985	7828	3294	2245	1202	1168	5595
MEAN	31.9	35.8	144	294	104	129	261	106	74.8	38.8	37.7	187
MAX	224	151	1170	2680	422	474	1830	532	294	90	113	1700
MIN	19	20	31	58	49	60	60	57	40	29	24	26
CFSM	.74	.83	3.35	6.84	2.42	3.00	6.07	2.47	1.74	.90	.88	4.35
IN.	.86	.93	3.87	7.87	2.52	3.45	6.77	2.85	1.94	1.04	1.01	4.84
CAL YR 1978	TOTAL	28788	MEAN	78.9	MAX	1740	MIN	18	CFSM	1.84	IN	24.90
WTR YR 1979	TOTAL	43866	MEAN	120	MAX	2680	MIN	19	CFSM	2.79	IN	37.95

03588500 SHOAL CREEK AT IRON CITY, TN

LOCATION.--Lat 35°01'27", long 87°34'44", Lawrence County, Hydrologic Unit 06030005, near center of span on downstream side of bridge on county road, 400 ft (122 m) downstream from Holly Creek, 1,350 ft (411 m) upstream from Louisville and Nashville Railroad bridge, 1,350 ft (411 m) northeast of Iron City Post Office, and at mile 22.3 (35.9 km).

DRAINAGE AREA.--348 mi² (901 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1925 to current year.

REVISED RECORDS.--WSP 823: Drainage area. WSP 1113: 1927(M). WSP 1436: 1926(M), 1927-29, 1930(M), 1932, 1933(M).

GAGE.--Water-stage recorder. Datum of gage is 534.22 ft (162.830 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 25, 1931, nonrecording gage at railroad bridge, 1,350 ft (411 m) downstream at datum 0.85 ft (0.259 m) lower. Feb. 25, 1931, to Sept. 30, 1933, nonrecording gage at site 825 ft (251 m) downstream and Oct. 1, 1933, to Sept. 30, 1957, water-stage recorder at site 750 ft (229 m) downstream at datum 0.69 ft (0.210 m) higher.

REMARKS.--Records good. Prior to January 1951, diurnal fluctuation at low flow caused by powerplant near Lawrenceburg.

AVERAGE DISCHARGE.--54 years, 649 ft³/s (18.38 m³/s), 25.33 in/yr (643 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 132,000 ft³/s (3,740 m³/s) Mar. 21, 1955, gage height, 27.25 ft (8.306 m), site and datum then in use, present site and datum, 28.4 ft (8.656 m), from rating curve extended above 50,000 ft³/s (1,416 m³/s) on basis of slope-area measurement made 1,500 ft (457 m) downstream; minimum, 38 ft³/s (1.08 m³/s) Aug. 31, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1902 reached a stage about 3 ft (0.914 m) higher than that of Mar. 21, 1955, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 6,500 ft³/s (184 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1130	10500 297	13.94 4.249	Apr. 12	1715	15200 430	15.98 4.871
Jan. 1	1930	24600 697	18.79 5.727	May 4	1500	7300 207	11.69 3.563
Jan. 7	2000	11500 326	14.47 4.410	Sept. 14	0700	*26100 739	19.16 5.840
Jan. 21	1445	7190 204	11.59 3.533	Sept. 21	2400	6800 193	11.24 3.426
Apr. 2	1945	14000 396	15.54 4.737				

Minimum discharge, 130 ft³/s (3.68 m³/s) Oct. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	149	286	15000	604	1050	1040	495	488	299	229	312
2	198	149	261	7260	558	854	7280	484	670	293	275	607
3	149	148	259	2200	565	1370	5740	1010	2210	302	266	393
4	160	149	1390	1470	548	3900	3430	6200	1160	284	266	299
5	149	150	917	1120	509	2300	2500	3150	782	275	481	257
6	136	148	608	991	488	1610	1770	1880	661	269	296	232
7	132	172	524	6940	675	1280	1380	1400	607	266	248	211
8	131	204	1160	4870	723	1070	1150	1100	541	287	226	198
9	131	173	7430	2140	714	876	1060	893	495	386	213	188
10	133	161	2110	1480	657	848	887	769	467	327	251	183
11	134	159	1200	1120	629	848	778	679	457	299	242	178
12	133	157	843	924	614	728	8370	644	414	608	248	170
13	392	158	675	805	588	683	6760	640	389	544	211	2060
14	555	159	578	730	559	657	2780	581	372	425	196	15000
15	256	163	509	616	541	599	1830	537	358	348	191	2010
16	192	385	497	562	512	555	1410	502	348	317	186	1150
17	172	664	475	548	470	530	1150	474	342	302	178	805
18	163	642	420	552	488	516	967	460	330	272	175	683
19	157	349	397	559	453	505	843	453	320	260	175	629
20	154	267	390	2960	439	541	759	446	314	281	173	537
21	152	233	702	5790	859	512	705	436	936	383	181	3200
22	147	220	717	3000	1240	495	675	495	830	314	186	3420
23	145	323	624	1930	1690	1430	701	764	548	272	178	1540
24	142	400	571	2140	1660	2060	640	1240	484	290	226	1060
25	148	303	518	1700	2470	1410	637	679	446	320	269	801
26	150	264	463	1370	2260	1050	614	566	397	335	705	661
27	160	351	415	1190	1660	854	599	534	358	312	581	585
28	155	334	376	1000	1300	750	559	534	334	287	348	559
29	150	294	354	825	---	670	530	491	324	278	372	498
30	150	323	389	730	---	618	512	505	314	263	293	439
31	147	---	1300	672	---	805	---	548	---	240	266	---
TOTAL	5498	7751	27358	73194	24473	31974	58056	29589	16696	9938	8331	38865
MEAN	177	258	883	2361	874	1031	1935	954	557	321	269	1296
MAX	555	664	7430	15000	2470	3900	8370	6200	2210	608	705	15000
MIN	131	148	259	548	439	495	512	436	314	240	173	170
CFSM	.51	.74	2.54	6.78	2.51	2.96	5.56	2.74	1.60	.92	.77	3.72
IN.	.59	.83	2.92	7.82	2.62	3.42	6.21	3.16	1.78	1.06	.89	4.15
CAL YR 1978	TOTAL	213197	MEAN 584	MAX	9980	MIN 100	CFSM 1.68	IN 22.79				
WTR YR 1979	TOTAL	331723	MEAN 909	MAX	15000	MIN 131	CFSM 2.61	IN 35.46				

TENNESSEE RIVER BASIN

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03588500 SHOAL CREEK AT IRON CITY, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1974 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
FEB 13...	1200	640	92	7.2	7.0	8	4	12.0	4	2.9	--
APR 11...	1300	821	84	6.7	13.5	7	2	9.8	--	2.0	--
JUN 12...	1300	460	110	6.7	21.0	3	9	8.2	--	1.4	--
AUG 16...	1055	240	110	7.7	22.0	5	2	8.1	--	1.6	16000

DATE	HARD- NESS (MG/L AS CACO3)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, TOTAL DIS- SOLVED (TONS PER AC-FT)
FEB 13...	--	15	1.9	3.8	.6	50	7.0	3.0	50	.07
APR 11...	39	--	--	--	--	53	5.0	3.0	60	.08
JUN 12...	51	--	--	--	--	50	6.0	2.0	70	.10
AUG 16...	53	--	--	--	--	45	7.0	3.0	70	.10

DATE	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPH OSPHATE DISSOL. (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
FEB 13...	86.4	2	.84	.02	.22	.040	--	<200	<1	10
APR 11...	133	5	.74	.03	.13	.030	.05	--	<1	20
JUN 12...	86.9	17	.62	.02	.07	.030	.02	--	<1	20
AUG 16...	45.4	5	.39	<.01	.08	.040	.02	--	<1	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
FEB 13...	70	<50	<10	<10	<10	<.2	<10	40	6.0	--
APR 11...	--	<50	<10	--	10	<.2	--	50	1.9	--
JUN 12...	--	<50	<10	--	30	<.2	--	20	1.6	--
AUG 16...	--	<50	<10	--	10	<.2	--	20	--	1.8

TENNESSEE RIVER BASIN

03588500 SHOAL CREEK AT IRON CITY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)
AUG 29...	.0	.00	.0	.00	.00	.00	.00	.00	.00

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
AUG 29...	.00	.00	.00	.00	0	.00	.00	.00

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN
(National stream-quality accounting network station)

LOCATION.--Lat 35°03'54", long 88°15'08", Hardin County, Hydrologic Unit 06040001, at downstream end of lockwall in lower pool at Pickwick Landing Dam, 16.8 mi (27.0 km) upstream from Savannah, Tennessee, and at mile 206.7 (332.6 km).

DRAINAGE AREA.--32,820 mi² (85,000 km²), approximately.

PERIOD OF RECORD.--Water year 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1976 to current year.

WATER TEMPERATURE: April 1976 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1976.

REMARKS.--Flow regulated by Pickwick Landing Dam and many other reservoirs above the station. Continuous discharge records are published under station 03593500 Tennessee River at Savannah, Tn.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 326 micromhos Sept. 18, 19, 1978; minimum, 116 micromhos Apr. 27, 1979.

WATER TEMPERATURE: Maximum, 31.5°C July 7, 1978; minimum, 2.0°C Feb. 8, 9, 1978.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 215 micromhos Oct. 26, 27; minimum, 116 micromhos Apr. 27.

WATER TEMPERATURE: Maximum, 30.0°C several days in July; minimum, 2.5°C Feb. 10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT												
25...	1445	18400	210	7.1	18.0	3.0	8.2	<1	K2	81	24	24
NOV												
14...	1400	17900	205	7.3	16.5	3.0	8.2	K1	K5	75	17	22
DEC												
13...	1000	60500	200	6.5	10.0	9.0	9.6	81	86	68	9	20
JAN												
16...	1000	83500	160	--	3.5	25	12.2	87	150	61	14	19
FEB												
13...	0945	61300	153	6.1	2.5	15	12.8	K18	K8	64	16	20
MAR												
20...	1000	68900	140	6.7	11.0	1.0	10.0	K13	K1	61	14	19
APR												
10...	0900	55900	140	6.2	14.0	15	9.2	K13	K15	58	13	18
MAY												
15...	0930	46000	130	6.8	20.5	8.0	7.8	K1	K10	54	10	17
JUN												
12...	0915	44800	140	7.0	24.0	6.0	7.7	K1	K19	56	14	17
JUL												
11...	0900	23500	145	--	26.5	2.0	6.2	K4	K12	58	5	18
AUG												
15...	0915	30800	158	--	28.0	4.0	6.5	--	--	64	8	19
SEP												
13...	0815	41500	151	7.2	--	5.0	6.6	95	100	60	9	18

K--Results based on colony count outside acceptable range (non-ideal colony count)

TENNESSEE RIVER BASIN

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
OCT 25...	5.1	8.1	18	.4	1.7	57	15	9.3	.1	5.6	108	103
NOV 14...	4.9	8.2	19	.4	1.6	58	15	9.8	.1	5.4	102	102
DEC 13...	4.5	9.0	22	.5	1.6	59	16	10	.1	5.1	109	102
JAN 16...	3.4	5.2	15	.3	1.5	47	13	6.4	.1	4.8	87	82
FEB 13...	3.5	4.9	14	.3	1.4	48	13	6.5	.1	5.1	89	83
MAR 20...	3.4	3.5	11	.2	1.2	47	9.4	4.3	.1	5.3	84	74
APR 10...	3.2	3.6	12	.2	1.3	45	9.5	4.3	.1	5.3	75	72
MAY 15...	2.7	3.4	12	.2	1.1	44	9.5	4.2	.1	4.8	72	69
JUN 12...	3.4	4.1	13	.2	1.1	42	9.8	4.4	.1	4.7	75	70
JUL 11...	3.1	4.2	13	.2	1.0	53	9.2	4.7	.1	4.1	82	76
AUG 15...	3.9	5.0	14	.3	1.3	56	11	5.6	.1	5.3	85	85
SEP 13...	3.7	4.6	14	.3	1.3	51	11	6.2	.1	5.6	90	82

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 25...	.15	5370	.35	--	.05	.37	.42	.16	.77	.090	.080	4.7
NOV 14...	.14	4930	.31	--	.04	.23	.27	.17	.58	.040	.030	--
DEC 13...	.15	17800	.36	--	.06	--	--	.37	--	.050	.040	2.1
JAN 16...	.12	19600	.65	--	.07	--	--	.15	--	.100	.050	--
FEB 13...	.12	14700	.71	--	.08	.23	.31	.01	1.0	.060	.030	1.7
MAR 20...	.11	15600	.63	--	.07	--	--	.23	--	.060	.030	2.5
APR 10...	.10	11300	.63	--	.06	--	--	.25	--	.040	.030	--
MAY 15...	.10	8940	.51	--	.05	.22	.27	.24	.78	.040	.010	5.6
JUN 12...	.10	9070	.29	--	.04	.11	.15	.07	.44	.040	.020	3.6
JUL 11...	.11	5200	.19	--	.08	--	--	.69	--	.040	.020	--
AUG 15...	.12	7070	.25	--	.03	.52	.55	.03	.80	.040	.020	2.0
SEP 13...	.12	10100	.24	.24	.06	.12	.18	.17	.42	.040	.030	4.5

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
NOV 14...	0	3	2		0	2	5	20	20
JAN 16...	0	5	1		30	3	0	50	20
APR 10...	1	4	2		30	12	5	40	20
JUL 11...	1	5	3	210	10	2	1	30	4

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 14...	<.5	<.5	0	0	0	0	10	0
JAN 16...	<.5	<.5	0	0	0	0	20	0
APR 10...	.5	.5	0	0	1	0	10	0
JUL 11...	<.5	<.5	0	0	0	0	20	5

[illegible]

TENNESSEE RIVER BASIN

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 14,78 1400	APR 10,79 0900	MAY 15,79 0930	JUN 12,79 0915				
TOTAL CELLS/ML	360	44	290	860				
DIVERSITY: DIVISION	0.2	1.0	0.6	1.3				
..CLASS	0.2	1.0	0.6	1.3				
...ORDER	0.2	1.0	0.6	1.4				
...FAMILY	0.2	1.0	0.6	1.6				
...GENUS	1.1	1.0	0.0	2.0				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
...SCHROEDERIA	--	-	--	-	--	-	--	-
...CHLOROCOCCACEAE								
...CHLOROCOCCUM	--	-	--	-	--	-	--	-
...COELASTRACEAE								
...COELASTRUM	--	-	--	-	--	-	--	-
...HYDRODICTYACEAE								
...PEDIASTRUM	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
...ANKISTRODESMUS	14	4	--	-	--	-	--	-
...KIRCHNERIELLA	--	-	--	-	--	-	--	-
...SELENASTRUM	--	-	--	-	--	-	13	1
...SCENEDESMACEAE								
...ACTINASTRUM	--	-	--	-	--	-	--	-
...SCENEDESMUS	--	-	--	-	--	-	--	-
...TETRASTRUM	--	-	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE	--	-	--	-	29	10	--	-
...CHLAMYDOMONAS	--	-	22#	50	14	5	26	3
...PLATYMONAS	--	-	--	-	--	-	--	-
...VOLVOCAEAE								
...PANDORINA	--	-	--	-	--	-	410#	48
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCAEAE								
...CYCLOTELLA	110#	31	22#	50	29	10	90	10
...MELOSIRA	240#	65	--	-	220#	75	270#	31
...SKELETONEMA	--	-	--	-	--	-	--	-
...STEPHANODISCUS	--	-	--	-	--	-	--	-
...THALASSIOSIRA	--	-	--	-	--	-	--	-
..PENNALES								
...FRAGILARIACEAE								
...FRAGILARIA	--	-	--	-	--	-	--	-
...SYNEDRA	--	-	--	-	--	-	--	-
...GOMPHONEMATAEAE								
...GOMPHONEMA	--	-	--	-	--	-	--	-
...NITZSCHIAEAE								
...NITZSCHIA	--	-	--	-	--	-	13	1
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
...CHROOMONAS	--	-	--	-	--	-	13	1
...CRYPTOMONADACEAE								
...CRYPTOMONAS	--	-	--	-	--	-	13	1
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
...AGMENELLUM	--	-	--	-	--	-	--	-
...ANACYSTIS	--	-	--	-	--	-	13	1
...HORMOGONALES								
...NOSTOCACEAE								
...ANABAENOPSIS	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
...OSCILLATORIA	--	-	--	-	--	-	--	-
...SCHIZOTHRIX	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
..DINOPHYCEAE								
...PERIDINIALES								
...GLENODINIACEAE								
...GLENODINIUM	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued
PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 11,79 0900	AUG 15,79 0915	SEP 13,79 0815
TOTAL CELLS/ML	1600	4400	3800
DIVERSITY: DIVISION	1.7	0.9	1.3
..CLASS	1.7	0.9	1.3
..ORDER	1.9	1.1	1.7
...FAMILY	2.3	1.9	1.8
....GENUS	3.0	2.1	2.4

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....CHARACIACEAE						
....SCHROEDERIA	--	-	26	1	*	0
....CHLOROCOCCACEAE						
....CHLOROCOCCUM	--	-	--	-	39	1
...COELASTRACEAE						
....COELASTRUM	150	9	--	-	--	-
...HYDRODICTYACEAE						
....PEDIASTRUM	100	6	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	--	-	*	0
....KIRCHNERIELLA	--	-	51	1	--	-
....SELENASTRUM	--	-	--	-	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	--	-	78	2
....SCENEDESMUS	26	2	26	1	97	3
....TETRASTRUM	100	6	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE	--	-	--	-	--	-
....CHLAMYDOMONAS	26	2	100	2	--	-
....PLATYMONAS	--	-	--	-	29	1
...VOLVOCAEEAE						
....PANDORINA	13	1	--	-	160	4
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
....COSCINODISCACEAE						
....CYCLOTELLA	400#	24	39	1	--	-
....MELOSIRA	130	8	230	5	--	-
....SKELETONEMA	--	-	--	-	590#	16
....STEPHANODISCUS	--	-	170	4	--	-
....THALASSIOSIRA	--	-	--	-	450	12
..PENNALES						
...FRAGILARIACEAE						
....FRAGILARIA	--	-	--	-	*	0
....SYNEDRA	26	2	*	0	--	-
...GOMPHONEMATAACEAE						
....GOMPHONEMA	--	-	--	-	*	0
...NITZSCHIAEAE						
....NITZSCHIA	13	1	*	0	19	1
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
....CRYPTOCHRYSIDACEAE						
....CHROOMONAS	--	-	--	-	--	-
...CRYPTOMONADACEAE						
....CRYPTOMONAS	39	2	64	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
....AGMENELLUM	210	13	51	1	1900#	49
....ANACYSTIS	410#	25	100	2	290	8
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENOPSIS	--	-	2200#	51	--	-
...OSCILLATORIAEAE						
....OSCILLATORIA	--	-	1300#	29	--	-
....SCHIZOTHRIX	--	-	--	-	130	3
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

TENNESSEE RIVER BASIN

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	189	186	188	213	210	212	202	201	202	202	192	198
2	191	188	189	212	208	211	205	201	203	199	193	198
3	191	187	189	212	210	211	204	198	202	194	185	190
4	190	188	189	212	210	211	206	197	204	184	179	181
5	191	188	190	211	207	210	204	198	203	180	171	174
6	194	191	192	208	206	208	206	201	204	181	174	177
7	193	190	192	209	208	208	209	205	206	181	166	174
8	193	190	192	209	209	209	210	205	207	170	165	166
9	195	192	193	---	---	---	210	204	208	168	159	166
10	196	195	195	---	---	---	207	205	206	159	154	157
11	197	195	196	---	---	---	210	204	206	157	148	154
12	197	195	196	---	---	---	205	204	204	156	152	154
13	198	196	198	---	---	---	204	203	204	157	151	152
14	199	198	198	---	---	---	205	204	204	161	145	152
15	200	199	199	205	190	205	208	202	203	164	145	147
16	201	199	200	203	201	202	206	205	206	161	152	158
17	202	200	201	203	200	202	210	206	208	159	151	157
18	204	202	203	203	199	200	210	207	209	161	154	158
19	205	203	204	202	198	199	212	208	210	159	149	156
20	205	203	204	199	197	197	211	209	210	157	145	152
21	205	203	204	198	197	197	210	205	208	159	151	156
22	206	204	205	196	194	195	207	203	205	164	158	161
23	209	206	207	193	191	192	205	202	203	153	148	151
24	210	206	208	192	190	191	204	201	202	151	142	145
25	210	208	209	196	196	196	204	202	203	152	146	148
26	215	208	213	199	197	199	204	203	202	147	143	145
27	215	212	214	201	198	199	204	202	203	145	141	142
28	214	211	213	202	201	201	205	204	204	142	138	139
29	214	212	212	201	199	201	206	204	205	142	138	139
30	214	212	213	202	201	202	204	201	202	140	137	139
31	214	211	213	---	---	---	206	200	203	141	134	138
MONTH	215	186	201	213	190	202	212	197	205	202	134	159
	FEBRUARY			MARCH			APRIL			MAY		
1	146	138	141	173	167	168	---	---	---	122	119	120
2	147	139	144	168	159	163	---	---	---	121	120	121
3	147	145	146	159	157	158	---	---	---	122	121	121
4	148	140	146	154	147	149	---	---	---	122	121	121
5	151	145	148	153	148	150	---	---	---	123	119	120
6	152	148	150	150	147	149	---	---	---	121	120	121
7	155	152	153	148	139	144	---	---	---	123	121	121
8	154	151	153	138	132	134	---	---	---	123	121	123
9	155	152	153	133	129	131	---	---	---	128	121	122
10	155	150	153	128	123	126	132	129	131	127	120	122
11	154	150	153	125	120	123	130	128	128	125	119	121
12	162	156	159	124	121	123	130	129	130	125	119	122
13	162	159	160	124	118	122	132	130	130	126	124	125
14	165	162	164	122	118	120	132	128	130	126	125	126
15	164	162	163	125	120	124	131	129	130	136	134	135
16	164	162	163	126	119	124	131	129	130	140	138	139
17	164	161	162	132	121	126	131	128	129	144	142	143
18	165	162	163	136	131	134	129	127	128	135	131	133
19	165	163	165	138	135	136	128	125	127	138	127	132
20	168	165	165	138	127	134	127	124	126	---	---	---
21	168	165	166	140	134	137	126	124	125	---	---	---
22	167	160	164	140	139	140	125	123	124	---	---	---
23	170	165	167	155	139	141	125	121	122	---	---	---
24	167	162	164	---	---	---	122	120	121	---	---	---
25	168	161	164	---	---	---	122	118	120	---	---	---
26	168	162	164	---	---	---	121	117	119	---	---	---
27	169	160	167	---	---	---	118	116	117	---	---	---
28	170	166	167	---	---	---	119	117	118	---	---	---
29	---	---	---	---	---	---	120	119	119	---	---	---
30	---	---	---	---	---	---	120	119	120	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	170	138	158	173	118	137	132	116	125	144	119	126

TENNESSEE RIVER BASIN

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03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	151	149	150	154	151	153
2	---	---	---	---	---	---	152	149	150	153	152	153
3	---	---	---	---	---	---	154	150	151	153	150	151
4	---	---	---	---	---	---	155	151	152	153	150	151
5	---	---	---	---	---	---	156	152	154	152	148	150
6	---	---	---	---	---	---	158	154	156	151	148	149
7	---	---	---	---	---	---	158	155	157	151	148	150
8	---	---	---	---	---	---	160	155	157	150	149	149
9	---	---	---	---	---	---	160	156	158	150	149	150
10	---	---	---	150	149	150	160	157	158	151	149	150
11	---	---	---	150	148	149	162	156	158	151	150	151
12	137	133	136	149	146	148	161	155	158	153	150	151
13	138	134	137	146	145	145	159	157	158	153	149	151
14	138	136	137	145	144	144	159	157	157	150	148	149
15	139	135	137	142	140	141	159	156	158	153	149	151
16	139	135	137	---	---	---	159	157	158	152	150	151
17	140	136	139	137	135	136	159	157	158	150	144	146
18	140	138	139	137	133	135	159	157	158	144	140	142
19	141	138	140	137	135	136	159	157	158	146	140	143
20	141	138	140	139	137	138	160	158	159	146	144	146
21	142	139	140	140	139	139	161	158	160	146	143	145
22	143	139	141	141	139	140	161	158	160	144	142	144
23	143	139	141	141	140	141	159	158	159	144	142	143
24	142	139	141	142	141	141	160	157	158	146	142	144
25	142	139	141	141	140	141	159	156	157	149	146	147
26	143	140	142	143	140	141	157	155	156	148	146	147
27	145	139	142	144	142	143	157	154	156	149	145	147
28	145	143	144	145	143	144	155	153	154	147	144	146
29	---	---	---	148	143	145	155	153	154	148	144	147
30	---	---	---	149	147	148	154	151	153	149	146	148
31	---	---	---	150	148	149	154	152	153	---	---	---
MONTH	145	133	140	150	133	143	162	149	156	154	140	148

TENNESSEE RIVER BASIN

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	25.5	25.0	25.5	18.0	17.5	18.0	14.5	14.0	14.0	8.0	7.5	8.0
2	25.5	25.0	25.0	18.0	17.5	18.0	14.5	14.0	14.0	7.5	7.0	7.5
3	25.0	24.5	24.5	18.0	17.5	18.0	14.5	14.0	14.0	7.5	6.5	7.0
4	24.5	24.5	24.5	18.0	17.5	18.0	13.5	13.0	13.5	6.5	6.0	6.5
5	24.5	24.5	24.5	18.0	18.0	18.0	13.5	12.5	13.0	7.0	7.0	7.0
6	24.5	24.0	24.0	18.0	17.5	18.0	13.0	12.5	12.5	6.5	6.0	6.0
7	24.0	23.5	23.5	18.0	17.5	17.5	13.0	12.5	13.0	6.0	5.5	6.0
8	23.5	23.0	23.0	---	---	---	13.0	13.0	13.0	5.5	5.0	5.5
9	22.5	22.0	22.5	---	---	---	13.0	11.5	12.0	5.0	4.5	4.5
10	22.0	22.0	22.0	---	---	---	11.5	11.5	11.5	4.5	4.5	4.5
11	22.0	21.5	21.5	---	---	---	11.5	11.0	11.0	4.5	4.0	4.5
12	21.5	21.5	21.5	---	---	---	10.0	10.0	10.5	4.5	4.5	4.5
13	21.5	21.5	21.5	---	---	---	10.5	10.0	10.0	4.5	4.5	4.5
14	21.5	20.5	21.0	---	---	---	10.0	10.0	10.0	4.5	3.5	4.0
15	20.5	20.0	20.0	18.0	17.0	17.0	10.0	9.5	10.0	3.5	3.0	3.5
16	20.0	19.5	19.5	17.5	17.0	17.0	9.5	9.5	9.5	3.5	3.0	3.5
17	19.0	19.0	19.0	17.5	17.0	17.0	9.5	9.5	9.5	3.5	3.5	3.5
18	19.0	18.5	19.0	17.0	16.5	17.0	9.5	9.0	9.5	4.0	4.0	4.0
19	19.0	18.5	18.5	16.5	16.5	16.5	9.5	9.0	9.0	4.5	4.0	4.0
20	18.5	18.5	18.5	16.5	16.0	16.5	10.0	9.5	9.5	4.5	4.5	4.5
21	18.5	18.5	18.5	16.5	16.0	16.0	10.0	9.5	9.5	4.5	4.0	4.5
22	18.5	18.5	18.5	16.5	16.0	16.5	9.5	9.5	9.5	4.5	4.0	4.0
23	18.5	18.5	18.5	16.5	16.0	16.5	9.5	9.0	9.5	4.5	4.0	4.0
24	18.5	18.0	18.5	16.5	16.0	16.5	9.5	9.0	9.0	5.0	4.0	4.5
25	18.0	18.0	18.0	16.5	16.0	16.5	9.0	8.5	9.0	4.5	4.0	4.0
26	18.0	18.0	18.0	17.0	16.0	16.0	8.5	8.0	8.5	4.5	4.0	4.0
27	18.0	18.0	18.0	16.0	15.5	16.0	8.0	8.0	8.0	4.5	4.0	4.5
28	18.0	17.5	17.5	15.5	15.0	15.5	8.0	7.5	7.5	4.5	4.0	4.0
29	17.5	17.5	17.5	17.0	16.5	17.0	8.5	7.5	7.5	4.0	3.5	4.0
30	17.5	17.5	17.5	15.0	15.0	15.0	7.5	7.5	7.5	4.0	3.5	3.5
31	18.0	17.5	18.0	---	---	---	8.0	7.5	7.5	4.0	3.5	4.0
MONTH	25.5	17.5	20.5	18.0	15.0	17.0	14.5	7.5	10.5	8.0	3.0	5.0
	FEBRUARY			MARCH			APRIL			MAY		
1	3.5	3.0	3.5	9.5	9.0	9.0	---	---	---	18.0	17.5	18.0
2	3.5	3.0	3.0	10.0	9.5	9.5	---	---	---	18.0	18.0	18.0
3	3.5	3.0	3.5	10.0	9.5	10.0	---	---	---	18.0	18.0	18.0
4	3.5	3.0	3.5	10.5	10.0	10.0	---	---	---	18.0	18.0	18.0
5	4.0	3.5	3.5	10.5	10.0	10.0	---	---	---	---	---	---
6	3.5	3.5	3.5	11.0	10.0	10.5	---	---	---	---	---	---
7	3.5	3.5	3.5	11.5	11.0	11.5	---	---	---	---	---	---
8	3.5	3.5	3.5	12.0	11.5	11.5	---	---	---	---	---	---
9	3.5	3.0	3.0	12.5	11.5	12.0	14.5	14.0	14.5	---	---	---
10	3.0	2.5	3.0	12.5	12.0	12.0	14.5	14.0	14.5	---	---	---
11	3.5	3.0	3.5	12.0	11.5	12.0	15.0	14.5	15.0	---	---	---
12	3.5	3.5	3.5	12.5	12.0	12.0	15.0	15.0	15.0	---	---	---
13	4.5	3.5	4.0	13.0	12.5	12.5	15.5	15.0	15.0	---	---	---
14	4.5	4.5	4.5	13.0	12.5	12.5	16.0	15.0	15.5	---	---	---
15	5.0	4.5	5.0	13.0	12.5	12.5	16.0	15.5	16.0	---	---	---
16	5.5	5.0	5.0	13.0	12.0	12.5	16.5	16.0	16.0	---	---	---
17	5.0	4.5	4.5	13.0	12.0	12.5	17.0	16.0	16.5	---	---	---
18	4.5	4.5	4.5	13.0	12.5	13.0	17.5	16.0	17.0	22.0	21.5	21.5
19	5.0	4.5	4.5	13.0	13.0	13.0	17.5	16.5	17.0	23.5	21.0	22.0
20	5.0	5.0	5.0	11.5	11.5	11.5	18.0	17.0	17.5	---	---	---
21	5.0	5.0	5.0	12.5	12.0	12.0	17.5	17.5	17.5	---	---	---
22	6.0	5.0	5.5	13.0	13.0	13.0	17.5	17.5	17.5	---	---	---
23	6.5	6.0	6.0	13.0	13.0	13.0	17.5	17.5	17.5	---	---	---
24	7.0	6.5	7.0	---	---	---	17.5	17.5	17.5	---	---	---
25	7.5	7.0	7.0	---	---	---	18.0	17.5	17.5	---	---	---
26	7.5	7.0	7.5	---	---	---	18.0	17.5	17.5	---	---	---
27	7.5	7.0	7.5	---	---	---	17.5	17.5	17.5	---	---	---
28	9.0	7.5	8.0	---	---	---	17.5	17.5	17.5	---	---	---
29	---	---	---	---	---	---	18.0	17.5	17.5	---	---	---
30	---	---	---	---	---	---	18.0	17.5	18.0	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	9.0	2.5	4.5	13.0	9.0	11.5	18.0	14.0	16.5	23.5	17.5	19.5

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	---	---	---	29.5	29.0	29.5	28.5	28.0	28.5
2	---	---	---	---	---	---	29.5	29.0	29.0	28.0	27.5	28.0
3	---	---	---	---	---	---	29.5	29.0	29.0	28.0	28.0	28.0
4	---	---	---	---	---	---	29.0	29.0	29.0	28.5	28.0	28.0
5	---	---	---	---	---	---	29.0	28.5	29.0	28.0	28.0	28.0
6	---	---	---	---	---	---	29.5	28.5	28.5	28.5	28.0	28.0
7	---	---	---	---	---	---	29.5	28.5	29.0	28.5	28.0	28.0
8	---	---	---	---	---	---	29.5	29.0	29.0	28.0	27.5	28.0
9	---	---	---	---	---	---	29.5	29.0	29.0	27.5	27.0	27.5
10	---	---	---	27.5	27.0	27.0	29.0	29.0	29.0	27.0	27.0	27.0
11	---	---	---	27.0	26.5	27.0	29.0	29.0	29.0	27.5	27.0	27.0
12	25.5	25.0	25.0	27.5	26.5	27.0	29.0	28.0	28.5	27.0	27.0	27.0
13	25.5	25.0	25.0	27.5	27.0	27.0	28.5	28.0	28.0	27.0	26.0	26.5
14	26.5	25.0	25.5	27.5	27.0	27.0	28.0	27.5	28.0	26.0	25.5	25.5
15	26.0	25.5	26.0	27.5	27.0	27.5	28.5	27.5	28.0	25.5	25.0	25.0
16	26.0	25.0	25.5	---	---	---	28.0	27.0	27.5	25.0	24.5	25.0
17	26.5	25.0	25.5	29.0	28.5	29.0	27.5	27.0	27.0	25.0	24.0	24.5
18	26.5	26.0	26.0	29.0	28.5	29.0	28.0	27.0	27.5	24.0	23.5	23.5
19	27.0	26.0	26.5	29.5	29.0	29.0	28.0	27.5	28.0	24.0	23.5	23.5
20	27.0	26.5	26.5	29.5	29.0	29.5	28.5	28.0	28.0	24.0	23.5	23.5
21	27.0	26.5	27.0	30.0	29.0	29.5	29.0	28.0	28.5	23.5	23.5	23.5
22	27.0	26.5	26.5	30.0	29.5	29.5	29.0	28.0	28.5	23.5	23.0	23.5
23	27.0	26.5	26.5	30.0	29.5	29.5	29.0	28.5	28.5	23.5	23.0	23.0
24	27.0	26.5	26.5	29.5	29.0	29.0	29.0	28.5	28.5	23.0	23.0	23.0
25	26.5	26.0	26.0	29.0	28.5	29.0	28.5	28.0	28.0	23.0	23.0	23.0
26	26.0	25.5	26.0	29.5	28.5	29.0	28.0	27.5	28.0	23.0	23.0	23.0
27	26.5	26.0	26.0	29.0	28.5	29.0	28.0	27.5	27.5	23.0	23.0	23.0
28	27.0	26.0	26.5	29.0	28.5	28.5	28.5	27.5	27.5	23.0	23.0	23.0
29	---	---	---	29.5	28.5	29.0	28.5	27.5	27.5	23.0	23.0	23.0
30	---	---	---	29.5	29.0	29.0	28.5	27.5	28.0	23.5	23.0	23.0
31	---	---	---	30.0	29.0	29.5	28.5	28.0	28.0	---	---	---
MONTH	27.0	25.0	26.0	30.0	26.5	28.5	29.5	27.0	28.5	28.5	23.0	25.5

TENNESSEE RIVER BASIN

03593500 TENNESSEE RIVER AT SAVANNAH, TN

LOCATION.--Lat 35°13'29", long 88°15'26", Hardin County, Hydrologic Unit 06040001, on right bank at downstream side of bridge on U.S. Highway 64, at Savannah, 16.8 mi (27.0 km) downstream from Pickwick Landing Dam and at mile 189.9 (305.5 km).

DRAINAGE AREA.--33,140 mi² (85,830 km²), approximately.

PERIOD OF RECORD.--September 1930 to current year. Gage-height records collected in this vicinity since June 1905, are in reports of U.S. Weather Bureau.

REVISED RECORDS.--WSP 853: Drainage area. WSP 1306: 1936 (monthly runoff). WSP 2110: 1966. WRD Tenn. 1974: 1973.

GAGE.--Water-stage recorder. Datum of gage is 300.00 ft (91.440 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 7, 1945, at datum 41.61 ft (12.683 m) higher. Oct. 1, 1948, to Apr. 13, 1978, auxiliary water-stage recorder on downstream end of lockwall in lower pool at Pickwick Landing Dam. Since Apr. 13, 1978, auxiliary water-stage recorder over the tailwater elevation well adjacent to the powerhouse which is an integral part of Pickwick Landing Dam, 16.8 mi (27.0 km) upstream from base gage at same datum. Apr. 5, 1937, to Jan. 31, 1939, auxiliary nonrecording gage 4.0 mi (6.4 km) downstream and Feb. 1, 1939, to Sept. 30, 1948, water-stage recorder 4.3 mi (6.9 km) downstream from base gage at same datum.

REMARKS.--Records fair. Slight regulation since 1924 by Wilson Lake and increasing regulation since 1936 as other reservoirs have been built above station (see p. 308 and Water Resources Data for adjoining states, 1979). Flow now is almost completely regulated.

AVERAGE DISCHARGE.--49 years, 55,071 ft³/s (1,560 m³/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 585,000 ft³/s (16,600 m³/s) Mar. 17, 1973, from Pickwick Landing Dam releases furnished by Tennessee Valley Authority; maximum gage height, 96.11 ft (29.294 m) Mar. 20, 1973; minimum discharge 60 ft³/s (1.70 m³/s) Apr. 23, 1966; minimum gage height, 41.20 ft (12.558 m), present datum, Oct. 20, 1931; minimum gage height since Kentucky Lake reached minimum pool elevation on Apr. 7, 1945, 53.40 ft (16.276 m) Jan. 12, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1867, 101.2 ft (30.85 m) Mar. 21, 1897, present datum, from floodmarks, discharge, 450,000 ft³/s (12,700 m³/s), from rating curve extended above 320,000 ft³/s (9,060 m³/s). Flood of Jan. 2, 1927, reached a stage of 92.7 ft (28.25 m), present datum, discharge, 349,000 ft³/s (9,880 m³/s). Minimum stage since 1905, 38.8 ft (11.83 m) present datum, Sept. 8, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 221,000 ft³/s (6,260 m³/s) Mar. 8; maximum gage height, 79.88 ft (24.347 m) Mar. 9; minimum daily discharge, 13,500 ft³/s (382 m³/s) Nov. 12; minimum gage height, 53.94 ft (16.441 m) Dec. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16800	18000	30000	87300	92300	147000	68700	50100	93800	32300	66200	67600
2	24000	17700	21700	119000	82300	151000	74300	50100	112000	30800	59800	68100
3	28700	17000	29400	126000	73800	160000	83300	54200	115000	37000	63500	70100
4	23400	17600	47100	133000	68400	177000	80600	86400	107000	30800	65600	59600
5	20200	16900	59600	132000	68500	191000	68000	88900	92500	32800	63400	54800
6	21600	17900	48200	130000	62500	212000	49000	60700	72500	34900	52400	52900
7	22100	16100	31400	139000	64800	217000	49300	49100	76300	47800	50900	51600
8	21100	15100	64100	145000	72700	217000	40000	47500	70900	48000	46200	48100
9	27400	15500	77000	144000	74500	211000	47200	47000	64100	35100	44000	39600
10	27000	13600	89100	144000	66100	200000	53400	45000	61100	34600	41400	45100
11	22700	13600	75500	142000	56300	184000	65300	46300	52900	37400	52400	48100
12	20700	13500	60200	140000	57200	166000	89200	44700	50500	72900	55300	49100
13	21000	17800	61300	138000	56400	147000	157000	41400	48300	47100	44300	65900
14	22300	16500	51800	123000	55000	132000	183000	44200	53500	50200	41200	77400
15	22100	16800	43300	93000	57900	114000	188000	41000	52200	40200	43400	81900
16	29400	20800	44700	83400	50800	101000	170000	42300	53700	48600	50600	81000
17	30800	25000	42600	82500	44900	91500	134000	47100	44000	55900	49400	77100
18	20700	26100	46500	80800	42600	84500	99900	48100	34800	50400	49600	63100
19	21600	23300	47400	68800	54500	78300	76300	35000	35900	50700	52500	58100
20	20600	34200	48100	86600	55900	66800	58800	29200	32800	46900	40800	54300
21	20900	27900	50200	118000	48000	64500	55200	36800	29800	63100	42500	56200
22	21300	29000	55300	139000	66200	68100	54900	40500	28200	80000	42500	67600
23	25000	20800	48300	152000	71700	77500	52400	50900	45800	84100	42100	66500
24	21200	19700	42900	158000	86000	71500	54600	59600	45900	91200	44500	66000
25	20100	30300	43100	158000	97500	58700	49200	68500	39100	94200	52900	66100
26	17700	33100	42100	159000	116000	61000	51700	68400	37600	95100	60500	65800
27	18500	33800	47700	156000	136000	61000	63400	62400	36100	90700	53900	66000
28	18600	27400	44100	146000	146000	62300	45800	54300	40400	86600	53500	65700
29	18900	28100	42800	125000	---	67800	41300	54300	43100	86000	56100	74500
30	18400	29500	48000	114000	---	76300	48200	54100	40700	80000	52900	91200
31	18900	---	62800	107000	---	82700	---	63700	---	78600	57900	---
TOTAL	683700	652600	1546300	3869400	2024800	3799500	2352000	1611800	1710500	1794000	1592200	1899100
MEAN	22050	21750	49880	124800	72310	122600	78400	51990	57020	57870	51360	63300
MAX	30800	34200	89100	159000	146000	217000	188000	88900	115000	95100	66200	91200
MIN	16800	13500	21700	68800	42600	58700	40000	29200	28200	30800	40800	39600
CAL YR 1978	TOTAL	16837400	MEAN	46130	MAX	193000	MIN	13500				
WTR YR 1979	TOTAL	23535900	MEAN	64480	MAX	217000	MIN	13500				

03596000 DUCK RIVER BELOW MANCHESTER, TN

LOCATION.--Lat 35°28'15", long 86°07'18", Coffee County, Hydrologic Unit 06040002, on right bank 50 ft (15 m) downstream from Powers Bridge, 2.0 mi (3.2 km) southwest of Manchester, 3.2 mi (5.1 km) downstream from Little Duck River, 7.0 mi (11.3 km) upstream from Crumpton Creek, and at mile 265.4 (427.0 km).

DRAINAGE AREA.--107 mi² (277 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1934 to current year.

REVISED RECORDS.--WSP 1436: 1946-47.

GAGE.--Water-stage recorder. Datum of gage is 878.23 ft (267.685 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Occasional regulation for short periods during low flow by small reservoirs above station.

AVERAGE DISCHARGE.--45 years, 188 ft³/s (5.324 m³/s), 23.86 in/yr (606 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft³/s (1,080 m³/s) May 27, 1973, gage height, 20.95 ft (6.386 m), from rating curve extended above 12,000 ft³/s (340 m³/s), based on contracted-opening measurement at gage height 15.04 ft (4.584 m), and slope-area measurements at gage heights 18.93 ft (5.770 m) and 20.95 ft (6.386 m); minimum, 8.0 ft³/s (0.23 m³/s) Aug. 12, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of 23.2 ft (7.07 m) from floodmarks by Tennessee Valley Authority, discharge, about 50,000 ft³/s (1,420 m³/s). Flood in March 1902 reached approximately same stage.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft³/s (70.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 1	2315	4160 118	9.22 2.810	Mar. 4	0900	5030 142	10.22 3.115
Jan. 7	1500	3610 102	8.52 2.597	Apr. 12	2400	2500 70.8	6.91 2.106
Jan. 21	0815	3050 86.4	7.75 2.362	Sept. 28	0800	3250 92.0	8.03 2.448
Feb. 25	1245	*5120 145	10.32 3.146				

Minimum discharge, 20 ft³/s (0.566 m³/s) Nov. 6, 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	23	71	2320	178	362	180	79	231	41	61	96
2	31	22	59	1840	175	310	1380	73	151	40	55	200
3	29	21	61	495	170	605	1560	216	184	40	52	105
4	30	21	258	320	165	3560	825	872	182	39	51	80
5	27	21	251	270	160	838	530	584	123	68	45	60
6	25	21	139	321	157	479	346	318	102	45	42	55
7	24	28	104	2650	276	371	265	208	101	41	42	52
8	24	26	147	1170	286	350	227	151	88	47	40	48
9	24	24	1710	446	270	290	287	120	76	47	40	45
10	24	24	531	311	209	483	256	101	69	42	39	44
11	24	22	257	254	187	562	200	89	63	40	59	41
12	24	22	146	225	239	345	1140	79	59	40	60	40
13	27	22	151	228	343	280	1940	75	57	55	43	90
14	28	21	126	224	278	288	799	72	55	45	39	287
15	27	21	108	178	245	273	444	66	56	47	40	113
16	26	60	110	156	209	227	312	60	54	44	38	73
17	24	102	141	155	170	195	246	56	53	39	37	64
18	24	101	113	177	169	177	201	55	51	37	36	57
19	24	67	101	180	165	174	171	53	50	47	35	54
20	23	51	99	1180	168	260	152	179	48	100	35	55
21	23	45	409	2660	607	225	135	192	50	156	36	63
22	22	43	268	1050	510	190	122	172	48	76	39	64
23	22	55	184	584	372	310	116	615	46	55	38	59
24	21	62	154	908	433	516	110	622	46	49	58	54
25	21	57	151	477	3560	352	105	314	47	327	63	50
26	24	50	123	343	1210	264	116	199	46	345	362	47
27	24	82	103	333	586	220	149	148	44	136	1010	475
28	23	89	91	340	429	206	119	150	43	88	224	2490
29	23	72	85	261	---	171	96	188	45	66	335	716
30	23	78	156	223	---	163	86	157	44	57	170	344
31	23	---	663	208	---	146	---	382	---	84	150	---
TOTAL	781	1353	7130	20487	11926	13192	12615	6645	2312	2383	3374	6021
MEAN	25.2	45.1	230	661	426	426	421	214	77.1	76.9	109	201
MAX	43	102	1710	2660	3560	3560	1940	872	231	345	1010	2490
MIN	21	21	59	155	157	146	86	53	43	37	35	40
CFSM	.24	.42	2.15	6.18	3.98	3.98	3.94	2.00	.72	.72	1.02	1.88
IN.	.27	.47	2.48	7.12	4.15	4.59	4.39	2.31	.80	.83	1.17	2.09

CAL YR 1978	TOTAL	59499	MEAN 163	MAX 3010	MIN 17	CFSM 1.52	IN 20.69
WTR YR 1979	TOTAL	88219	MEAN 242	MAX 3560	MIN 21	CFSM 2.26	IN 30.67

TENNESSEE RIVER BASIN

03596000 DUCK RIVER BELOW MANCHESTER, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: December 1975 to current year.

INSTRUMENTATION.--Temperature recorder since Dec. 5, 1975.

REMARKS.--No record, clock stopped Feb. 16-23, Apr. 26-30, June 8 to July 2, July 17 to Aug. 1, (range in temperature 20.5°C to 25.5°C).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 28.0°C Aug. 16, 1977; minimum, 1.5°C Feb. 2, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 26.0°C Aug. 8, 9; minimum 2.0°C Jan. 4, 8-11.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	20.5	16.0	16.5	15.0	13.5	14.0	10.5	10.0	10.0	9.0	8.0	8.5
2	19.5	18.0	18.5	15.5	13.5	14.5	11.0	10.0	10.5	8.5	4.0	5.5
3	19.0	18.0	18.5	15.5	13.5	14.5	13.0	10.5	11.5	4.0	3.0	3.5
4	19.5	17.0	18.0	15.0	13.0	13.5	12.0	11.0	11.5	4.0	2.0	3.0
5	18.0	16.0	17.0	14.0	13.0	13.5	11.5	10.5	11.0	4.0	3.5	3.5
6	17.0	15.5	16.5	14.0	12.0	13.0	10.5	9.5	10.0	4.5	3.5	4.0
7	16.0	14.5	15.5	14.0	13.5	13.5	11.0	9.5	10.5	4.5	3.5	4.0
8	15.5	13.5	14.5	14.0	12.0	13.0	11.0	10.0	11.0	4.5	2.0	4.0
9	14.5	13.5	14.0	13.5	11.5	13.0	11.0	7.0	9.0	3.5	2.0	3.0
10	15.0	13.5	14.0	13.5	11.5	12.0	7.0	5.5	6.0	3.5	2.0	3.0
11	16.0	14.5	15.0	13.0	11.0	11.5	6.5	5.0	6.0	4.0	2.0	3.5
12	17.0	15.0	16.0	13.5	11.5	12.0	6.0	5.0	5.5	4.5	3.5	4.0
13	17.0	16.0	16.5	14.0	13.0	13.0	6.0	5.0	5.5	5.5	4.0	5.0
14	16.5	14.5	16.0	14.5	13.0	14.0	6.0	5.0	5.5	5.0	4.0	4.5
15	14.5	13.0	13.5	15.5	14.0	14.5	6.0	4.5	5.5	4.5	3.0	4.0
16	14.5	13.0	13.5	16.5	15.0	15.0	6.5	5.5	6.0	4.5	3.5	4.0
17	14.0	12.0	13.0	15.5	14.0	14.5	6.0	5.0	5.5	5.0	4.5	4.5
18	13.5	12.0	12.0	14.5	13.0	13.5	6.5	5.0	6.0	5.0	4.0	4.5
19	13.5	12.0	13.0	13.5	12.0	13.0	8.0	6.5	7.0	6.5	5.0	5.5
20	14.0	13.0	13.0	13.5	11.5	12.0	9.0	8.0	8.5	6.5	6.0	6.0
21	14.5	13.0	13.5	13.5	12.0	13.0	9.0	8.5	9.0	6.0	3.0	4.5
22	14.5	13.5	13.5	13.5	12.0	13.0	8.5	6.5	8.0	4.5	3.0	4.0
23	15.0	13.5	14.0	13.0	12.0	13.0	7.0	6.0	6.5	5.5	3.5	4.5
24	15.5	14.0	14.5	13.5	11.5	12.0	7.0	6.0	6.5	5.5	3.5	4.5
25	15.0	14.0	14.5	11.5	10.5	11.0	6.0	6.0	6.0	4.5	3.0	4.0
26	16.0	15.0	15.5	11.5	11.0	11.0	6.0	4.5	5.0	5.0	3.5	4.5
27	16.5	14.0	15.5	12.0	11.5	11.5	5.5	3.5	4.5	5.5	4.5	5.0
28	15.0	13.0	14.0	11.0	9.5	10.5	4.5	3.5	4.0	5.0	4.5	4.5
29	14.5	12.0	13.0	10.0	9.0	9.5	5.0	3.5	4.5	5.5	4.5	5.0
30	14.5	13.0	13.5	10.0	9.0	9.5	5.5	5.0	5.5	6.0	4.5	5.5
31	14.5	13.5	14.0	---	---	---	8.0	5.0	6.0	5.5	4.5	5.0
MONTH	20.5	12.0	15.0	16.5	9.0	12.5	13.0	3.5	7.5	9.0	2.0	4.5

03596000 DUCK RIVER BELOW MANCHESTER, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	6.5	5.0	6.0	11.0	9.5	10.0	17.0	15.0	16.0	18.5	16.0	17.0
2	6.5	4.5	5.5	11.5	9.5	10.5	16.5	14.5	16.0	18.0	16.5	17.0
3	7.0	6.0	6.5	13.0	11.0	11.5	16.0	14.5	15.5	18.0	16.5	17.0
4	7.0	6.0	6.5	14.0	12.0	13.0	16.0	14.5	15.0	18.0	16.5	17.0
5	6.5	5.5	6.0	13.5	11.0	12.0	16.0	14.0	15.0	17.0	16.0	16.5
6	6.5	5.5	6.0	13.0	10.5	11.5	16.0	13.5	14.5	18.0	15.5	16.5
7	6.0	5.0	5.5	12.0	10.0	11.0	16.0	13.5	14.5	18.5	15.5	16.5
8	6.5	5.0	6.0	11.0	10.0	10.5	15.0	14.0	14.5	19.0	16.5	18.0
9	6.0	4.5	5.0	11.5	9.5	10.5	14.5	13.5	14.0	19.5	18.0	19.0
10	6.0	4.5	5.0	10.5	10.0	10.0	14.5	13.0	13.5	21.0	18.5	20.0
11	6.5	4.5	5.5	10.5	8.5	9.5	16.0	13.5	14.5	21.5	19.5	20.5
12	6.5	5.5	6.0	11.0	8.5	10.0	15.0	15.0	15.0	20.5	19.5	20.5
13	7.0	5.5	6.0	11.5	9.5	10.5	15.5	14.5	15.0	19.5	17.0	18.5
14	8.0	6.0	7.0	13.5	10.5	11.5	16.0	14.0	15.0	19.0	16.5	18.0
15	9.0	8.0	8.5	13.0	10.5	11.5	16.5	14.0	15.5	20.0	18.0	19.0
16	---	---	---	13.0	10.0	11.5	17.0	14.0	15.5	20.0	18.5	19.0
17	---	---	---	13.5	10.5	12.0	17.0	14.5	16.0	20.0	18.0	19.0
18	---	---	---	14.0	11.5	13.0	18.0	15.0	16.5	20.5	18.5	19.5
19	---	---	---	15.0	13.0	14.0	17.0	15.0	16.5	20.5	19.0	19.5
20	---	---	---	16.0	13.5	15.0	18.5	15.5	18.0	20.5	18.0	19.5
21	---	---	---	17.0	14.5	15.5	18.0	16.0	17.0	20.5	19.0	20.0
22	---	---	---	17.0	15.0	16.0	18.5	17.0	17.0	20.5	19.0	19.5
23	---	---	---	18.0	15.0	16.0	18.5	17.0	17.0	19.0	18.0	18.5
24	14.0	11.0	13.0	15.5	12.0	14.0	18.5	16.5	17.0	18.0	17.0	18.0
25	13.5	10.5	11.5	13.0	10.0	11.5	18.5	17.0	17.0	17.0	15.5	16.5
26	10.5	8.5	9.5	13.0	10.0	11.5	---	---	---	17.0	15.0	16.0
27	9.5	8.5	9.0	11.5	10.5	11.0	---	---	---	16.0	15.5	16.0
28	10.5	8.5	9.5	14.0	10.5	12.0	---	---	---	18.0	16.0	17.0
29	---	---	---	14.0	11.5	13.0	---	---	---	19.5	16.5	18.5
30	---	---	---	15.0	13.0	14.0	---	---	---	19.5	18.0	19.0
31	---	---	---	16.0	14.0	15.0	---	---	---	19.5	18.5	19.0
MONTH	---	---	---	18.0	8.5	12.0	18.5	13.0	15.5	21.5	15.0	18.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	20.5	18.5	19.5	---	---	---	---	---	---	23.5	21.5	22.0
2	21.5	19.0	20.5	---	---	---	24.5	22.0	23.5	23.0	21.0	21.5
3	21.0	19.0	20.0	23.5	20.5	22.0	25.0	22.0	23.5	23.0	21.0	22.0
4	21.0	19.0	20.0	24.0	21.0	23.0	24.5	22.0	23.5	23.5	21.5	22.0
5	21.0	19.5	20.5	23.5	21.5	22.0	25.0	22.0	23.5	25.0	22.0	23.5
6	20.0	19.5	20.0	23.5	21.0	22.0	25.0	22.0	24.0	25.0	23.5	24.0
7	21.0	19.0	20.0	22.0	21.0	21.5	25.5	23.0	24.5	24.5	23.0	23.5
8	---	---	---	21.0	20.0	20.5	26.0	23.5	24.5	24.0	21.5	23.0
9	---	---	---	21.5	20.0	20.5	26.0	23.5	25.0	23.0	20.5	21.5
10	---	---	---	22.0	20.0	21.0	25.5	23.5	24.5	23.5	20.5	22.0
11	---	---	---	21.5	20.0	21.0	25.0	23.0	23.5	23.0	20.5	21.5
12	---	---	---	21.5	20.5	21.0	23.0	21.0	21.5	23.0	20.5	22.0
13	---	---	---	22.0	20.5	21.0	23.0	20.0	21.5	23.0	21.0	22.0
14	---	---	---	23.5	21.0	22.0	23.0	20.5	21.5	22.0	20.5	21.5
15	---	---	---	24.0	21.5	23.0	22.0	20.5	21.5	21.0	19.5	20.5
16	---	---	---	24.5	21.5	23.5	23.0	20.0	21.0	21.0	19.5	20.5
17	---	---	---	---	---	---	22.0	20.0	21.0	21.5	20.0	20.5
18	---	---	---	---	---	---	23.5	20.5	22.0	21.0	20.0	20.5
19	---	---	---	---	---	---	24.0	21.0	23.0	22.0	20.5	21.0
20	---	---	---	---	---	---	24.5	22.0	23.5	21.5	20.5	21.0
21	---	---	---	---	---	---	24.5	22.0	24.0	21.5	20.5	21.0
22	---	---	---	---	---	---	24.5	23.0	24.0	21.5	20.0	21.0
23	---	---	---	---	---	---	24.0	23.0	23.5	21.0	19.5	20.0
24	---	---	---	---	---	---	24.5	22.0	23.5	20.5	19.0	20.0
25	---	---	---	---	---	---	24.0	22.0	23.5	21.0	19.0	20.0
26	---	---	---	---	---	---	23.5	21.0	22.0	21.5	19.5	20.5
27	---	---	---	---	---	---	23.0	21.0	21.5	20.5	20.0	20.0
28	---	---	---	---	---	---	22.0	20.5	21.5	20.5	19.5	20.0
29	---	---	---	---	---	---	23.0	21.0	21.5	21.0	19.5	20.5
30	---	---	---	---	---	---	22.0	21.0	21.5	21.0	19.5	20.5
31	---	---	---	---	---	---	23.0	21.0	21.5	---	---	---
MONTH	---	---	---	---	---	---	26.0	20.0	23.0	25.0	19.0	21.5

TENNESSEE RIVER BASIN

03597850 DUCK RIVER AT SHELBYVILLE WATERWORKS, NEAR SHELBYVILLE, TN

LOCATION.--Lat 35°28'24", long 86°27'50", Bedford County, Hydrologic Unit 06040002, 1.3 mi (2.1 km) downstream from bridge on State Route 82, 1.6 mi (2.6 km) upstream from bridge on U. S. Highway 231, 1.6 mi (2.6 km) upstream from bridge on U. S. Highway 231, 1.6 mi (2.6 km) east of Royal, and at mile 222.0 (357.2 km).

DRAINAGE AREA.--425 mi² (1101 km²).

PERIOD OF RECORD.--Water years 1975 to current year.

REMARKS.--Flow regulated by Normandy Lake (station 03596460) above site.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM UNINHIB 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
JAN 09...	0945	3030	170	6.8	6.0	12	6	11.4	8	1.9	110000	--
MAR 21...	1205	338	240	8.1	17.8	10	11	9.0	--	2.2	--	120
MAY 08...	1050	710	190	7.4	19.0	15	11	7.8	--	1.0	--	95
JUL 11...	1313	183	150	7.1	22.2	8	7	7.3	--	1.9	--	68
SEP 11...	1000	181	150	7.6	20.0	15	10	8.0	--	1.1	--	18

DATE	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
JAN 09...	29	3.2	1.6	1.1	73	11	3.0	110	.15	900	16
MAR 21...	--	--	--	--	100	12	4.0	120	.16	110	9
MAY 08...	--	--	--	--	84	10	2.0	130	.18	249	21
JUL 11...	--	--	--	--	61	8.0	4.0	90	.12	44.5	13
SEP 11...	--	--	--	--	60	5.0	4.0	80	.11	39.1	10

03597850 DUCK RIVER AT SHELBYVILLE WATERWORKS, NEAR SHELBYVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
JAN 09...	.95	.07	.13	.080	--	530	<2	120	<1	<5	<10
MAR 21...	--	--	--	--	.04	--	--	--	<1	--	30
MAY 08...	.72	.09	.03	.070	.07	--	--	--	<1	--	20
JUL 11...	.45	.06	.20	.080	.06	--	--	--	<1	--	<10
SEP 11..	.49	.02	.15	.100	.01	--	--	--	<1	--	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
JAN 09...	670	60	<10	180	--	<.2	<10	<1	40	.8	--
MAR 21...	--	<50	<10	--	60	.2	--	--	120	--	3.1
MAY 08...	--	190	<10	--	150	<.2	--	--	20	2.7	--
JUL 11...	--	90	<10	--	50	<.2	--	--	10	4.2	--
SEP 11...	--	340	<10	--	90	<.2	--	--	<50	4.6	--

TENNESSEE RIVER BASIN

03598000 DUCK RIVER NEAR SHELBYVILLE, TN

LOCATION.--Lat 35°28'49", long 86°29'57", Bedford County, Hydrologic Unit 06040002, on right bank 150 ft (50 m) downstream from Sims Bridge, 2.1 mi (3.4 km) upstream from Sugar Creek, 2.2 mi (3.5 km) west of Shelbyville, 2.9 mi (4.7 km) downstream from Flat Creek, and at mile 216.2 (347.9 km).

DRAINAGE AREA.--481 mi² (1,246 km²).

PERIOD OF RECORD.--October 1933 to current year. Prior to April 1934 monthly discharge only, published in WSP 1306.

REVISED RECORDS.--WSP 783: 1934. WSP 853: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 683.51 ft (208.334 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 2, 1966, at datum 2.0 ft (0.6 m) higher.

REMARKS.--Records good. Prior to 1948 diurnal fluctuation caused by powerplant upstream. Flow regulated by Normandy Reservoir (station 03596460) since January 1976. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--46 years, 828 ft³/s (23.45 m³/s), 23.38 in/yr (594 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,900 ft³/s (1,780 m³/s) Feb. 13, 1948, gage height, 38.40 ft (11.704 m), present datum, from floodmarks, from rating curve extended above 35,000 ft³/s (991 m³/s) on basis of slope-area measurement of peak flow; minimum, 5.0 ft³/s (0.14 m³/s) Aug. 23, 1936; minimum daily, 20 ft³/s (0.57 m³/s) Sept. 2, 1945.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1929 reached a stage of 39.6 ft (12.07 m) present datum, discharge, about 70,000 ft³/s (1,980 m³/s), from high water profile by Tennessee Valley Authority. Flood in March 1902 reached a stage about 2.0 ft (0.61 m) higher than that in March 1929, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,900 ft³/s (309 m³/s) at 1300 hours Mar. 4, gage height, 20.34 ft (6.200 m); minimum, 157 ft³/s (4.45 m³/s) Oct. 24, 25, May 17, 18; minimum daily, 159 ft³/s (4.50 m³/s) Oct. 31, Nov. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	224	159	1330	7170	717	2790	660	211	1560	192	276	664
2	228	159	1050	6480	651	2590	4120	199	1360	187	292	719
3	191	163	984	2690	506	2290	3800	723	1640	186	238	705
4	196	175	2660	2590	487	9250	3080	2430	1250	181	222	676
5	187	177	1450	2650	436	4130	2400	2540	741	208	202	290
6	183	177	1480	2430	413	3270	1850	1290	658	201	206	221
7	180	209	1320	7830	813	2890	1550	979	618	193	200	203
8	177	219	1760	4430	821	2690	1400	790	488	216	191	196
9	175	206	8680	3100	819	2500	1450	699	389	229	184	190
10	174	191	3000	2580	694	2140	1290	632	363	216	176	187
11	172	186	1980	1100	634	2120	1180	415	491	200	185	184
12	172	183	1600	2060	689	1840	3400	354	248	195	260	183
13	208	182	1390	2150	913	1650	6240	338	223	237	209	876
14	229	182	1230	1970	823	2160	3740	316	196	229	188	3120
15	214	182	1110	1220	809	716	1980	226	190	192	179	853
16	187	581	1060	762	743	488	2480	181	184	178	175	508
17	178	1100	1040	666	784	432	1580	163	172	171	168	371
18	174	1190	951	658	790	394	1400	174	167	162	172	308
19	169	504	884	661	741	387	1280	178	184	228	181	280
20	163	350	841	3810	732	551	563	181	193	1820	181	263
21	163	733	2130	6450	1700	483	411	236	203	1120	176	363
22	164	832	1620	3830	1610	417	365	336	206	398	208	527
23	162	856	1270	3200	1970	677	337	1760	184	235	189	412
24	160	710	1100	3600	2030	1200	309	2570	169	239	184	320
25	162	921	990	3210	7480	910	293	1550	174	456	196	284
26	166	870	863	2750	5230	719	298	801	216	877	402	266
27	164	1240	783	2560	3550	595	343	626	210	785	864	1840
28	164	1120	715	2460	3050	705	273	584	197	757	1500	6460
29	164	1410	425	2230	---	660	241	1630	196	304	464	3730
30	162	1520	556	959	---	617	224	1080	200	265	306	2640
31	159	---	2530	810	---	597	---	2440	---	388	313	---
TOTAL	5571	16687	48782	89066	40635	52858	48537	26632	13270	11445	8887	27839
MEAN	180	556	1574	2873	1451	1705	1618	859	442	369	287	928
MAX	229	1520	8680	7830	7480	9250	6240	2570	1640	1820	1500	6460
MIN	159	159	425	658	413	387	224	163	167	162	168	183
(†)	-3000	-7000	-6100	+2200	+9000	+1400	+7900	+3000	-1000	+500	+300	+600
MEAN‡	82.9	323	1377	2944	1773	1750	1881	956	409	385	296	948
CFSM‡	.17	.67	2.86	6.12	3.69	3.64	3.91	1.99	.85	.80	.62	1.97
IN.‡	.20	.75	3.30	7.06	3.84	4.20	4.36	2.29	.95	.92	.71	2.20
CAL YR 1978 TOTAL	255712			701	MAX 8680	MIN 159	MEAN‡ 710	CFSM‡ 1.48	IN.‡ 20.03			
WTR YR 1979 TOTAL	390209			MEAN 1069	MAX 9250	MIN 159	MEAN‡ 1090	CFSM‡ 2.27	IN.‡ 30.77			

† Change in contents, in cfs-days, in Normandy Lake.

‡ Adjusted for change in contents.

03599460 DUCK RIVER NEAR COLUMBIA, TN

LOCATION.--Lat 35°35'53", long 86°57'27", Maury County, Hydrologic Unit 06040002, on right bank on Sowell Mill Pike, 0.8 mi (1.3 km) west of Union Grove School, 5.4 mi (8.7 km) east of Columbia, and at mile 141.1 (227.0 km).

DRAINAGE AREA.--1,176 mi² (3,046 km²).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: November 1973 to current year.

INSTRUMENTATION.--Temperature recorder since November 1973.

REMARKS.--Temperature recorder clock stopped Oct. 1, Mar. 11 to Apr. 1.

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 33.0°C July 15-17, 1977; minimum, 0.5°C Jan. 22, 1977.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 29.0°C Aug. 8-10; minimum, 4.5°C Feb. 2.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	15.5	14.0	15.0	13.0	12.0	12.0	13.0	11.0	13.0
2	21.0	20.0	20.5	16.0	15.0	15.0	13.0	12.0	12.0	13.0	11.0	11.5
3	20.5	20.0	20.0	16.0	14.5	15.0	14.0	12.0	13.0	11.0	9.5	10.0
4	20.5	20.0	20.0	15.5	14.5	15.0	15.0	13.5	14.0	9.5	8.5	9.0
5	20.5	19.5	20.0	15.5	14.5	15.0	14.5	13.5	14.0	8.5	8.5	8.5
6	20.0	19.0	19.5	15.0	14.0	14.5	13.5	12.0	13.0	8.5	8.5	8.5
7	19.0	18.0	18.5	14.5	14.0	14.5	13.0	11.5	12.0	9.0	8.5	8.5
8	18.0	17.0	17.0	14.5	13.5	14.0	13.5	10.5	13.0	8.5	8.0	8.5
9	17.0	16.0	16.5	14.0	13.5	13.5	11.5	9.5	10.5	9.0	8.5	8.5
10	16.5	15.5	16.0	14.0	13.5	13.5	10.0	9.0	9.5	8.5	8.0	8.0
11	17.0	15.5	16.5	14.0	13.5	13.5	11.5	8.5	9.5	8.0	6.5	7.0
12	18.5	16.5	18.0	14.5	13.5	14.0	10.5	8.0	9.5	8.5	7.0	8.0
13	19.0	18.0	18.5	15.0	14.0	14.5	9.5	8.0	9.0	9.0	8.5	8.5
14	19.0	16.5	18.0	15.5	14.5	15.0	9.5	9.0	9.0	9.0	8.0	8.5
15	16.5	15.5	16.0	17.0	15.0	16.0	9.5	8.5	9.0	8.0	7.0	8.0
16	16.0	15.0	15.5	17.0	16.0	16.5	9.5	8.5	9.0	7.0	6.0	6.5
17	15.0	14.5	15.0	17.0	16.5	17.0	9.5	9.0	9.5	8.0	6.5	7.0
18	15.0	14.0	15.0	17.0	16.5	16.5	9.5	9.0	9.0	8.5	7.0	8.0
19	15.5	14.5	15.0	17.0	15.5	16.0	10.0	9.0	9.5	8.5	8.0	8.0
20	15.5	14.5	15.0	16.0	15.0	15.5	12.0	10.0	11.0	9.5	8.5	9.0
21	15.5	15.0	15.0	15.5	14.5	15.0	12.0	11.5	12.0	9.5	8.5	9.0
22	15.5	15.0	15.0	15.0	14.0	14.5	12.0	11.5	11.5	9.0	8.5	8.5
23	16.0	15.0	15.5	14.5	14.5	14.5	11.5	10.0	11.0	9.0	8.0	8.5
24	16.5	15.5	16.0	15.0	14.5	14.5	10.5	10.0	10.0	9.5	8.5	9.0
25	16.0	14.5	15.5	14.5	13.5	14.0	10.0	9.5	9.5	8.5	8.0	8.0
26	16.0	15.0	15.5	14.0	13.5	14.0	10.0	9.0	9.5	8.0	7.0	8.0
27	16.0	15.5	15.5	14.5	13.5	14.0	9.5	8.5	8.5	8.0	8.0	8.0
28	16.0	14.5	15.0	14.0	13.5	14.0	9.0	6.5	8.0	8.0	8.0	8.0
29	15.5	14.0	14.5	13.5	13.0	13.0	8.0	6.5	7.0	8.0	7.0	7.0
30	15.0	14.0	14.5	13.5	13.0	13.0	9.0	8.0	8.0	7.0	6.5	7.0
31	15.0	14.0	14.5	---	---	---	11.5	9.0	10.0	7.0	6.5	6.5
MONTH	21.0	14.0	16.5	17.0	13.0	14.5	15.0	6.5	10.5	13.0	6.0	8.5

TENNESSEE RIVER BASIN

03599460 DUCK RIVER NEAR COLUMBIA, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	6.5	5.5	6.0	11.0	9.5	10.5	---	---	---	19.5	18.0	19.0
2	6.5	4.5	5.5	11.5	10.0	10.5	16.0	14.0	15.5	18.5	17.0	18.0
3	6.5	6.0	6.0	13.0	11.0	11.5	16.0	15.5	15.5	18.0	16.5	17.0
4	7.0	6.5	6.5	14.0	13.0	13.5	15.5	14.5	15.0	18.0	16.5	17.0
5	7.0	6.0	6.5	14.5	14.0	14.5	15.5	13.5	14.5	16.5	16.0	16.0
6	6.5	5.5	6.0	14.5	13.5	14.0	15.0	13.0	14.0	16.0	15.5	16.0
7	5.5	5.0	5.5	13.5	11.5	12.0	14.5	13.0	14.0	17.0	16.0	16.5
8	6.0	5.5	6.0	11.5	11.0	11.5	14.5	14.0	14.0	17.0	16.5	17.0
9	6.0	5.5	6.0	11.5	10.5	11.0	14.0	13.0	13.5	19.0	17.0	18.0
10	6.0	5.0	5.5	11.5	10.5	11.0	13.5	13.0	13.0	21.0	18.5	19.5
11	6.5	5.0	5.5	---	---	---	15.0	13.0	14.0	21.5	19.5	20.5
12	7.0	5.5	6.0	---	---	---	16.0	14.5	15.5	21.5	20.0	21.0
13	8.0	6.0	6.5	---	---	---	15.5	15.0	15.0	20.5	19.0	19.5
14	9.0	8.0	8.5	---	---	---	15.0	14.5	14.5	20.0	18.5	19.5
15	10.5	9.0	9.5	---	---	---	15.5	14.0	15.0	20.5	19.5	20.0
16	10.5	9.5	10.0	---	---	---	16.0	14.5	15.5	21.0	19.5	20.5
17	10.0	9.0	9.5	---	---	---	16.5	15.0	16.0	21.0	19.5	20.5
18	9.0	8.0	8.5	---	---	---	16.5	15.0	16.0	21.0	20.5	21.0
19	8.5	7.0	8.0	---	---	---	17.0	15.5	16.0	21.5	21.0	21.5
20	8.5	6.5	7.0	---	---	---	18.0	15.5	17.0	22.0	21.5	21.5
21	9.5	7.0	8.5	---	---	---	18.0	17.0	17.0	22.0	22.0	22.0
22	11.5	9.0	10.0	---	---	---	18.0	16.5	17.0	22.0	21.5	21.5
23	13.5	10.5	12.0	---	---	---	18.0	17.0	18.0	21.5	19.0	21.0
24	14.5	13.5	14.0	---	---	---	18.0	18.0	18.0	20.0	18.5	19.5
25	14.5	12.0	13.5	---	---	---	18.0	18.0	18.0	18.5	17.0	18.0
26	12.0	11.0	11.5	---	---	---	18.0	16.5	18.0	17.0	15.5	16.5
27	11.5	10.0	10.5	---	---	---	18.0	16.0	17.0	18.0	16.5	16.5
28	10.0	9.0	9.5	---	---	---	18.5	17.0	18.0	18.5	16.0	16.5
29	---	---	---	---	---	---	18.5	17.0	18.0	19.5	17.0	18.5
30	---	---	---	---	---	---	19.0	17.0	18.5	20.0	19.0	19.5
31	---	---	---	---	---	---	---	---	---	19.5	18.5	19.0
MONTH	14.5	4.5	8.0	---	---	---	19.0	13.0	16.0	22.0	15.5	19.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	19.5	18.5	19.0	28.5	28.0	28.0	28.5	26.0	26.5	23.5	22.0	22.0
2	20.0	19.0	19.5	28.0	27.0	28.0	26.0	25.0	25.5	23.5	22.0	23.0
3	20.0	18.5	19.0	27.0	25.5	26.0	26.5	25.5	26.0	24.5	23.0	23.5
4	20.0	18.5	19.0	28.0	25.5	26.5	26.5	25.5	26.0	25.0	24.0	24.5
5	21.5	19.0	20.0	28.0	26.5	27.0	26.5	25.0	25.5	25.0	24.5	25.0
6	21.5	21.0	21.5	28.0	26.5	27.0	27.0	25.5	26.0	25.0	24.5	25.0
7	23.0	21.0	22.0	27.0	26.0	26.5	28.0	26.5	27.0	25.5	24.5	25.0
8	25.0	22.0	23.5	26.0	24.0	24.5	29.0	27.0	28.0	25.0	24.0	24.5
9	25.5	23.5	24.5	24.5	24.0	24.0	29.0	28.5	28.5	24.5	23.5	24.0
10	25.5	25.0	25.0	24.5	23.5	24.0	29.0	28.5	28.5	24.0	23.5	23.5
11	26.5	24.0	25.0	24.5	24.0	24.0	28.5	27.0	28.5	24.0	23.0	23.5
12	25.5	23.5	24.5	24.0	23.5	24.0	27.0	26.0	26.5	24.0	23.5	24.0
13	25.5	24.0	25.0	24.5	23.5	24.0	27.0	25.0	26.0	24.5	21.0	23.0
14	25.5	25.0	25.5	25.5	24.0	25.0	26.0	25.0	25.5	21.0	20.0	20.5
15	26.0	25.5	25.5	26.5	25.5	26.0	25.5	24.5	25.0	20.5	19.5	20.0
16	26.5	25.5	26.0	27.0	26.0	26.5	25.0	24.0	24.5	19.5	18.0	19.0
17	26.5	26.0	26.5	28.5	27.0	28.0	25.5	24.0	24.5	19.5	19.0	19.0
18	28.0	26.5	27.0	28.5	28.0	28.5	26.5	24.5	25.5	19.5	19.0	19.0
19	28.5	27.0	28.0	28.5	27.0	28.0	27.0	25.0	25.5	20.5	19.0	19.5
20	28.5	28.0	28.5	28.0	26.5	27.0	28.0	25.5	26.5	20.0	19.5	19.5
21	28.0	25.0	26.5	26.5	24.0	25.5	28.5	26.5	27.0	21.0	19.5	20.0
22	26.5	25.5	26.0	26.0	25.0	25.5	28.0	26.5	27.0	21.5	20.0	21.0
23	28.0	26.5	27.0	25.5	24.5	25.0	27.0	26.0	26.5	21.0	19.0	20.0
24	28.0	27.0	28.0	25.5	25.0	25.5	27.0	26.0	26.0	19.5	18.5	19.0
25	27.0	25.5	26.0	25.5	25.0	25.0	26.5	25.0	26.0	18.5	18.0	18.5
26	26.5	26.0	26.0	25.5	25.0	25.5	25.0	24.0	24.5	19.5	18.0	18.5
27	28.0	26.0	26.5	26.0	25.0	25.5	25.5	24.0	24.5	19.5	18.5	19.0
28	28.0	26.5	27.0	26.0	25.5	25.5	25.0	24.0	24.5	19.0	18.5	19.0
29	28.5	27.0	28.0	26.5	25.5	26.0	25.0	23.5	24.0	19.0	18.5	19.0
30	28.5	28.0	28.0	27.0	26.0	26.5	25.0	22.0	24.0	19.0	18.5	19.0
31	---	---	---	28.5	26.5	27.0	23.0	21.0	22.0	---	---	---
MONTH	28.5	18.5	25.0	28.5	23.5	26.0	29.0	21.0	26.0	25.5	18.0	21.5

03599482 DUCK RIVER AT COLUMBIA WATERWORKS, TN

LOCATION.--Lat 35°37'34", long 87°01'13", Maury County, Hydrologic Unit 06040003, 0.8 mi (1.3 km) downstream from Bear Creek, 1.1 mi (1.8 km) northeast of Columbia Courthouse, 3.8 mi (6.1 km) south of Darks Mill, and at mile 133.9 (215.4 km).

DRAINAGE AREA.--1,195 mi² (3,095 km²).

PERIOD OF RECORD.--Water years 1975 to current year.

REMARKS.--Flow regulated by Normandy Lake (station 03596460).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	PH (UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (JTU)	OXYGEN DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM INHIB 5 DAY (MG/L)	COLT- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	ALKA- LITY (MG/L AS CaCO3)
NOV											
16...	1225	6.1	16.0	12	9.0	--	--	24000	--	--	84
DEC											
04...	1240	5.8	10.0	50	9.4	--	--	3600	--	--	80
JAN											
08...	1430	7.1	5.0	70	11.6	--	--	710	--	--	69
MAR											
05...	1207	6.9	11.0	230	9.6	--	--	--	--	--	60
APR											
02...	1205	7.5	14.0	220	9.7	--	--	14000	--	--	76
MAY											
04...	1130	7.0	17.0	190	8.7	--	--	16000	--	--	50
30...	1125	7.5	20.0	14	9.6	8	1.1	2000	37	3.6	70
JUN											
04...	1215	7.3	21.5	45	7.6	--	--	3900	--	--	120

DATE	SOLIDS. RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS. DIS- SOLVED (TONS PER AC-FT)	SOLIDS. RESIDUE AT 100 DEG. C SUS- PENDED (MG/L)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
NOV											
16...	--	--	19	--	--	--	--	--	--	--	--
DEC											
04...	--	--	33	--	--	--	--	--	--	--	--
JAN											
08...	--	--	62	--	--	--	--	--	--	--	--
MAR											
05...	--	--	330	--	--	--	--	--	--	--	--
APR											
02...	--	--	350	--	--	--	--	--	--	--	--
MAY											
04...	--	--	350	--	--	--	--	--	--	--	--
30...	180	.24	21	1.0	.07	.07	.140	910	<50	70	20
JUN											
04...	--	--	59	--	--	--	--	--	--	--	--

TENNESSEE RIVER BASIN

03599500 DUCK RIVER AT COLUMBIA, TN

LOCATION.--Lat 35°37'05", long 87°01'56", Maury County, Hydrologic Unit 06040003, on right bank 4 ft (1 m) down stream from bridge on former U. S. Highway 31, 2 blocks north of public square in Columbia, 0.7 mi (1.1 km) downstream from Columbia hydroelectric plant, 2.4 mi (3.9 km) upstream from Rutherford Creek, and at mile 132.8 (213.7 km).

DRAINAGE AREA.--1,208 mi² (3,129 km²).

PERIOD OF RECORD.--October 1904 to December 1908, April 1920 to current year. Monthly discharge only for some periods, published in WSP 1306. Gage-height records collected at same site, 1887-95, 1911 (fragmentary), 1947-71, published in reports of U.S. Weather Bureau.

REVISED RECORD.--WSP 783: 1929(M). WSP 853: Drainage area. WSP 1306: 1905-9, 1920-22, 1923(M).

GAGE.--Water-stage recorder. Datum of gage is 535.33 ft (163.169 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 9, 1925, nonrecording gages near this site; all gages at datum 2.37 ft (0.722 m) higher prior to Oct. 1, 1933.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data. Flow regulated by Normandy Lake (station 03596460) since Jan. 5, 1976.

AVERAGE DISCHARGE.--63 years, 1905-8, 1921-79, 2,009 ft³/s (56.89 m³/s), 22.58 in/yr (574 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,500 ft³/s (1,740 m³/s) Mar. 17, 1973; maximum gage height, 51.75 ft (15.773 m) Feb. 14, 1948; no flow Oct. 22, 1922.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 30, 1902, reached a stage of 48.0 ft (14.63 m), present datum, discharge, 50,700 ft³/s (1,440 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,900 ft³/s (762 m³/s) at 2400 hours Jan. 1, gage height, 34.93 ft (10.646 m); minimum, 195 ft³/s (5.52 m³/s) Nov. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	340	201	2230	20100	1760	5370	2110	648	4200	250	1050	1030
2	354	201	1930	26700	1540	4490	12200	595	3290	254	884	1250
3	396	198	1640	21900	1410	4150	17500	1310	4770	243	645	1190
4	341	198	3720	8640	1310	7240	14500	10500	4900	232	574	1060
5	285	201	6640	5240	1220	13100	10200	10700	3080	225	649	933
6	267	207	4070	4900	1140	8660	6570	6600	2020	219	534	758
7	247	225	2670	15100	1150	5380	4500	3990	1540	327	442	444
8	230	234	4760	21900	1620	4450	3460	2670	1380	343	360	336
9	217	254	18700	15100	1980	3880	4100	2070	1190	292	324	307
10	212	269	21500	6950	1910	3650	3790	1730	972	286	304	290
11	210	261	12600	5000	1700	3950	2960	1500	847	283	288	277
12	207	244	4940	3410	1650	3740	12500	1300	1180	283	278	267
13	236	231	3440	3020	2210	2990	18500	1070	930	360	272	2630
14	342	224	2710	3370	2660	2560	16100	942	640	337	278	16900
15	462	222	2240	3140	2510	2920	8900	853	493	337	307	13500
16	458	343	1960	2320	2220	1980	5130	757	415	311	283	4340
17	347	1970	1840	1810	1900	1360	4280	615	364	257	267	2170
18	286	3630	1760	1550	1740	1210	3230	526	340	225	253	1580
19	262	2830	1620	1580	1680	1140	2560	476	314	209	244	1280
20	244	1450	1540	6470	1600	1410	2240	457	296	236	234	1070
21	230	977	2990	16400	2620	2210	1800	468	671	1130	234	7730
22	219	814	5030	17200	5540	1940	1340	473	778	1820	244	15600
23	213	1170	3700	10600	5740	3510	1210	855	485	993	267	7270
24	210	1510	2650	8380	5970	4640	1100	6370	381	588	270	3150
25	207	1570	2180	8030	9240	4000	1020	5560	327	450	601	2130
26	216	1380	1890	6170	15100	2880	964	3070	292	422	622	1660
27	213	1570	1630	4930	12100	2250	959	1990	272	764	1180	1420
28	210	1810	1450	4340	7060	1910	940	1440	283	930	1430	4860
29	207	1820	1330	3890	---	1750	874	1350	283	925	1610	12200
30	204	1850	1570	3390	---	1610	732	2760	257	852	2160	7340
31	204	---	3880	2380	---	1540	---	3520	---	522	1690	---
TOTAL	8276	28064	130810	263910	98280	111870	166269	77165	37190	14905	18778	114972
MEAN	267	935	4220	8513	3510	3609	5542	2489	1240	481	606	3832
MAX	462	3630	21500	26700	15100	13100	18500	10700	4900	1820	2160	16900
MIN	204	198	1330	1550	1140	1140	732	457	257	209	234	267
(†)	-3000	-7000	-6100	+2200	+9000	+1400	+7900	+3000	-1000	+500	+300	+600
MEAN‡	170	702	4023	8584	3831	3654	5806	2586	1206	497	615	3852
CFSM‡	.14	.58	3.53	7.11	3.17	3.02	4.81	2.14	1.00	.41	.51	3.19
IN.‡	.16	.65	3.84	8.19	3.30	3.49	5.36	2.47	1.11	.47	.59	3.56

CAL YR 1978 TOTAL 618336 MEAN 1694 MAX 21500 MIN 198 MEAN‡ 1703 CFSM‡ 1.41 IN.‡ 19.14
WTR YR 1979 TOTAL 1070489 MEAN 2933 MAX 26700 MIN 198 MEAN‡ 2954 CFSM‡ 2.45 IN.‡ 33.20

† Change in contents, in cfs-days, in Normandy Lake.

‡ Adjusted for change in contents.

03600500 BIG BIGBY CREEK AT SANDY HOOK, TN

LOCATION.--Lat 35°29'19", long 87°13'59", Maury County, Hydrologic Unit 06040003, on right bank 45 ft (14 m) west of Louisville and Nashville Railroad track, 0.2 mi (0.3 km) downstream from bridge on U. S. Highway 43, 0.4 mi (0.6 km) northeast of Sandy Hook, 0.5 mi (0.8 km) upstream from Dry Creek, 3.5 mi (5.6 km) southwest of Mount Pleasant, and at mile 17.9 (28.8 km).

DRAINAGE AREA.--17.5 mi² (45.3 km²).

PERIOD OF RECORD.--September 1953 to current year.

REVISED RECORDS.--WRD TN 1974: 1954(P), 1955, 1956-57(P), 1958(M), 1961(M), 1962-65(P), 1966 (M), 1967-68(P), 1969(M), 1970(P), 1971(M), 1972-73(P).

GAGE.--Water-stage recorder. Datum of gage is 670.44 ft (204.350 m) National Geodetic Vertical Datum of 1929.

REMARKS: Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--26 years, 28.3 ft³/s (0.801 m³/s), 21.96 in/yr (558 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,700 ft³/s (218 m³/s) Mar. 15, 1973, gage height, 11.55 ft (3.520 m), from rating curve extended above 1,400 ft³/s (39.6 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 1.0 ft³/s (0.028 m³/s) Sept. 10, 1958, and July 9, 1959, caused by removal of gravel 0.2 mi (0.3 km) upstream; minimum natural discharge, 1.5 ft³/s (0.042 m³/s) Sept. 4-7, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 8	1930	609 17.2	4.85 1.478	Apr. 2	0730	1400 39.6	6.60 2.012
Jan. 1	1400	1950 55.2	7.44 2.268	Apr. 12	0545	1040 29.5	5.90 1.798
Jan. 7	1115	809 22.9	5.38 1.640	Sept. 13	1915	*5570 158	10.42 3.176

Minimum daily discharge, 5.0 ft³/s (0.142 m³/s) Nov. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	6.0	8.4	670	25	41	66	29	14	10	9.3	8.1
2	8.3	5.7	8.1	99	24	38	544	29	17	12	9.7	9.4
3	8.0	5.7	11	48	25	70	153	43	28	11	8.5	8.1
4	7.9	5.7	68	36	24	99	116	125	22	11	8.8	7.6
5	7.3	5.5	21	31	23	67	84	58	18	10	8.6	7.2
6	6.8	5.5	14	30	23	54	66	39	17	10	7.6	6.8
7	6.7	7.4	15	347	27	48	56	31	16	11	7.3	6.5
8	6.2	5.5	161	109	25	44	54	26	14	11	7.0	6.5
9	6.2	5.2	143	46	24	40	85	23	14	11	6.9	6.5
10	6.0	5.0	38	32	23	44	65	20	13	11	6.8	6.4
11	6.2	5.2	22	26	24	42	58	18	13	11	7.3	6.2
12	6.0	5.1	17	24	30	40	363	18	12	15	7.3	6.2
13	10	5.2	14	22	33	39	130	17	12	23	6.8	1020
14	7.4	5.2	13	20	33	38	74	16	12	13	6.6	191
15	6.2	5.5	12	18	35	35	57	15	12	10	6.6	49
16	6.0	12	13	17	32	34	48	15	11	9.3	6.7	31
17	5.7	30	12	17	30	33	43	14	11	8.7	6.5	24
18	5.5	11	12	17	29	33	40	14	11	8.0	6.5	20
19	5.2	7.3	12	18	28	34	38	14	11	9.5	6.5	18
20	5.4	6.2	13	108	28	36	36	15	11	9.2	6.5	17
21	5.1	5.9	39	126	56	38	35	15	18	10	6.5	149
22	5.4	5.8	24	66	52	37	34	16	13	9.7	8.8	66
23	5.4	11	15	53	64	107	35	29	12	8.8	8.9	38
24	6.0	9.3	16	63	60	84	34	26	12	8.6	7.4	28
25	6.2	7.8	14	48	95	61	33	20	12	8.6	12	23
26	7.7	8.5	13	40	70	49	33	17	11	8.5	16	20
27	7.1	13	12	37	54	45	33	16	11	8.2	12	20
28	6.6	9.6	11	33	46	42	31	15	11	9.8	9.5	20
29	6.2	9.2	11	30	---	39	30	14	11	9.6	8.5	17
30	6.2	9.2	12	29	---	37	30	16	11	8.4	8.4	16
31	6.0	---	41	27	---	51	---	15	---	7.9	8.7	---
TOTAL	208.9	239.2	835.5	2287	1042	1499	2504	778	411	322.8	254.5	1852.5
MEAN	6.74	7.97	27.0	73.8	37.2	48.4	83.5	25.1	13.7	10.4	8.21	61.8
MAX	14	30	161	670	95	107	544	125	28	23	16	1020
MIN	5.1	5.0	8.1	17	23	33	30	14	11	7.9	6.5	6.2
CFSM	.39	.46	1.54	4.22	2.13	2.77	4.77	1.43	.78	.59	.47	3.53
IN.	.44	.51	1.78	4.86	2.21	3.19	5.32	1.65	.87	.69	.54	3.94

CAL YR 1978 TOTAL 7934.9 MEAN 21.7 MAX 479 MIN 5.0 CFSM 1.24 IN 16.87
WTR YR 1979 TOTAL 12234.4 MEAN 33.5 MAX 1020 MIN 5.0 CFSM 1.91 IN 26.01

TENNESSEE RIVER BASIN

03602500 PINEY RIVER AT VERNON, TN

LOCATION.--Lat 35°52'16", long 87°30'05", Hickman County, Hydrologic Unit 06040003, on right bank at county highway bridge, 40 ft (12 m) upstream from Pretty Creek, 0.2 mi (0.3 km) northwest of Vernon, 2.3 mi (3.7 km) downstream from Mill Creek, 6.5 mi (10.5 km) north of Centerville, and at mile 8.3 (13.4 km).

DRAINAGE AREA.--202 mi² (523 km²).

PERIOD OF RECORD.--July 1925 to current year.

REVISED RECORDS.--WSP 758: 1927(M). WSP 823: Drainage area. WSP 1306: Drainage area at site used Feb. 9, 1931, to May 10, 1934. WSP 1436: 1926(M), 1927, 1929, 1930-31(M), 1932, 1934(M).

GAGE.--Water-stage recorder. Datum of gage is 461.72 ft (140.732 m) National Geodetic Vertical Datum of 1929. Prior to May 11, 1934, nonrecording gage; July 3, 1925, to Feb. 8, 1931, at site 350 ft (107 m) upstream at datum 3.17 ft (0.966 m) higher; Feb. 9, 1931, to May 10, 1934, at site 0.4 mi (0.6 km) downstream at datum 0.40 ft (0.122 m) higher. May 11, 1934, to Sept. 30, 1970, water-stage recorder at site 350 ft (107 m) upstream; prior to June 29, 1965, at datum 3.17 ft (0.966 m) higher, and 2.17 ft (0.661 m) higher thereafter.

REMARKS.--Records fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--54 years, 314 ft³/s (8.892 m³/s), 21.11 in/yr (536 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft³/s (920 m³/s) Dec. 21, 1926, gage height, 16.5 ft (5.03 m), site and datum then in use; minimum, 35 ft³/s (0.991 m³/s) Sept. 19, 20, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1897 reached a stage of 17.5 ft (5.33 m), original site and datum, discharge, 37,000 ft³/s (1,050 m³/s), from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft³/s (113 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	0330	7620 216	12.69 3.868	Apr. 12	0915	14400 408	15.69 4.782
Dec. 8	2215	23200 657	18.47 5.630	May 4	0645	*25300 716	19.07 5.813
Jan. 1	1530	6810 193	12.17 3.709	Sept. 14	0345	16000 453	16.23 4.947
Apr. 2	1030	13800 391	15.48 4.718				

Minimum discharge, 82 ft³/s (2.32 m³/s) Nov. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	86	97	3590	374	702	2090	340	282	256	164	275
2	92	86	94	1860	351	600	8400	333	267	254	174	521
3	92	86	933	998	345	714	2270	770	316	248	159	367
4	95	86	3630	725	331	1540	1470	10800	311	236	154	311
5	88	87	749	613	312	1010	1140	1970	282	223	153	263
6	87	87	480	549	303	784	904	1180	267	214	146	233
7	85	86	1310	1060	309	679	756	856	255	229	143	202
8	85	85	11700	1100	291	591	693	711	246	321	139	184
9	85	85	6240	804	280	519	1200	603	237	287	137	172
10	85	85	960	660	267	495	930	526	226	249	133	162
11	85	85	906	565	261	449	791	471	216	232	194	155
12	85	85	705	505	265	412	7410	452	206	382	160	148
13	118	83	584	498	289	392	2180	403	199	459	142	1060
14	109	83	495	511	311	379	1330	369	193	372	135	7300
15	94	83	428	443	357	355	1010	340	189	318	130	1310
16	90	103	391	419	355	338	827	318	186	288	129	809
17	88	141	356	412	334	325	715	301	183	260	126	617
18	88	128	333	400	337	316	638	289	179	238	124	517
19	88	102	318	402	319	333	573	280	176	242	122	450
20	88	94	320	1390	311	394	522	274	174	245	119	398
21	88	90	657	1530	405	524	478	374	1170	205	117	823
22	87	88	568	1050	482	526	451	315	590	198	288	893
23	87	112	508	838	1080	2030	440	550	437	187	151	661
24	85	114	468	927	1090	1870	416	658	397	187	141	536
25	87	102	428	766	1710	1100	403	510	359	189	404	459
26	94	102	385	673	1510	808	403	430	326	222	578	406
27	94	120	351	621	1050	692	388	380	306	188	411	369
28	88	109	330	559	830	619	369	355	291	183	315	347
29	87	103	318	482	---	557	359	326	278	185	280	318
30	87	100	313	438	---	512	348	308	268	173	234	293
31	87	---	361	410	---	599	---	303	---	166	202	---
TOTAL	2800	2886	35716	25798	14459	21164	39904	26095	9012	7636	6004	20559
MEAN	90.3	96.2	1152	832	516	683	1330	842	300	246	194	685
MAX	118	141	11700	3590	1710	2030	8400	10800	1170	459	578	7300
MIN	85	83	94	400	261	316	348	274	174	166	117	148
CFSM	.45	.48	5.70	4.12	2.55	3.38	6.58	4.17	1.49	1.22	.96	3.39
IN.	.52	.53	6.58	4.75	2.66	3.90	7.35	4.81	1.66	1.41	1.11	3.79

CAL YR 1978 TOTAL 135848 MEAN 372 MAX 11700 MIN 83 CFSM 1.84 IN 25.02
WTR YR 1979 TOTAL 212033 MEAN 581 MAX 11700 MIN 83 CFSM 2.88 IN 39.05

TENNESSEE RIVER BASIN

297

03603000 DUCK RIVER ABOVE HURRICANE MILLS, TN

LOCATION.--Lat 35°55'48", long 87°44'35", Humphreys County, Hydrologic Unit 06040003, on left bank 0.4 mi (0.6 km) downstream from Tumbling Creek, 1.3 mi (2.1 km) upstream from bridge on State Highway 13, 3.6 mi (5.8 km) southeast of Hurricane Mills, and at mile 26.0 (41.8 km).

DRAINAGE AREA.--2,557 mi² (6,623 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1925 to current year. Prior to October 1951, published as "near Hurricane Mills."

REVISED RECORDS.--WSP 803: 1935. WSP 823: 1927(M). WSP 853: Drainage area. WSP 1436: 1926-28, 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 370.53 ft (112.938 m) National Geodetic Vertical Datum of 1929. Prior to Feb. 21, 1934, nonrecording gage and Feb. 21, 1934, to Sept. 30, 1951, water-stage recorder at bridge 5.6 mi (9.0 km) downstream at datum 8.80 ft (2.682 m) lower.

REMARKS.--Records good. Flow regulated since January 1976 by Normandy Lake (station 03596460). Prior to 1953 occasional regulation at low flow from small dams upstream. Minor diversions for irrigation. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--54 years, 4,116 ft³/s (117 m³/s), 21.86 in/yr (555 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 122,000 ft³/s (3,460 m³/s) Feb. 14, 1948, gage height, 30.70 ft (9.357 m), from floodmark in gage house, present site and datum; minimum, 185 ft³/s (5.24 m³/s) Sept. 11, 12, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 50,900 ft³/s (1,440 m³/s) at 0130 hours May 5, gage height, 23.28 ft (7.096 m); minimum, 686 ft³/s (19.4 m³/s) Aug. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	796	766	2840	11800	5820	13700	6930	3040	5450	1200	1610	3240
2	866	756	3180	29300	4700	10400	22200	2840	6010	1170	1430	3590
3	983	747	3970	35400	4230	8990	32800	3820	6470	1170	1830	3090
4	974	746	18000	36200	3950	11100	33700	37700	8600	1170	1600	2790
5	1010	741	15400	27600	3710	14000	30300	46600	8460	1090	1450	2440
6	948	744	10400	10600	3460	17500	21100	31300	6560	1010	1460	2150
7	860	770	9070	11200	3390	15500	13800	15400	5110	989	1400	1910
8	807	785	23300	23600	3300	10500	10300	10200	4200	1480	1230	1680
9	789	837	39400	31500	3340	8620	9860	7710	3700	2080	1080	1350
10	779	845	33200	31600	3840	7660	10600	6370	3340	2130	977	1120
11	766	822	29100	16800	3820	7190	9480	5480	3050	1580	1020	1020
12	740	852	25800	10100	710	7080	21700	4900	2720	2090	1020	941
13	871	854	11400	7990	3700	6960	33000	4500	2600	2630	923	1490
14	910	847	7360	6680	4310	6100	33000	4000	2680	2640	874	17400
15	883	824	6000	6530	5310	5440	29500	3560	2340	2470	818	31600
16	952	847	5130	5980	5640	5330	19300	3250	2070	2000	801	27700
17	1010	1130	4520	5170	5260	4930	11400	3000	1880	1740	794	12100
18	1050	1930	4100	4400	4820	3900	8990	2780	1760	1540	747	5850
19	956	4370	3840	3430	4440	3560	7710	2570	1660	1360	711	4350
20	882	4660	3540	5750	4190	3670	6520	2430	1570	1420	694	3540
21	831	3240	4150	15500	4180	3990	5810	2480	2270	1480	701	4160
22	801	2260	5770	22800	5590	4860	5210	2530	3720	1430	878	10900
23	783	1900	7600	26100	9240	6910	4520	2770	3050	2490	901	19600
24	769	1930	7020	21500	11600	12100	4130	4000	2320	2560	818	15000
25	757	2330	5620	15300	13200	11800	3840	7660	1920	1920	994	7370
26	776	2660	4780	13700	19100	9800	3690	8810	1690	1760	2090	5130
27	807	2580	4190	11400	22200	7860	3700	6260	1500	1670	2280	4110
28	853	2660	3720	9540	20800	6680	3610	4800	1370	1570	2440	3530
29	834	2810	3360	8310	---	5870	3360	3860	1270	1820	2260	4470
30	799	3040	3130	7480	---	5280	3240	3380	1230	1850	2520	12600
31	779	---	3310	6770	---	5080	---	4010	---	1790	2570	---
TOTAL	26621	50343	312250	480130	190850	252360	413800	252010	100570	53299	40921	216221
MEAN	859	1678	10070	15490	6815	8141	13790	8129	3352	1719	1320	7207
MAX	1050	4660	39400	36200	22200	17500	33700	46600	8600	2640	2570	31600
MIN	740	741	2890	9300	3300	3560	3240	2430	1230	989	694	941

CAL YR 1978 TOTAL 1475777 MEAN 4043 MAX 39400 MIN 698 MEAN# 4052 CFSM# 1.58 IN.# 21.51
WTH YR 1979 TOTAL 2389375 MEAN 6546 MAX 46600 MIN 694 MEAN# 6568 CFSM# 2.57 IN.# 34.87

Adjusted for change in contents in Normandy Lake.

TENNESSEE RIVER BASIN

03603000 DUCK RIVER ABOVE HURRICANE MILLS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-67, 1973 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (JTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEM 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
JAN 17...	1340	5400	240	7.7	6.0	7	3	11.9	4	1.0	5300	--
MAR 21...	1400	4070	210	8.2	15.0	7	12	10.4	--	2.1	--	100
MAY 30...	1330	3330	220	7.0	20.5	8	10	8.1	--	1.1	--	110
JUL 18...	1330	1800	190	8.1	24.0	13	11	7.5	--	<1.0	--	96
SEP 19...	1315	4730	220	6.7	19.5	10	17	7.7	--	1.0	--	110

DATE	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	SODIUM, TOTAL RECOV- ERABLE (MG/L AS NA)	POTAS- SIUM, TOTAL RECOV- ERABLE (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, TOTAL DIS- SOLVED (TONS PER AC-FT)	SOLIDS, TOTAL SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
JAN 17...	38	3.3	1.7	1.0	94	14	3.0	130	.18	1900	11
MAR 21...	--	--	--	--	90	13	4.0	120	.16	1320	14
MAY 30...	--	--	--	--	100	15	4.0	140	.19	1260	17
JUL 18...	--	--	--	--	84	18	4.0	120	.16	583	21
SEP 19...	--	--	--	--	100	12	4.0	150	.20	1920	32

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)
JAN 17...	1.2	.06	.06	.160	--	730	10	80	<1	<5	<10
MAR 21...	.74	.04	.06	.190	.09	--	--	--	<1	--	<10
MAY 30...	.82	--	--	.190	<.01	--	--	--	<1	--	<10
JUL 18...	.55	.01	.06	.250	.15	--	--	--	<1	--	<10
SEP 19...	.85	<.01	.15	.320	.07	--	--	--	<1	--	<10

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
JAN 17...	260	90	<10	30	<10	.4	<10	<2	30	1.7	--
MAR 21...	--	<50	<10	--	20	.7	--	--	20	--	2.3
MAY 30...	--	120	<10	--	40	<.2	--	--	20	3.5	--
JUL 18...	--	<50	<10	--	<10	<.2	--	--	<10	2.9	--
SEP 19...	--	<50	<10	--	<10	<.2	--	--	90	4.1	--

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN
(Hydrologic bench-mark station)

LOCATION.--Lat 35°29'45", long 87°49'58", Perry County, Hydrologic Unit 06040004, on right bank 0.4 mi (0.6 km) downstream from Little Opossum Creek, 0.5 mi (0.8 km) downstream from bridge on State Highway 13, 1.3 mi (2.1 km) north of Flat Woods, 3.9 mi (6.3 km) upstream from Sinking Creek, and at mile 58.7 (94.4 km).

DRAINAGE AREA.--447 mi² (1,158 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1920 to current year.

REVISED RECORDS.--WSP 758: 1933. WSP 803: 1935. WSP 823: Drainage area. WSP 1436: 1921(M), 1922-24, 1925(M), 1927(M), 1934(M), WRD TN 1971: 1970.

GAGE.--Water-stage recorder. Datum of gage is 513.58 ft (156.539 m) National Geodetic Vertical Datum of 1929. Prior to May 27, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--59 years, 749 ft³/s (21.21 m³/s), 22.75 in/yr (578 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,000 ft³/s (2,550 m³/s) Feb. 13, 1948, gage height, 32.0 ft (9.75 m), from high-water mark in gage house, from rating curve extended above 50,000 ft³/s (1,420 m³/s) on basis of slope-area and contracted-opening measurements of peak flow and rainfall-runoff study; minimum, 65 ft³/s (1.84 m³/s) Sept. 9, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Feb. 13, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,500 ft³/s (127 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 9	1600	6290 178	12.67 3.862	Apr. 2	2400	*18000 510	20.66 6.297
Jan. 2	1100	13200 374	18.16 5.535	Apr. 12	2230	17400 493	20.42 6.224
Jan. 8	0730	10400 295	16.26 4.956	May 4	2230	5280 150	11.56 3.523
Jan. 21	2000	5450 154	11.75 3.581	Sept. 14	2030	15500 439	19.52 5.950

Minimum discharge, 195 ft³/s (5.52 m³/s) part of each day Oct. 7-13.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	210	233	380	4490	746	1270	2060	589	609	438	453	414
2	282	237	340	11800	674	1080	8850	577	579	430	447	461
3	244	237	476	3470	648	1090	12600	686	1250	452	437	479
4	232	237	2570	1810	624	3160	4240	3350	1490	440	424	429
5	229	237	1950	1360	593	2850	3240	3990	1100	418	561	395
6	210	237	1030	1140	567	1850	2320	2390	793	430	521	379
7	199	244	817	3820	650	1400	1720	1670	733	425	446	367
8	196	262	1520	8810	690	1190	1410	1310	670	456	415	353
9	195	262	5220	3140	685	1030	1860	1120	616	611	395	340
10	198	250	4100	1950	663	943	1910	977	574	537	451	324
11	197	244	1710	1450	646	943	1480	858	548	479	433	317
12	196	242	1110	1170	664	885	9330	839	517	701	439	312
13	226	242	864	1040	730	796	10800	834	492	952	404	573
14	507	241	716	967	770	755	3730	756	472	1040	374	10800
15	478	249	627	874	780	710	2380	696	456	752	357	7700
16	293	315	574	785	758	658	1800	634	443	613	352	1790
17	243	687	563	721	708	628	1410	598	435	564	344	1240
18	227	843	541	677	688	611	1190	570	427	509	336	770
19	220	554	480	688	658	602	1060	551	417	482	333	808
20	220	400	449	2060	624	619	964	544	417	700	332	710
21	217	341	685	4850	708	623	876	564	1660	590	377	815
22	216	317	860	4130	1000	618	414	570	1650	561	397	1890
23	213	371	752	2390	1160	1590	799	807	903	512	422	1520
24	212	471	659	2130	1700	3060	768	1130	707	496	435	1100
25	213	417	612	2040	2240	2030	743	965	633	484	403	895
26	239	378	552	1560	3060	1450	722	783	568	560	472	756
27	275	432	502	1340	2160	1180	706	699	521	497	756	667
28	261	448	473	1190	1570	1050	672	676	490	480	627	622
29	241	406	453	1040	---	949	632	662	470	596	493	589
30	235	406	453	937	---	862	608	610	454	565	446	553
31	234	---	619	857	---	899	---	612	---	486	415	---
TOTAL	7562	10449	32667	74686	27169	37361	81734	31617	21098	17256	13497	38571
MEAN	244	348	1054	2409	970	1205	2724	1020	703	557	435	1286
MAX	507	843	5220	11800	3060	3160	12600	3990	1660	1040	756	10800
MIN	195	233	340	677	567	602	608	544	417	418	332	312
CFSM	.55	.78	2.36	5.39	2.17	2.70	6.09	2.28	1.57	1.25	.97	2.88
IN.	.63	.87	2.72	6.22	2.26	3.11	6.80	2.63	1.76	1.44	1.12	3.21

CAL YR 1978 TOTAL 243707 MEAN 668 MAX 8430 MIN 173 CFSM 1.49 IN 20.28
WTR YR 1979 TOTAL 393667 MEAN 1079 MAX 12500 MIN 195 CFSM 2.41 IN 32.76

TENNESSEE RIVER BASIN

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: June 1964 to January 1978.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 31.0°C July 13-15, 1966; minimum, 0.0°C many days during winter periods.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT										
26...	1030	276	100	7.4	15.0	9.4	87	140	48	2
DEC										
06...	1100	1020	85	7.3	13.0	9.8	--	9500	33	3
FEB										
21...	1100	696	80	6.8	6.0	12.4	44	140	34	8
APR										
21...	1000	870	80	7.1	17.0	9.4	110	--	31	0
JUN										
05...	1215	885	80	7.6	19.5	8.5	K1400	730	34	0
AUG										
03...	1115	439	100	7.8	24.5	7.5	110	180	45	3

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT										
26...	16	2.0	1.4	6	.1	.9	46	3.1	1.7	.1
DEC										
06...	10	2.0	1.6	9	.1	1.4	30	5.8	2.3	.1
FEB										
21...	11	1.6	1.2	7	.1	.6	26	3.9	2.3	.0
APR										
21...	10	1.4	1.1	7	.1	7.0	31	4.6	1.5	.0
JUN										
05...	11	1.5	1.1	6	.1	1.3	34	3.2	1.8	.0
AUG										
03...	15	1.9	1.4	6	.1	.9	42	2.7	1.6	.0

DATE	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
26...	5.5	57	58	.08	42.5	.04	.040	6	4.5	--
DEC										
06...	6.4	57	48	.08	157	.56	.140	39	107	--
FEB										
21...	4.9	48	41	.07	90.2	.42	.010	4	7.5	--
APR										
21...	5.9	52	44	.07	122	.40	.020	17	40	82
JUN										
05...	6.8	44	47	.06	105	.42	.070	40	96	--
AUG										
03...	7.0	67	56	.09	79.4	.27	.030	19	23	--

K--Results based on colony count outside acceptable range (non-ideal colony count)

TENNESSEE RIVER BASIN

301

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 26...	0	0	0	10	4	160	16	20	.5	0	0	20
JUN 05...	0	0	0	--	5	2600	4	70	<.5	0	0	30

DATE	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
JUN 05...	.0	25	.00	.0	.0	2	.00	.0	.00	.0	.00	1.2

DATE	DI- AZINON, TOTAL (UG/L)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)
JUN 05...	.00	.00	.0	.00	.00	.00	.00	.0	.00	.0

DATE	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	METHYL PARA- THION, TOTAL (UG/L)	METHYL TRI- THION, TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
JUN 05...	.0	.00	.00	.00	.00	0	0	.00	.00	.00	.00

03604500 BUFFALO RIVER NEAR LOBELVILLE, TN

LOCATION.--Lat 35°48'46", long 87°47'51", Perry County, Hydrologic Unit 06040004, on right bank 30 ft (9 m) upstream from Standing Rock Bridge, 1.4 mi (2.3 km) downstream from bridge on State Highway 13, 3 mi (5 km) north of Lobelville, 13 mi (21 km) downstream from Cane Creek, and at mile 17.7 (28.5 km).

DRAINAGE AREA.--707 mi² (1,831 km²).

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for October 1927, published in WSP 1306.

REVISED RECORDS.--WSP 803: 1935. WSP 823: Drainage area. WSP 853: 1928-37. WSP 1436: 1932(M).

GAGE.--Water-stage recorder. Datum of gage 403.02 ft (122.840 m) National Geodetic Vertical Datum of 1929. Nov. 1, 1927, to May 31, 1934, nonrecording gage 40 ft (12 m) downstream at same datum.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--52 years, 1,184 ft³/s (33.53 m³/s), 22.74 in/yr (578 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 100,000 ft³/s (2,830 m³/s) Feb. 14, 1948, gage height, 23.76 ft (7.242 m) from high-water mark in gage house, from rating curve extended above 40,000 ft³/s (1,130 m³/s) on basis of slope-area measurement of peak flow; minimum, 135 ft³/s (3.82 m³/s) Aug. 18, 1953, caused by regulations upstream at unknown location; minimum discharge unaffected by regulation, 142 ft³/s (4.02 m³/s) Oct. 1-8, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1897, that of Feb. 14, 1948. Flood of March 1902 reached a stage of about 21.8 ft (6.64 m), discharge not determined, from flood profile by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,200 ft³/s (147 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	1500	9990 283	12.75 3.886	Apr. 4	0100	15800 447	14.93 4.551
Dec. 9	1030	14500 411	14.56 4.438	Apr. 13	2230	15500 439	14.84 4.523
Jan. 3	1300	12800 362	14.07 4.289	May 4	1530	*18700 530	15.61 4.758
Jan. 9	1030	11000 312	13.25 4.039	Sept. 16	0500	15400 436	14.82 4.517
Jan. 22	1930	7040 199	11.09 3.380				

Minimum discharge, 333 ft³/s (9.43 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	351	399	645	4340	1380	2580	2380	993	967	722	788	774
2	365	395	613	9440	1240	2150	7720	962	982	731	750	931
3	399	395	1120	12100	1160	1980	12400	1800	1510	745	713	846
4	429	395	8240	5820	1110	3190	13400	15000	2080	708	690	798
5	395	395	4810	2850	1060	4780	6930	9970	1940	731	681	727
6	384	395	2890	2300	1000	3870	4530	6340	1550	798	769	676
7	365	406	2210	3310	1010	2820	3370	3680	1330	699	764	631
8	351	414	8540	7170	1060	2300	2680	2720	1200	1020	694	592
9	343	421	13100	10300	1090	1960	2610	2200	1090	1100	654	557
10	340	425	8500	4700	1070	1740	2980	1880	1000	1330	645	537
11	340	421	5790	2900	1040	1580	2780	1630	936	1060	681	516
12	340	410	2830	2300	1060	1500	8830	1480	881	1470	681	500
13	399	406	2070	1920	1130	1390	13200	1400	832	2120	658	1020
14	496	406	1650	1700	1220	1300	12300	1330	793	2230	622	7310
15	570	406	1400	1510	1290	1220	5380	1220	755	1820	583	9910
16	672	460	1240	1370	1300	1150	3410	1130	722	1440	557	10700
17	549	600	1140	1260	1250	1080	2700	1040	704	1190	533	2650
18	456	911	1070	1200	1210	1030	2240	977	685	1050	520	1920
19	414	1060	1010	1170	1160	1020	1930	931	667	936	508	1570
20	395	886	962	1890	1120	1040	1710	901	654	876	496	1370
21	387	704	1280	4290	1180	1020	1550	901	1520	993	496	1620
22	384	609	1490	6660	1340	1040	1430	891	2680	946	553	1800
23	376	605	1560	5460	2090	2060	1370	1050	2130	881	587	2450
24	373	663	1430	3680	3090	3880	1310	1480	1460	841	636	1980
25	373	699	1280	3320	3800	4140	1270	1590	1200	803	750	1590
26	387	672	1160	2970	4760	2970	1240	1440	1050	911	798	1360
27	421	699	1040	2500	4490	2340	1210	1240	946	926	817	1220
28	437	704	967	2170	3290	1980	1150	1130	866	827	971	1110
29	441	704	906	1890	---	1740	1100	1070	807	846	926	1030
30	421	672	871	1670	---	1570	1030	1030	760	886	788	967
31	406	---	951	1520	---	1520	---	1020	---	866	713	---
TOTAL	12759	16737	82765	115680	47000	63940	126140	70426	34697	32502	21022	54662
MEAN	412	558	2670	3732	1679	2063	4205	2272	1157	1048	678	1989
MAX	672	1060	13100	12100	4760	4780	13400	15000	2680	2230	971	10700
MIN	340	395	613	1170	1000	1020	1030	891	654	699	496	500
CFSM	.58	.79	3.78	5.28	2.38	2.92	5.95	3.21	1.64	1.48	.96	2.81
IN.	.67	.88	4.35	6.09	2.47	3.36	6.64	3.71	1.83	1.71	1.11	3.14

CAL YR 1978 TOTAL 444183 MEAN 1217 MAX 13100 MIN 326 CFSM 1.72 IN 23.37
WTR YR 1979 TOTAL 683330 MEAN 1872 MAX 15000 MIN 340 CFSM 2.65 IN 35.95

03605555 TRACE CREEK ABOVE DENVER, TN

LOCATION.--Lat 36°03'08", long 87°54'27", Humphreys County, Hydrologic Unit 06040005, on left bank at bridge on U.S. Highway 70, 1.0 mi (1.6 km) east of Denver, 3.9 mi (6.3 km) northeast of New Johnsonville, and at mile 4.2 (6.8 km).

DRAINAGE AREA.--31.9 mi² (82.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to current year. Published as "near Denver" prior to October 1972.

REVISED RECORDS.--WDR TN-76-1: 1973-75(P).

GAGE.--Water-stage recorder. Datum of gage is 377.05 ft (114.925 m) National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1973, at site 1.1 mi (1.8 km) upstream. Oct. 22 to Nov. 6, 1963, at different datum and Nov. 7, 1963, to Dec. 31, 1972, at datum 12.47 ft (3.801 m) higher.

REMARKS.--Records good.

AVERAGE DISCHARGE.--16 years, 53.2 ft³/s (1.507 m³/s), 22.65 in/yr (575 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,170 ft³/s (260 m³/s), Apr. 19, 1973, gage height, 12.43 ft (3.789 m); maximum discharge at prior site and datum, 3,640 ft³/s (103 m³/s), May 13, 1967, gage height, 9.08 ft (2.768 m); minimum discharge, 3.0 ft³/s (0.085 m³/s) Aug. 9, 13, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1886, 14 ft (4.3 m) January 1937, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,850 ft³/s (52.4 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 8	1755	*6340 180	10.85 3.307	May 4	0700	2090 59.2	7.39 2.252
Apr. 2	0115	4460 126	9.61 2.929	Sept. 14	0200	4440 126	9.59 2.923
Apr. 12	0615	4680 133	9.77 2.978	Sept. 21	1115	4460 126	9.61 2.929

a Observed

Minimum discharge, 5.7 ft³/s (0.162 m³/s) Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	9.3	12	423	24	88	712	9.9	53	11	12	92
2	8.5	9.2	11	129	19	145	1830	9.4	50	12	14	150
3	8.0	9.0	37	73	19	240	264	350	104	10	13	80
4	7.7	9.0	345	52	17	170	280	789	63	9.1	11	83
5	7.4	9.0	185	41	17	120	178	230	46	8.5	11	48
6	7.2	9.5	120	39	15	80	108	150	30	7.4	11	38
7	6.9	12	380	59	15	42	77	111	22	7.7	9.8	30
8	7.2	11	3800	36	12	94	76	83	20	49	8.5	25
9	7.4	10	540	28	12	64	252	67	18	146	8.5	23
10	6.7	10	149	21	10	150	122	54	16	152	8.8	21
11	6.4	9.5	74	16	11	74	86	42	22	67	132	19
12	6.4	9.5	55	18	12	54	1460	44	16	392	66	19
13	10	9.5	39	46	24	34	211	43	13	225	41	647
14	11	9.5	28	35	34	28	128	32	12	120	28	1000
15	8.8	9.5	22	18	46	25	83	25	12	88	21	92
16	8.2	12	18	16	33	24	61	21	12	73	17	54
17	8.0	15	15	19	24	22	47	19	11	61	12	41
18	8.0	20	13	19	22	21	36	18	11	56	12	28
19	8.0	15	13	113	19	31	27	15	39	46	14	20
20	8.0	12	22	366	18	28	21	32	128	40	20	16
21	8.0	10	243	167	57	96	18	144	74	33	54	1800
22	8.0	11	42	104	53	260	15	68	63	28	49	407
23	8.0	13	58	120	350	470	15	252	91	24	41	171
24	8.2	15	46	180	152	270	15	316	78	25	47	107
25	8.2	12	36	94	295	200	14	148	60	23	46	91
26	8.5	12	26	75	200	120	19	104	39	27	75	70
27	9.8	15	18	70	150	74	19	75	23	22	73	55
28	9.8	20	15	61	68	71	16	62	17	19	56	47
29	9.7	15	16	44	---	59	13	50	14	17	48	39
30	9.5	12	22	38	---	54	11	42	14	15	43	33
31	9.5	---	445	30	---	156	---	68	---	13	47	---
TOTAL	257.0	354.5	6885	2550	1728	3364	6214	3473.3	1171	1826.7	1049.6	5346
MEAN	8.29	11.8	222	82.3	61.7	109	207	112	39.0	58.9	33.9	178
MAX	11	20	3800	423	350	470	1830	789	128	392	132	1800
MIN	6.4	9.0	11	16	10	21	11	9.4	11	7.4	8.5	16
CFSM	.26	.37	6.96	2.58	1.93	3.42	6.49	3.51	1.22	1.85	1.06	5.58
IN.	.30	.41	8.03	2.97	2.02	3.92	7.25	4.05	1.37	2.13	1.22	6.23

CAL YR 1978 TOTAL 20259.5 MEAN 55.5 MAX 3800 MIN 6.4 CFSM 1.74 IN 23.62
WTR YR 1979 TOTAL 34219.1 MEAN 93.8 MAX 3800 MIN 6.4 CFSM 2.94 IN 39.90

NOTE.--No gage-height record Oct. 28 to Dec. 1; Dec. 4-8; Feb. 24 to Mar. 27.

TENNESSEE RIVER BASIN

03605555 TRACE CREEK ABOVE DENVER, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT 03...	1200	8.1	225	18.0	--	--
DEC 01...	1205	11	240	10.0	--	--
MAR 27...	1715	73	135	12.5	--	--
MAY 08...	1445	82	165	21.0	--	--
JUN 26...	1110	39	195	20.0	--	--
AUG 03...	1510	15	225	25.5	3	.12
SEP 19...	1445	18	210	20.5	4	.19

03606500 BIG SANDY RIVER AT BRUCETON, TN

LOCATION.--Lat 36°02'19", long 88°13'42", Carroll County, Hydrologic Unit 06040005, on right bank on downstream end of abutment of county bridge, 700 ft (213 m) downstream from bridge on U.S. Highway 70, 0.6 mi (1.0 km) upstream from Cherry Creek, 0.9 mi (1.4 km) east of Bruceton, and at mile 31.6 (50.8 km).

DRAINAGE AREA.--205 mi² (531 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1929 to current year.

REVISED RECORDS.--WSP 853: Drainage area. WSP 923: 1929-35.

GAGE.--Water-stage recorder. Datum of gage is 380.58 ft (116.001 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 1, 1940, nonrecording gage at same site and datum.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--50 years, 293 ft³/s (8.298 m³/s), 19.41 in/yr (493 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft³/s (481 m³/s) Jan. 21, 1935, gage height, 16.16 ft (4.926 m) from graph based on gage readings, from rating curve extended above 9,200 ft³/s (261 m³/s); minimum, 28 ft³/s (0.79 m³/s) Aug. 17-19, 22, Sept. 1, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1897 reached a stage of 18 ft (5.5 m), discharge, 25,000 ft³/s (708 m³/s), and flood in March 1919 reached a stage of 17 ft (5.2 m), discharge, 21,000 ft³/s (595 m³/s), from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,000 ft³/s (56.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	1100	2090 59.2	11.98 3.652	Apr. 13	1930	2820 79.9	12.83 3.911
Dec. 9	1700	5130 145	14.11 4.301	May 5	0515	*9420 267	15.20 4.633
Jan. 1	2245	2380 67.4	12.34 3.761	Sept. 14	0900	3850 109	13.46 4.103
Apr. 3	0345	7620 216	14.78 4.505	Sept. 21	2130	2370 67.1	12.33 3.758
Apr. 9	0730	2120 60.0	12.03 3.667				

Minimum discharge 75 ft³/s (2.124 m³/s) Oct. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	87	130	2000	190	624	1770	194	225	118	158	282
2	91	86	124	2140	175	409	5860	232	197	338	171	515
3	77	86	466	2030	216	639	6370	1400	326	200	141	427
4	81	86	2000	1110	247	1230	2970	4600	424	131	133	293
5	77	86	1070	394	208	1040	2060	7450	416	150	202	178
6	83	86	930	297	193	860	1120	3030	247	261	137	146
7	93	105	1400	409	229	521	610	1740	192	515	124	133
8	94	118	2570	367	226	297	541	560	177	1090	117	122
9	94	99	5070	255	204	252	1430	345	166	1510	111	116
10	94	94	3900	205	192	617	1090	291	161	1450	107	114
11	95	93	2350	195	195	482	745	257	158	1330	533	113
12	102	93	946	205	273	350	2400	438	135	1210	370	113
13	115	94	328	347	394	272	2670	445	129	980	235	688
14	144	92	249	439	424	247	2440	334	124	890	153	301
15	113	115	222	309	376	213	1330	246	118	830	130	3290
16	104	154	215	238	280	200	458	211	113	394	128	2940
17	99	445	202	267	218	198	323	190	113	222	118	537
18	86	341	187	303	204	197	279	179	111	160	112	263
19	82	188	183	373	209	226	254	178	106	141	108	218
20	79	142	259	1370	217	272	236	230	108	131	106	203
21	79	119	819	1230	439	235	226	910	604	122	105	195
22	78	119	564	1270	432	227	246	646	256	122	106	180
23	76	237	461	970	1330	1020	362	1200	181	118	111	1980
24	76	247	265	1150	1260	1260	333	1530	229	118	178	1560
25	79	168	216	810	1750	1330	338	931	168	278	464	537
26	93	167	187	702	1770	776	579	703	136	622	334	263
27	117	310	167	439	1040	415	478	317	128	555	287	218
28	95	200	159	334	644	346	302	246	121	422	186	203
29	89	156	164	255	---	293	236	220	119	262	172	195
30	94	143	146	233	---	277	211	199	118	196	176	180
31	90	---	702	222	---	759	---	219	---	221	220	---
TOTAL	2890	4556	26701	20868	13559	16104	38767	29671	5806	15087	5733	16503
MEAN	93.2	152	861	673	484	519	1292	957	194	487	185	550
MAX	144	445	5070	2140	1770	1330	6370	7450	604	1510	533	3290
MIN	76	86	124	195	175	197	211	178	106	118	105	113
CFSM	.46	.74	4.20	3.28	2.36	2.53	6.30	4.67	.95	2.38	.90	2.68
IN.	.52	.83	4.85	3.79	2.46	2.92	7.03	5.38	1.05	2.74	1.04	2.99

CAL YR 1978 TOTAL 114002 MEAN 312 MAX 5070 MIN 67 CFSM 1.52 IN 20.69
WTR YR 1979 TOTAL 196245 MEAN 538 MAX 7450 MIN 76 CFSM 2.62 IN 35.61

TENNESSEE RIVER BASIN

03606500 BIG SANDY RIVER AT BRUCETON, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968, 1970-72, 1976 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 03...	1330	76	36	16.5	--	--	--
NOV 01...	1345	86	44	16.5	--	--	--
DEC 06...	1415	949	60	9.5	--	--	--
MAR 27...	1445	414	35	11.5	--	--	--
JUN 26...	1645	140	35	20.5	--	--	--
AUG 03...	1115	139	48	23.5	53	20	89
SEP 19...	1220	255	39	18.0	33	23	80

DATE	TIME	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)
SEP 19...	1220	.0	.00	.00	.0	.00	.00	.00	.00	.00	.00

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
SEP 19...	.00	.00	.00	.00	.00	.00	0	.00	.00	.00

TENNESSEE RIVER BASIN

307

03609500 TENNESSEE RIVER NEAR PADUCAH, KY.

LOCATION.--Lat 37°01'11", long 88°16'50", Marshall County, Hydrologic Unit 06040006, on left bank at Gilbertsville, 4,000 ft (1,200 m) downstream from Kentucky Dam, 2.3 mi (3.7 km) upstream from Shadie Creek, 16 mi (26 km) east of Paducah, and at mile 21.6 (34.8 km).

DRAINAGE AREA.--40,200 mi² (104,100 km²), approximately.

PERIOD OF RECORD.--October 1875 to September 1889 (gage heights only), October 1889 to current year. Prior to October 1931, published as "at Johnsonville, Tenn.", and October 1931 to September 1939, published as "near Johnsonville, Tenn."

REVISED RECORDS.--WSP 1306: 1936 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 286.35 ft (87.279 m) National Geodetic Vertical Datum of 1929. Prior to October 1939, various types of gages between 75 and 80 mi (121 and 129 km) upstream at datums from 33.16 to 34.67 ft (10.107 to 10.567 m) higher. October 1939 to September 1942, water-stage recorder 16.4 mi (26.4 km) downstream at present datum. Auxiliary water-stage recorder 16.3 mi (26.2 km) downstream at present datum since Oct. 1, 1942. October 1939 to Sept. 30, 1942, auxiliary water-stage recorder at same site and datum as present base gage at Gilbertsville. (See WSP 1706 for details).

REMARKS.--Records good. Slight regulation since 1924 by Wilson Lake and increasing regulation since 1936 as other lakes have been built above station (see basic data releases for adjoining states). Flow completely regulated. Barkley-Kentucky Canal (station 03438190) diverts water from or to Lake Barkley in Cumberland River basin.

AVERAGE DISCHARGE.--76 years (1889-1965, prior to opening of Barkley-Kentucky Canal), 64,060 ft³/s (1,814 m³/s), unadjusted; 14 years (1965-79, since opening of Barkley-Kentucky Canal), 66,630 ft³/s (1887 m³/s), 22.51 in/yr (572 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 500,000 ft³/s (14,200 m³/s) Feb. 17, 1948; maximum gage height, 62.43 ft (19.029 m) Feb. 2, 1937, at Gilbertsville, present datum; minimum daily discharge, 60 ft³/s (1.70 m³/s) May 16, 1961.
Maximum discharge since closure of Kentucky Dam on Aug. 30, 1944, 500,000 ft³/s (14,200 m³/s) Feb. 17, 1948.
Maximum discharge since opening of Barkley-Kentucky Canal in June 1966, 420,000 ft³/s (11,900 m³/s) Mar. 17, 1975

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 245,000 ft³/s (6,940 m³/s) Mar. 6; maximum gage height, 51.59 ft (15.725 m) Mar. 7; minimum daily discharge, 17,700 ft³/s (501 m³/s) Nov. 10; minimum gage height, 12.97 ft (3.953 m) July 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26800	22800	40000	87200	128000	170000	82400	52900	80300	28000	50700	51600
2	29200	22200	29700	140000	115000	171000	107000	53200	97000	35800	43700	53000
3	31900	18400	34300	184000	97300	172000	134000	52300	103000	36500	41200	55600
4	27700	18400	70400	190000	86200	194000	150000	84700	115000	37700	40600	55700
5	27700	18200	91000	188000	78700	226000	149000	128000	122000	35500	41000	50600
6	26700	19100	91500	181000	69500	232000	129000	140000	123000	34600	42900	47400
7	27900	19300	91100	180000	66600	208000	109000	115000	113000	35200	46400	46500
8	27200	18800	101000	185000	66800	174000	96400	91600	86400	36700	47100	45400
9	27200	18600	141000	183000	64100	147000	102000	79800	58500	36700	46500	44100
10	26500	17700	185000	179000	56300	140000	108000	73200	49800	40600	45800	43400
11	26800	18300	203000	184000	54800	145000	108000	77300	48800	48300	45400	43300
12	26900	18800	187000	179000	55700	149000	133000	80600	49900	51600	45800	44500
13	24000	21700	157000	174000	55800	160000	163000	78400	49300	49700	42200	52600
14	25100	19700	127000	156000	55600	171000	164000	68800	47800	48700	41700	73700
15	23900	18600	102000	130000	54700	176000	162000	57100	49000	42900	49400	106000
16	24100	20700	85300	117000	54000	183000	138000	55200	47200	49400	50700	116000
17	22600	31300	67700	111000	51800	183000	121000	54000	39000	50200	45100	118000
18	30400	36000	56400	104000	51300	178000	103000	43600	37200	51500	44000	109000
19	31200	36200	52500	105000	50700	170000	105000	43900	45600	51000	39200	96100
20	30600	34700	71000	118000	50600	160000	117000	43200	45700	50800	36800	92700
21	30400	35900	85700	146000	51400	149000	131000	47000	47800	52000	43800	98500
22	24600	35900	89400	173000	56600	139000	145000	46700	51100	51600	39600	109000
23	24900	24400	91200	193000	77800	123000	145000	54700	51100	57400	40400	108000
24	24900	26800	89900	201000	98200	104000	145000	54800	51000	67200	42000	108000
25	24600	35900	85600	204000	117000	94300	146000	59300	50100	69000	43800	100000
26	25700	43600	73200	202000	143000	91000	143000	69800	43200	70900	45300	84000
27	24700	37100	55800	198000	160000	83600	133000	78700	43000	67800	45700	65400
28	23600	36400	54700	188000	165000	77000	105000	72400	42400	62500	52400	64300
29	22700	35400	55900	170000	---	71700	82300	70000	42300	61600	51900	56300
30	23700	39300	55200	154000	---	68900	54200	69400	39500	56900	52100	66300
31	23200	---	61200	141000	---	70900	---	69800	---	50600	49700	---
TOTAL	817400	800200	2781700	5045200	2233500	4581400	3710300	2165400	1869000	1518900	1392900	2187000
MEAN	26370	26670	89730	162700	79770	147800	123700	69850	62300	49000	44930	72900
MAX	31900	43600	203000	204000	165000	232000	164000	140000	123000	70900	52400	118000
MIN	22600	17700	29700	87200	50600	68900	54200	43200	37200	28000	36800	43300
CAL YR 1978 TOTAL	20127800	MEAN	55140	MAX	223000	MIN	17700					
WTR YR 1979 TOTAL	29102900	MEAN	79730	MAX	232000	MIN	17700					

RESERVOIRS IN TENNESSEE RIVER BASIN, TN

03468500 DOUGLAS LAKE.--Lat 35°57'40", long 83°32'20", Sevier County, Hydrologic Unit 06010107, at Douglas Dam on French Broad River, 6.5 mi (10.5 km) north of Sevierville, and at mile 32.3 (52.0 km). DRAINAGE AREA, 4,541 mi² (11,761 km²). PERIOD OF RECORD, February 1943 to current year. GAGE, water-stage recorder. Datum of gage in National Geodetic Vertical Datum of 1929.

Reservoir formed by concrete main dam and 10 saddle dams. Spillway equipped with 11 radial gates, 32 ft (10 m) high by 40 ft (12 m) wide and 8 sluice gates 10 ft (3 m) high by 5.67 ft (1.73 m) wide. Closure of dam was made Feb. 19, 1943; water in reservoir first reached minimum pool elevation Feb. 25, 1943. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,002.00 ft (305.410 m), top of gates, is 743,600 cfs-days (1,820 hm³), of which 703,100 cfs-days (1,720 hm³) is controlled storage above elevation 920.00 ft (280.416 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 760,000 cfs-days (1,860 hm³) July 25, 1949, elevation, 1,001.79 ft (305.346 m); minimum after first filling, 1,000 cfs-days (2.447 hm³) Jan. 16, 1956, elevation, 883.7 ft (269.35 m) estimated.

EXTREMES FOR CURRENT YEAR: Maximum contents, 696,000 cfs-days (1,703 hm³) July 25, elevation, 999.14 ft (304.538 m); minimum, 125,200 cfs-days (306.4 hm³) Dec. 31, elevation, 942.41 ft (287.247 m).

03476000 SOUTH HOLSTON LAKE.--Lat 36°31'15", long 82°05'11", Sullivan County, Hydrologic Unit 06010102, 470 ft (140 m) upstream from South Holston Dam on South Fork Holston River, 7.0 mi (11.3 km) southeast of Bristol, Virginia-Tennessee, and at mile 49.8 (80.1 km). DRAINAGE AREA, 703 mi² (1,821 km²). PERIOD OF RECORD, November 1950 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to May 11, 1951, nonrecording gage at same site and datum.

Reservoir is formed by rock and rolled earthfill dam. Spillway is uncontrolled morning-glory type, 128 ft (40 m) in diameter with six piers 3 ft (1 m) wide to guide flow spilling into a concrete-lined shaft and tunnel 34 ft (10 m) in diameter. Closure of dam was made Nov. 20, 1950; water in reservoir first reached minimum pool elevation Jan. 25, 1951. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,742.00 ft (530.962 m), spillway crest, is 385,200 cfs-days (942.6 hm³), of which 324,200 cfs-days (793.3 hm³) is controlled storage above elevation 1,616.00 ft (492.557 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 347,100 cfs-days (849.3 hm³) Apr. 3, 1975, elevation, 1,732.82 ft (528.164 m); minimum after first filling, 57,700 cfs-days (141.2 hm³) Jan. 13, 1956, elevation, 1,614.15 ft (491.993 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 332,500 cfs-days (813.6 hm³) June 25, elevation, 1,729.26 ft (527.078 m); minimum, 181,300 cfs-days (443.6 hm³) Nov. 10, elevation, 1,681.78 ft (512.607 m).

03483500 WATAUGA LAKE.--Lat 36°19'20", long 82°07'16", Carter County, Hydrologic Unit 06010103, at Watauga Dam on Watauga River, 5 mi (8 km) east of Elizabethton, and at mile 36.7 (59.0 km). DRAINAGE AREA, 468 mi² (1,212 km²). PERIOD OF RECORD, December 1948 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by rock and rolled earthfill dam. Spillway is uncontrolled morning-glory type, 128 ft (40 m) in diameter with six piers 3 ft (1 m) wide to guide flow spilling into a concrete-lined shaft and tunnel 34 ft (10 m) in diameter. Closure of dam was made Dec. 1, 1948; water in reservoir first reached minimum pool elevation Dec. 31, 1948. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,975.00 ft (601.980 m), spillway crest, is 341,300 cfs-days (835.2 hm³), of which 315,000 cfs-days (770.8 hm³) is controlled storage above elevation 1,815.00 ft (553.212 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 293,300 cfs-days (717.7 hm³) Apr. 6, 1974, elevation, 1,961.07 ft (597.734 m); minimum after first filling, 25,100 cfs-days (61.42 hm³) Jan. 13, 1956, elevation, 1,813.47 ft (552.746 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 289,800 cfs-days (709.1 hm³) July 24, elevation 1,959.97 ft (597.399 m); minimum, 186,700 cfs-days (456.9 hm³) Nov. 22, elevation, 1,924.45 ft (586.572 m).

03486800 BOONE LAKE.--Lat 36°26'26", long 82°26'16", Sullivan County, Hydrologic Unit 06010102, at Boone Dam on South Fork Holston River, 0.7 mi (1.1 km) northeast of Spurgeon, 1.3 mi (2.1 km) downstream from Watauga River, and at mile 18.6 (29.9 km). DRAINAGE AREA, 1,840 mi² (4,766 km²). PERIOD OF RECORD, December 1952 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by gravity nonoverflow type concrete dam. Spillway is equipped with five radial gates, 35 ft (11 m) high by 35 ft (11 m) wide. Storage began Dec. 16, 1952; water in reservoir first reached minimum pool elevation Jan. 5, 1953. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,385.0 ft (422.15 m), top of gates, is 97,500 cfs-days (238.6 hm³), of which 74,800 cfs-days (183.0 hm³) is controlled storage above elevation 1,330 ft (405.4 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 99,100 cfs-days (242.5 hm³) May 19, 1964, elevation 1,384.99 ft (422.145 m); minimum after first filling, 21,300 cfs-days (52.12 hm³) Jan. 23, 1956, elevation, 1,327.06 ft (404.488 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 94,900 cfs-days (232.2 hm³) July 24, elevation, 1,383.79 ft (421.779 m); minimum, 42,600 cfs-days (104.2 hm³) Jan. 19, elevation, 1,351.11 ft (411.818 m).

03487000 FORT PATRICK HENRY LAKE.--Lat 36°29'53", long 82°30'32", Sullivan County, Hydrologic Unit 06010102, at Fort Patrick Henry Dam on South Fork Holston River, 0.2 mi (0.3 km) upstream from bridge on U. S. Highway 23, 4.5 mi (7.2 km) southeast of Kingsport, and at mile 8.2 (13.2 km). DRAINAGE AREA, 1,903 mi² (4,929 km²). PERIOD OF RECORD, October 1953 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by gravity nonoverflow type concrete dam. Spillway is equipped with five radial gates, 35 ft (11 m) high by 35 ft (11 m) wide. Storage began Oct. 27, 1953; water in reservoir first reached minimum pool elevation Dec. 8, 1953. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,263 ft (385.0 m), top of gates, is 13,600 cfs-days (33.28 hm³), of which 2,200 cfs-days (5.383 hm³) is controlled storage above elevation 1,258 ft (383.4 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 14,000 cfs-days (34.26 hm³) Feb. 11, 1954, elevation, 1,263.80 ft (385.206 m); minimum after first filling, 9,300 cfs-days (22.76 hm³) Mar. 16, 1954, elevation, 1,252.32 ft (381.707 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 13,600 cfs-days (33.28 hm³) Apr. 9, elevation, 1,263.00 ft (384.962 m); minimum, 11,200 cfs-days (27.41 hm³) Sept. 12, elevation, 1,257.39 ft (383.252 m).

RESERVOIRS IN TENNESSEE RIVER BASIN, TN--Continued

03493500 CHEROKEE LAKE.--Lat 36°10'00", long 83°29'55", Jefferson County, Hydrologic Unit 06010104, at Cherokee Dam on Holston River, 0.3 mi (0.5 km) upstream from bridge on State Highway 92, 2.7 mi (4.3 km) upstream from Mill Spring Creek, 2.8 mi (4.5 km) north of Jefferson City, and at mile 52.3 (84.2 km). DRAINAGE AREA, 3,429 mi² (8,881 km²). PERIOD OF RECORD, December 1941 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with nine radial gates 32 ft (10 m) high by 40 ft (12 m) wide. Storage began Dec. 5, 1941; water in reservoir first reached minimum pool elevation Jan. 6, 1942. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,075.0 ft (327.66 m), top of gates, is 778,400 cfs-days (1,905 hm³), of which 736,200 cfs-days (1,801 hm³) is controlled storage above elevation 980.0 ft (298.70 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 779,400 cfs-days (1,907 hm³) May 11, 1944, maximum elevation, 1,074.47 ft (327.498 m) May 30, 1973; minimum after first filling, 48,400 cfs-days (118.4 hm³) Jan. 7, 1954, elevation, 980.77 ft (298.939 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 732,200 cfs-days (1,792 hm³) June 30, elevation, 1,071.88 ft (326.709 m); minimum, 242,500 cfs-days (593.4 hm³) Nov. 8, elevation, 1,026.65 ft (312.923 m).

03499500 FORT LOUDOUN LAKE.--Lat 35°47'30", long 84°14'35", Loudon County, Hydrologic Unit 06010201, at Fort Loudoun Dam on Tennessee River, 1 mi (2 km) northeast of Lenoir City, and at mile 602.3 (969.1 km). DRAINAGE AREA, 9,550 mi² (24,730 km²). PERIOD OF RECORD, July 1943 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir formed by concrete dam with earth embankment. Spillway equipped with 14 radial gates 32 ft (10 m) high by 40 ft (12 m) wide. Closure of dam was made Aug. 2, 1943; water in reservoir first reached ordinary minimum pool elevation Sept. 4, 1943. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 815.00 ft (248.412 m), top of gates, is 198,100 cfs-days (484.8 hm³), of which 55,900 cfs-days (136.8 hm³) is controlled flood storage above elevation 807.00 ft (245.974 m), minimum navigation pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum elevation, 815.00 ft (248.412 m) Sept. 11, 1943, May 14, 1945; minimum after first filling, 805.54 ft (245.529 m) Jan. 18, 1954. Contents based on backwater profile.

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 182,000 cfs-days (445.4 hm³) May 13; maximum elevation, 813.10 ft (247.833 m) Aug. 28; minimum midnight contents, 144,000 cfs-days (352.4 hm³) Jan. 16; minimum elevation, 807.00 ft (245.974 m) Jan. 16.

03518200 CHILHOWEE LAKE.--Lat 35°32'43", long 84°03'02", Monroe County, Hydrologic Unit 06010204, at Chilhowee Dam on Little Tennessee River, 2.4 mi (3.9 km) southwest of Chilhowee, 2.6 mi (4.2 km) upstream from Citico Creek, 10.1 mi (16.2 km) downstream from Calderwood Dam, and at mile 33.6 (54.1 km). DRAINAGE AREA, 1,977 mi² (5,120 km²). PERIOD OF RECORD, August 1957 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete dam with rockfill end abutments. Spillway controlled by six radial gates 38 ft (12 m) high by 35 ft (11 m) wide. Closure of dam was made June 9, 1957; storage began Aug. 1, 1957; water in reservoir first reached minimum pool elevation Aug. 9, 1957. Total capacity at elevation 874.0 ft (266.40 m), top of gates, is 24,800 cfs-days (60.68 hm³), of which 3,400 cfs-days (8.320 hm³) is controlled storage above elevation 870.0 ft (265.18 m), minimum pool. Reservoir is used for navigation, flood control, and power. Gage-height record furnished by Aluminum Co. of America; level storage records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 25,400 cfs-days (62.15 hm³) May 28, 1973, elevation, 874.60 ft (266.578 m); minimum after first filling, 18,100 cfs-days (44.29 hm³) May 18, 1963, elevation, 865.94 ft (263.938 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 24,800 cfs-days (60.69 hm³) Nov. 11, elevation, 874.00 ft (266.395 m); minimum, 21,000 cfs-days (51.39 hm³) Aug. 3, elevation, 869.55 ft (265.039 m).

03532500 NORRIS LAKE.--Lat 36°13'29", long 84°05'29", Anderson County, Hydrologic Unit 06010205, at Norris Dam on Clinch River, 2.5 mi (4.0 km) northwest of Norris, and at mile 79.8 (128.4 km). DRAINAGE AREA, 2,912 mi² (7,542 km²). PERIOD OF RECORD, June 1935 to current year. GAGE, water-stage recorder. Datum of gage is 0.11 ft (0.034 m) National Geodetic Vertical Datum of 1929. Gage readings have been reduced to National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete gravity dam with three drum gates 100 ft (30 m) wide by 14 ft (4 m) high. Some storage began in June 1935; dam was completely closed and placed in operation Mar. 4, 1936; water in reservoir first reached minimum pool elevation Mar. 24, 1936. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 1,034.1 ft (315.19 m), top of gates, is 1,286,600 cfs-days (3,148 hm³), of which 1,140,400 cfs-days (2,791 hm³) is controlled storage above elevation 930.11 ft (283.498 m), minimum pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 1,236,700 cfs-days (3,026 hm³) Feb. 11, 1937, elevation, 1,031.21 ft (314.313 m); minimum after first filling, 75,500 cfs-days (184.7 hm³) Jan. 24, 1956, elevation, 909.46 ft (277.203 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 1,024,600 cfs-days (2,507 hm³) June 8, elevation, 1,019.88 ft (310.859 m); minimum, 439,900 cfs-days (1,076 hm³) Dec. 1, elevation, 974.79 ft (297.116 m).

03535900 MELTON HILL LAKE.--Lat 35°53'04", long 84°18'01", Loudon-Roane County line, Hydrologic Unit 06010207, 9 mi (14 km) southwest of Oak Ridge, 19 mi (31 km) west of Knoxville, 57 mi (92 km) downstream from Norris Dam on Clinch River, and at mile 23.1 (37.2 km). DRAINAGE AREA, 3,343 mi² (8,658 km²). PERIOD OF RECORD, August 1962 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete gravity dam. Spillway is equipped with three radial gates, each 42 ft (13 m) high by 40 ft (12 m) wide. Dam completed and storage began May 1, 1963; water in reservoir first reached minimum pool elevation May 23, 1963. Revised capacity table put into use Jan. 1, 1971. Total capacity at elevation 796 ft (242.6 m), top of gates, is 63,500 cfs-days (155.4 hm³), of which 16,100 cfs-days (39.40 hm³) is controlled storage above elevation 790.0 ft (240.79 m), minimum pool. Reservoir is used for navigation, power, and recreation. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 64,900 cfs-days (158.8 hm³) Mar. 16, 1973, elevation, 796.45 ft (242.758 m); minimum after first filling, 35,100 cfs-days (85.89 hm³) Feb. 9, 1966, elevation, 784.10 ft (238.994 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 61,400 cfs-days (150.2 hm³) Apr. 9, elevation, 795.30 ft (242.407 m); minimum, 47,500 cfs-days (116.2 hm³) Dec. 18, elevation, 790.02 ft (240.798 m).

RESERVOIRS IN TENNESSEE RIVER BASIN, TN--Continued

03543000 WATTS BAR LAKE.--Lat 35°37'13", long 84°47'00", Rhea County, Hydrologic Unit 06010201, at Watts Bar Dam on Tennessee River, 6.5 mi (10.4 km) southeast of Spring City, 72.4 mi (116.5 km) downstream from Fort Loudoun Dam, and at mile 529.9 (852.6 km). DRAINAGE AREA, 17,310 mi² (44,830 km²), approximately. PERIOD OF RECORD, October 1941 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with 20 radial gates 32 ft (10 m) high by 40 ft (12 m) wide, also one 2-section leaf trashway gate 16.3 ft (5.0 m) high by 24 ft (7 m) wide. Storage began with partial closure Dec. 12, 1941, and final closure Jan. 1, 1942; water in reservoir first reached minimum navigation pool elevation Feb. 17, 1942. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 745.0 ft (227.08 m), top of gates, is 592,400 cfs-days (1,450 hm³), of which 191,100 cfs-days (467.6 hm³) is controlled flood storage above elevation 735.0 ft (224.03 m), minimum navigation pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum elevation, 745.40 ft (227.198 m) Mar. 17, 1973; minimum after first filling, 733.44 ft (223.552 m) Mar. 20, 1945. Contents based on backwater profile.

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 549,000 cfs-days (1,343 hm³) July 21; maximum elevation, 742.97 ft (226.457 m) July 22; minimum midnight contents, 410,000 cfs-days (1,003 hm³) Dec. 8; minimum elevation, 734.97 ft (224.019 m) Dec. 20.

03564000 LAKE OCOEE.--Lat 35°05'40", long 84°38'53", Polk County, Hydrologic Unit 06020003, at Lake Ocoee Dam on Ocoee River at Parksville, 13.8 mi (22.2 km) east of Cleveland, and at mile 11.9 (19.1 km). DRAINAGE AREA, 595 mi² (1,541 km²). PERIOD OF RECORD, June 1914 to current year. Prior to October 1953, published as "Parksville (Ocoee No. 1) Reservoir," and October 1953 to September 1968, as "Parksville Lake." GAGE, nonrecording gage. Datum of gage is 6.89 ft (2.100 m) National Geodetic Vertical Datum of 1929. Gage readings have been reduced to National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete dam with 347 ft (110 m) of spillway. Spillway is equipped with four flood-gates 6 ft (2 m) high by 20 ft (6 m) wide and 265 ft (80 m) of flashboards about 5.7 ft (2 m) high. Crest of spillway under gates is at elevation 830.82 ft (253.234 m); remainder of spillway is 1.0 ft (0.3 m) higher. Dam completed and storage began in 1911. Capacity of reservoir has been considerably reduced by silting. Revised capacity table put into use Jan. 1, 1979. Total capacity at elevation 837.55 ft (255.285 m), about top of flashboards, is 42,300 cfs-days (103.5 hm³), of which 16,200 cfs-days (39.64 hm³) is controlled storage above elevation 816.9 ft (248.99 m), minimum pool. Reservoir is used for power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum midnight contents observed, 53,300 cfs-days (130.4 hm³) July 9, 1916; maximum midnight elevation observed, 840.2 ft (256.09 m) Feb. 10, 1946; minimum contents observed, 27,300 cfs-days (66.80 hm³) Jan. 27, 1956, elevation, 817.7 ft (249.23 m); minimum midnight elevation observed, 814.8 ft (248.35 m) Dec. 14, 1934.

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 43,300 cfs-days (106.0 hm³) Apr. 13, elevation, 838.6 ft (255.61 m); minimum contents observed, 32,800 cfs-days (80.26 hm³) Jan. 16, elevation, 826.8 ft (252.01 m).

03566500 CHICKAMAUGA LAKE.--Lat 35°06'07", long 85°13'42", Hamilton County, Hydrologic Unit 06020001, at Chickamauga Dam on Tennessee River, 5.8 mi (9.3 km) northeast of Chattanooga, 58.9 mi (94.8 km) downstream from Watts Bar Dam, and at mile 471.0 (757.8 km). DRAINAGE AREA, 20,790 mi² (53,850 km²), approximately. PERIOD OF RECORD, October 1939 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with eighteen 2-section lift gates 40.44 ft (12.33 m) high by 40 ft (12 m) wide. Storage began Feb. 6, 1940; water in reservoir first reached minimum navigation pool elevation Mar. 10, 1940. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 685.44 ft (208.922 m), top of gates, is 372,600 cfs-days (911.8 hm³), of which 175,000 cfs-days (428.2 hm³) is controlled flood storage above elevation 675.0 ft (205.74 m), minimum navigation pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum elevation, 686.10 ft (209.123 m) Mar. 18, 1973; minimum after first filling, 673.27 ft (205.213 m) Jan. 21, 1942. Contents based on backwater profile.

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 348,000 cfs-days (851.6 hm³), May 31; maximum elevation, 684.09 ft (208.511 m), June 1; minimum midnight contents, 205,000 cfs-days (501.6 hm³) Apr. 1; minimum elevation, 674.80 ft (205.679 m) Mar. 17.

03570520 NICKAJACK LAKE.--Lat 35°00'07", long 85°37'14", Marion County, Hydrologic Unit 06020001, at Nickajack Dam on Tennessee River, 2 mi (3 km) upstream from Sequatchie River, 5 mi (8 km) south of Jasper, 46.3 mi (74.5 km) downstream from Chickamauga Dam, and at mile 424.7 (683.3 km). DRAINAGE AREA, 21,870 mi² (56,640 km²), approximately. PERIOD OF RECORD, December 1967 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete dam with earth embankments on each side. The spillway, with crest at elevation 595.0 ft (181.36 m), is equipped with 10 radial gates, each 40 ft (12 m) high by 40 ft (12 m) wide. A trash gate, 5.5 ft (1.7 m) high by 15 ft (5 m) wide, is located between the spillway and powerhouse. Dam was completed and storage began on Dec. 14, 1967. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 635.0 ft (193.55 m), top of gates, is 127,200 cfs-days (311.3 hm³), of which 16,200 cfs-days (39.64 hm³) is controlled storage above elevation 632.0 ft (192.63 m), ordinary minimum. Reservoir is used for navigation and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum elevation, 634.99 ft (193.545 m) Apr. 19, 1969; minimum after first filling, 630.82 ft (192.274 m) Feb. 20, 1968. Contents based on backwater profile.

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 141,000 cfs-days (345.0 hm³) Mar. 4; maximum elevation, 634.14 ft (193.286 m) Apr. 4; minimum midnight contents, 118,000 cfs-days (288.7 hm³) Apr. 11; minimum elevation, 632.00 ft (192.634 m) Apr. 12.

03579000 WOODS RESERVOIR.--Lat 35°17'54", long 86°05'48", Franklin County, Hydrologic Unit 06030003, at Elk River dam on Elk River, 1.2 mi (1.9 km) upstream from Spring Creek, 2.5 mi (4.0 km) northeast of Estill Springs, 6.8 mi (10.9 km) upstream from bridge on U. S. Highway 41-A, and at mile 170.0 (273.5 km). DRAINAGE AREA, 263 mi² (681 km²). PERIOD OF RECORD, May 1952 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete gravity and earthfill-type dam with riprapped embankments. Spillway equipped with three radial gates, 24 ft (7 m) high by 50 ft (15 m) wide and two sluice gates 6 ft (2 m) high by 4 ft (1 m) wide. Closure of dam was made May 1, 1952; water in reservoir first reached minimum pool elevation Feb. 6, 1953. Total capacity at elevation 962.0 ft (293.22 m), surcharge pool, is 44,400 cfs-days (108.6 hm³), of which 9,900 cfs-days (24.22 hm³) is controlled storage above elevation 957.0 ft (291.69 m), minimum pool. Reservoir is used for cooling water, flood control, and recreational purposes. Twice-daily gage readings (0600 and 2400 hours) furnished by U. S. Air Force.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 42,300 cfs-days (103.5 hm³) Apr. 21, 22, 1956, elevation, 960.98 ft (292.907 m); minimum after first filling, 26,300 cfs-days (64.36 hm³) Nov. 8-11, 1953, elevation, 951.93 ft (290.148 m).

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 39,700 cfs-days (97.15 hm³) Sept. 27, elevation, 959.71 ft (292.520 m); minimum midnight contents, 36,100 cfs-days (88.34 hm³) Feb. 15, elevation, 957.82 ft (291.944 m).

RESERVOIRS IN TENNESSEE RIVER BASIN, TN--Continued

03580740 TIMS FORD LAKE.--Lat 35°11'51", long 86°16'41", Franklin County, Hydrologic Unit 06030003, in intake tower near left bank at Tims Ford Dam on Elk River, 0.4 mi (0.6 km) upstream from bridge on State Highway 50, 9.5 mi (15.3 km) west of Winchester, and at mile 133.4 (214.6 km). DRAINAGE AREA, 529 mi² (1,370 km²). PERIOD OF RECORD, December 1970 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir formed by concrete dam with compacted rockfill impervious earth core embankments. Spillway equipped with three radial gates 42 ft (13 m) high by 40 ft (12 m) wide. Storage began Dec. 1, 1970; water in reservoir first reached minimum pool elevation Feb. 23, 1971, and first filling was completed June 3, 1971. Total capacity at elevation 895 ft (272.8 m), top of gates, is 306,500 cfs-days (750.0 hm³), of which 160,300 cfs-days (392.2 hm³) is controlled storage above elevation 860 ft (262.1 m), minimum pool. Reservoir is used for flood control, power, and recreation. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 296,300 cfs-days (725.0 hm³) Mar. 17, 1973, elevation, 893.24 ft (272.260 m); minimum after first filling 154,000 cfs-days (376.8 hm³) Oct. 15, 1972, elevation, 862.24 ft (262.811 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 270,900 cfs-days (662.9 hm³) Sept. 30, elevation, 888.68 ft (270.870 m); minimum, 228,700 cfs-days (559.6 hm³) Oct. 31, elevation, 880.37 ft (268.337 m).

03593000 PICKWICK LAKE.--Lat 35°04'16", long 88°15'04", Hardin County, Hydrologic Unit 06040001, at Pickwick Landing Dam on Tennessee River, 1.5 mi (2.4 km) north of town of Pickwick Dam, 6.1 mi (9.8 km) upstream from Lick Creek, 52.7 mi (84.8 km) downstream from Wilson Dam, and at mile 206.7 (332.6 km). DRAINAGE AREA, 38,820 mi² (85,000 km²), approximately. PERIOD OF RECORD, October 1937 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete dam with riprapped earth embankments. Spillway equipped with twenty-two 2-section lift gates 40 ft (12 m) high by 40 ft (12 m) wide, one of which is used as a trash gate. Dam completed and storage began Feb. 8, 1938; water in reservoir first reached minimum pool elevation Feb. 18, 1938. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 418.0 ft (127.41 m), top of gates, is 557,100 cfs-days (1,363 hm³), of which 210,200 cfs-days (514.4 hm³) is controlled flood storage above elevation 408.0 ft (124.36 m), minimum navigation pool. Reservoir is used for navigation, flood control, and power. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum elevation, 419.49 ft (127.860 m) Mar. 30, 1944; minimum after first filling, 407.12 ft (124.090 m) Dec. 18, 1944. Contents based on backwater profile.

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 533,000 cfs-days (1,304 hm³) Apr. 14; maximum elevation, 416.18 ft (126.852 m) Apr. 15; minimum midnight contents, 362,000 cfs-days (885.8 hm³) Feb. 10; minimum elevation, 408.10 ft (124.389 m) Dec. 9.

03596460 NORMANDY LAKE.--Lat 35°27'55", long 86°14'48", Coffee County, Hydrologic Unit 06040002, at Normandy Dam on Duck River, 1.5 mi (2.4 km) northeast of Normandy, 2.6 mi (4.2 km) downstream from Riley Creek, 8 mi (13 km) north of Tullahoma, and at mile 248.6 (400.0 km). DRAINAGE AREA, 195 mi² (505 km²). PERIOD OF RECORD, January 1976 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete gravity dam with riprapped and rolled earthfill embankment on left side. Spillway is equipped with two radial gates, 40 ft (12 m) high by 36 ft (11 m) wide. Storage began Jan. 5, 1976; water in reservoir first reached minimum pool elevation Mar. 22, 1976. Revised capacity table put into use Jan. 1, 1977. Total capacity at elevation 880 ft (268.2 m), top of gates, is 64,000 cfs-days (156.6 hm³), of which 30,400 cfs-days (74.39 hm³) is controlled storage above elevation 859 ft (261.8 m), minimum pool. Reservoir is used for flood control, water supply, water quality control, recreation, and shoreline development. Records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 61,800 cfs-days (151.2 hm³) Apr. 5, 1977, elevation, 878.66 ft (276.816 m); minimum after first filling, 28,300 cfs-days (69.25 hm³) Dec. 15, 1977, elevation, 854.48 ft (260.446 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 60,000 cfs-days (146.8 hm³) Sept. 28, elevation, 877.57 ft (267.483 m); minimum, 33,600 cfs-days (82.22 hm³) Dec. 29, elevation 858.98 ft (261.817 m).

03609000 KENTUCKY LAKE.--Lat 37°00'49", long 88°16'06", Marshall County, Ky., Hydrologic Unit 06040006, at Kentucky Dam on Tennessee River at Gilbertsville, and at mile 22.4 (36.0 km). DRAINAGE AREA, 40,200 mi² (104,100 km²), approximately. PERIOD OF RECORD, July 1944 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

Reservoir is formed by concrete dam with 24 lift gates 50 ft (15 m) high by 40 ft (12 m) wide. Storage began Aug. 16, 1944, and final closure was Aug. 30, 1944. Water in reservoir reached minimum pool elevation Apr. 7, 1945. Revised capacity table put into use Jan. 1, 1971. Total level pool capacity at elevation 375.0 ft (114.30 m), top of gates, is 3,090,000 cfs-days (7,561 hm³), of which 2,020,700 cfs-days (4,945 hm³) is controlled storage above 354.0 ft (107.90 m), ordinary minimum pool. Reservoir is used for navigation, flood control and power. Records furnished by Tennessee Valley Authority.

Barkley-Kentucky Canal opened July 13, 1966, for navigation and power use. Canal is 1.75 miles (2.82 km) long and interconnects Lake Barkley and Kentucky Lake at a point 2.2 mi (3.5 km) upstream from Barkley Dam. For daily discharges through the canal, see Kentucky reports.

EXTREMES FOR PERIOD OF RECORD: Maximum elevation, 369.01 ft (112.474 m) Mar. 28, 1973; minimum after first filling, 348.02 ft (106.076 m) Mar. 11, 1961. Contents based on backwater profile.

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 2,348,000 cfs-days (5,746 hm³) Apr. 16; maximum elevation, 368.14 ft (112.209 m) Apr. 19; minimum midnight contents, 1,079,000 cfs-days (2,640 hm³) Dec. 2; minimum elevation, 353.81 ft (107.841 m) Feb. 8.

OTHER RESERVOIRS.--The following small reservoirs in the Tennessee River basin are described below, but records of contents are not published herein.

03466400 DAVY CROCKETT LAKE on Nolichucky River at Nolichucky Dam, Tn., with a total capacity of 1,300 cfs-days (3.181 hm³), of which 900 cfs-days (2.202 hm³) is controlled storage.

03517900 CALDERWOOD LAKE on Little Tennessee River at Calderwood, Tn., with a total capacity of 20,800 cfs-days (50.90 hm³) of which 2,060 cfs-days (5.041 hm³) is controlled storage.

03562500 OCOEE NO. 3 LAKE on Ocoee River at Ocoee No. 3 Dam, 5.0 miles (8.0 km) west of Ducktown, Tn., with a total capacity of 2,040 cfs-days (4.992 hm³), of which 1,900 cfs-days (4.649 hm³) is controlled storage. Records of contents previous to 1971 water year published (as Ocoee No. 3 Lake near Ducktown, Tn.).

TENNESSEE RIVER BASIN
RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
03468500 DOUGLAS LAKE				03476000 SOUTH HOLSTON LAKE			03483500 WATAUGA LAKE		
Sept. 30.....	955.38	209400	-	1689.57	202400	-	1929.97	201100	-
Oct. 31.....	948.07	158800	-50600	1682.33	182800	-19600	1925.59	189600	-11500
Nov. 30.....	947.38	154400	-4400	1682.69	183700	+900	1924.79	187600	-2000
Dec. 31.....	942.44	125300	-29100	1689.14	201200	+17500	1928.24	196500	+8900
CAL YR 1978	-	-	-11700	-	-	+135300	-	-	-43200
Jan. 31.....	948.20	159600	+34300	1704.55	246800	+45600	1933.45	210500	+14000
Feb. 28.....	966.06	299800	+140200	1715.82	283800	+37000	1945.44	244500	+34000
Mar. 31.....	974.16	379700	+79900	1720.74	301100	+17300	1955.85	276600	+32100
Apr. 30.....	994.45	627500	+247800	1725.84	319300	+18200	1952.64	266400	-10200
May 31.....	997.64	672900	+45400	1725.99	319900	+600	1957.43	281700	+15300
June 30.....	995.71	645000	-27900	1727.82	326800	+6900	1957.94	283300	+1600
July 31.....	997.90	676800	+31800	1727.94	327300	+500	1957.73	282700	-600
Aug. 31.....	985.83	514400	-162400	1720.63	300700	-26600	1947.26	249900	-32800
Sept. 30.....	985.87	514900	+500	1714.73	280100	-20600	1946.58	247900	-2000
WTR YR 1979	-	-	+305500	-	-	+77700	-	-	+46800
03486800 BOONE LAKE				03487000 FORT PATRICK HENRY LAKE			03493500 CHEROKEE LAKE		
Sept. 30.....	1375.23	77800	-	1259.13	11900	-	1031.04	275200	-
Oct. 31.....	1369.83	68400	-9400	1261.30	12800	+900	1027.27	246900	-28300
Nov. 30.....	1362.10	56400	-12000	1261.50	12900	+100	1026.85	243900	-3000
Dec. 31.....	1357.52	50700	-5700	1259.05	11900	-1000	1030.73	272800	+28900
CAL YR 1978	-	-	-600	-	-	-100	-	-	-48400
Jan. 31.....	1357.34	50500	-200	1259.62	12100	+200	1036.55	320600	+47800
Feb. 28.....	1367.30	64200	+13700	1260.50	12500	+400	1042.69	375500	+54900
Mar. 31.....	1373.05	73900	+9700	1261.04	12700	+200	1052.20	474700	+99200
Apr. 30.....	1381.32	89600	+15700	1260.61	12500	-200	1066.48	655100	+180400
May 31.....	1382.22	91500	+1900	1260.68	12600	+100	1069.73	701100	+46000
June 30.....	1382.18	91400	-100	1260.34	12400	-200	1071.60	728200	+27100
July 31.....	1382.83	92800	+1400	1261.38	12800	+400	1071.17	721900	-6300
Aug. 31.....	1381.27	89500	-3300	1259.96	12300	-500	1062.39	599600	-122300
Sept. 30.....	1364.07	59200	-30300	1262.53	13400	+1100	1057.56	538200	-61400
WTR YR 1979	-	-	-18600	-	-	+1500	-	-	+263000
03499500 FORT LOUDON LAKE†				03518200 CHILHOWEE LAKE			03532500 NORRIS LAKE		
Sept. 30.....	812.06	176000	-	873.44	24300	-	984.81	540800	-
Oct. 31.....	812.13	177000	+1000	873.40	24300	0	979.56	486000	-54800
Nov. 30.....	807.95	148000	-29000	873.47	24400	+100	974.87	440600	-45400
Dec. 31.....	807.39	145000	-3000	873.35	24300	-100	984.34	535700	+95100
CAL YR 1978	-	-	-5000	-	-	-200	-	-	-73100
Jan. 31.....	807.82	149000	+4000	873.41	24300	0	1001.04	738000	+202300
Feb. 28.....	807.85	149000	0	873.47	24400	+100	1004.94	791900	+53900
Mar. 31.....	808.11	149000	0	873.64	24500	+100	1006.81	818700	+26800
Apr. 30.....	812.20	177000	+28000	873.39	24300	-200	1013.07	913300	+94600
May 31.....	812.55	180000	+3000	873.14	24100	-200	1017.76	988900	+75600
June 30.....	812.09	177000	-3000	873.82	24700	+600	1017.84	990300	+1400
July 31.....	812.00	176000	-1000	871.34	22500	-2200	1016.99	976200	-14100
Aug. 31.....	811.80	175000	-1000	872.72	23700	+1200	1007.23	824800	-151400
Sept. 30.....	812.07	176000	+1000	872.38	23400	-300	998.34	702100	-122700
WTR YR 1979	-	-	0	-	-	-900	-	-	+161300

† Contents based on backwater profile.

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RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
03535900 MELTON HILL LAKE				03543000 WATTS BAR LAKE†			03564000 LAKE OCOEE		
Sept. 30.....	793.66	56700		740.62	502000		835.0	40500	
Oct. 31.....	793.60	56500	-200	738.42	461000	-41000	835.0	40500	0
Nov. 30.....	790.75	49200	-7300	736.78	432000	-29000	831.4	37200	-3300
Dec. 31.....	793.30	55700	+6500	735.43	412000	-20000	827.8	34000	-3200
Dec. 31.....								a33600	
CAL YR 1978	-	-	-2300	-	-	-11000	-	-	0
Jan. 31.....	793.80	57100	+1400	735.85	423000	+11000	828.1	33900	+300
Feb. 28.....	793.28	55700	-1400	738.17	463000	+40000	832.2	37400	+3500
Mar. 31.....	792.80	54400	-1300	735.82	416000	-47000	829.1	34700	-2700
Apr. 30.....	793.70	56800	+2400	741.12	512000	+96000	832.5	37700	+3000
May 31.....	794.50	59000	+2200	742.25	535000	+23000	836.6	41500	+3800
June 30.....	793.45	56100	-2900	740.52	501000	-34000	835.3	40200	-1300
July 31.....	793.49	56200	+100	740.97	511000	+10000	835.5	40400	+200
Aug. 31.....	792.83	54500	-1700	741.40	518000	+7000	835.5	40400	0
Sept. 30.....	793.70	56800	+2300	741.40	518000	0	835.4	40300	-100
WTR YR 1979	-	-	+100	-	-	+16000	-	-	a+300
03566500 CHICKAMAUGA LAKE†				03570520 NICKAJACK LAKE†			03579000 WOODS RESERVOIR		
Sept. 30.....	680.82	287000		633.68	121000		959.00	38300	
Oct. 31.....	678.52	247000	-40000	633.10	120000	-1000	958.73	37800	-500
Nov. 30.....	676.10	216000	-31000	633.45	120000	0	957.98	36400	-1400
Dec. 31.....	675.98	220000	+4000	633.70	125000	+5000	958.25	36900	+500
CAL YR 1978	-	-	0	-	-	+6000	-	-	+400
Jan. 31.....	675.72	221000	+1000	632.20	122000	-3000	957.92	36200	-700
Feb. 28.....	677.36	245000	+24000	632.31	127000	+5000	958.07	36500	+300
Mar. 31.....	675.66	208000	-37000	633.12	122000	-5000	959.35	39000	+2500
Apr. 30.....	682.87	323000	+115000	633.35	121000	-1000	959.58	39400	+400
May 31.....	683.84	348000	+25000	632.84	128000	+7000	959.46	39200	-200
June 30.....	681.90	310000	-38000	633.78	123000	-5000	959.48	39200	0
July 31.....	681.03	295000	-15000	632.33	120000	-3000	959.53	39300	+100
Aug. 31.....	680.20	279000	-16000	633.46	123000	+3000	959.52	39300	0
Sept. 30.....	681.49	299000	+20000	633.38	124000	+1000	959.46	39200	-100
WTR YR 1979	-	-	+12000	-	-	+3000	-	-	+900
03580740 TIMS FORD LAKE				03593000 PICKWICK LAKE†			03596460 NORMANDY LAKE		
Sept. 30.....	883.00	241400		411.08	406000		871.62	50600	
Oct. 31.....	880.41	228800	-12600	409.35	372000	-34000	869.58	47600	-3000
Nov. 30.....	876.85	212400	-16400	409.25	373000	+1000	864.60	40600	-7000
Dec. 31.....	872.68	194500	-17900	408.95	374000	+1000	859.73	34500	-6100
CAL YR 1978	-	-	-2600	-	-	-16000	-	-	+3200
Jan. 31.....	876.84	212400	+17900	409.35	385000	+11000	861.56	36700	+2200
Feb. 28.....	880.79	230600	+18200	410.61	417000	+32000	868.32	45700	+9000
Mar. 31.....	881.32	233200	+2600	410.61	405000	-12000	869.26	47100	+1400
Apr. 30.....	884.33	248100	+14900	414.45	477000	+72000	874.41	55000	+7900
May 31.....	886.50	259300	+11200	414.31	479000	+2000	876.28	58000	+3000
June 30.....	886.06	257000	-2300	413.17	449000	-30000	875.65	57000	-1000
July 31.....	886.89	261300	+4300	412.68	445000	-4000	875.99	57500	+500
Aug. 31.....	887.39	264000	+2700	411.88	422000	-23000	876.14	57800	+300
Sept. 30.....	888.52	270000	+6000	412.83	449000	+27000	876.51	58400	+600
WTR YR 1979	-	-	+28600	-	-	+43000	-	-	+7800

† Contents based on backwater profile.

a Based on Jan. 1, 1979, capacity table.

TENNESSEE RIVER BASIN
RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
03609000 KENTUCKY LAKE†			
Sept. 30.....	355.22	1143000	
Oct. 31.....	354.72	1105000	-38000
Nov. 30.....	354.39	1087000	-18000
Dec. 31.....	354.43	1140000	+53000
CAL YR 1978	-	-	-10000
Jan. 31.....	354.27	1190000	+50000
Feb. 28.....	355.68	1355000	+165000
Mar. 31.....	356.70	1304000	-51000
Apr. 30.....	359.34	1466000	+162000
May 31.....	359.18	1462000	-4000
June 30.....	358.04	1354000	-108000
July 31.....	357.70	1355000	+1000
Aug. 31.....	356.19	1236000	-119000
Sept. 30.....	359.17	1479000	+243000
WTR YR 1979	-	-	+336000

† Contents based on backwater profile.

07024300 BEAVER CREEK AT HUNTINGDON, TN

LOCATION.--Lat 35°59'56", long 88°26'01", Carroll County, Hydrologic Unit 08010203, on left bank on downstream end of pier of bridge on U.S. Highway 70, 0.3 mi (0.5 km) southwest of Huntingdon, 0.6 mi (1.0 km) downstream from Brier Creek, and at mile 5.6 (9.0 km).

DRAINAGE AREA.--55.5 mi² (143.7 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1946, 1948, 1952-54, 1958-61 and annual maximum, water years 1954-62. October 1962 to current year.

REVISED RECORDS.--WSP 1920: 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 364.20 ft (111.008 m) National Geodetic Vertical Datum of 1929 (Tennessee State Highway Department bench mark). Dec. 21, 1945, to Oct. 3, 1962, nonrecording gage at site 30 ft (9.1 m) downstream at same datum; Jan. 6, 1954, to Oct. 3, 1962, crest-stage gage at same site at datum 1.17 ft (0.356 m) higher.

REMARKS.--Records good. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--17 years, 117 ft³/s (3.313 m³/s), 28.63 in/yr (727 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,350 ft³/s (236 m³/s) Sept. 9, 1970, gage height, 13.96 ft (4.255 m) from rating curve extended above 3,600 ft³/s (102 m³/s) on basis of contracted opening measurement of peak flow; minimum, 19 ft³/s (0.54 m³/s) May 17, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft³/s (51.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	0945	2120 60.0	10.97 3.344	Apr. 12	1130	2830 80.1	11.51 3.508
Dec. 8	2330	6150 174	13.15 4.008	May 4	1345	3340 94.6	11.82 3.603
Jan. 1	1715	2270 64.3	11.11 3.386	Sept. 14	1300	2190 62.0	11.04 3.365
Apr. 2	0945	*6170 175	13.16 4.011	Sept. 21	1930	2920 82.7	11.57 3.526

Minimum discharge, 25 ft³/s (0.71 m³/s) Oct. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	33	40	1810	46	321	1780	46	49	33	35	49
2	33	33	38	1400	42	158	4850	82	47	110	36	53
3	32	32	307	421	62	289	1220	748	101	57	34	42
4	32	32	1920	45	64	801	431	2880	58	37	36	39
5	31	32	782	40	52	325	307	1360	47	36	109	37
6	30	32	136	46	50	108	114	287	43	34	37	36
7	30	44	550	154	60	87	84	93	43	40	35	35
8	30	38	3460	70	55	73	163	67	41	267	34	34
9	31	34	3710	58	52	65	1390	55	39	425	33	33
10	30	33	756	48	52	365	534	49	38	145	33	33
11	31	33	128	46	53	263	413	44	36	57	188	33
12	30	34	70	54	148	100	2370	123	35	500	61	33
13	77	34	59	179	217	81	1010	65	35	513	39	237
14	42	34	50	206	191	71	215	49	35	94	35	1840
15	29	49	48	66	138	61	93	43	34	52	34	728
16	27	53	48	57	85	57	73	38	33	49	35	88
17	26	238	43	91	59	56	65	37	33	42	33	48
18	26	124	43	96	54	55	59	36	33	39	34	44
19	27	48	45	192	58	77	54	36	32	38	33	43
20	27	40	110	987	67	86	51	87	43	37	32	61
21	26	38	362	939	258	83	50	332	178	55	32	1830
22	26	41	145	254	165	76	56	221	63	38	32	1890
23	27	121	67	178	968	924	100	453	40	37	33	426
24	27	78	60	586	1150	932	86	670	47	45	83	83
25	28	47	51	320	696	214	107	163	40	54	133	55
26	37	80	45	106	612	97	195	64	36	49	76	49
27	38	117	40	131	195	116	140	53	35	40	45	46
28	31	55	40	97	140	98	68	50	34	48	39	45
29	29	46	40	63	---	78	56	47	34	41	37	43
30	30	43	57	60	---	108	50	50	34	37	105	41
31	32	---	334	58	---	421	---	60	---	36	115	---
TOTAL	1005	1696	13584	8858	5789	6646	16184	8388	1396	3085	1676	8054
MEAN	32.4	56.5	438	286	207	214	539	271	46.5	99.5	54.1	268
MAX	77	238	3710	1810	1150	932	4850	2880	178	513	188	1890
MIN	26	32	38	40	42	55	50	36	32	33	32	33
CFSM	.58	1.02	7.89	5.15	3.73	3.86	9.71	4.88	.84	1.79	.98	4.83
IN.	.67	1.14	9.10	5.94	3.88	4.45	10.85	5.62	.94	2.07	1.12	5.40

CAL YR 1978	TOTAL	46105	MEAN 126	MAX 3710	MIN 25	CFSM 2.27	IN 30.90
WTR YR 1979	TOTAL	76361	MEAN 209	MAX 4850	MIN 26	CFSM 3.77	IN 51.18

OBION RIVER BASIN

07024300 BEAVER CREEK AT HUNTINGDON, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--1961, 1963-65, July to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 10...	1610	31	46	13.5	--	--	--
NOV 07...	1155	49	--	13.5	--	--	--
DEC 06...	1205	118	102	7.0	--	--	--
JAN 10...	1545	48	85	2.5	--	--	--
FEB 12...	1045	90	70	4.5	--	--	--
MAR 14...	1445	72	70	12.5	--	--	--
MAY 15...	0745	43	70	17.0	--	--	--
JUN 20...	1230	37	44	20.5	--	--	--
JUL 25...	1115	47	65	21.5	79	10	92
AUG 22...	0845	33	55	20.5	35	3.1	--
SEP 25...	1100	56	52	16.5	32	4.8	--

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
SEP 25...	1100	.0	0	.00	.00	.0	.0	0	.00	.1	.00	.0

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
SEP 25...	.00	1.5	.00	.0	.00	.00	.0	.00	.0	.00

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
SEP 25...	.00	.0	.00	.0	.00	.00	0	0	.00	.00	.00

07024500 SOUTH FORK OBION RIVER NEAR GREENFIELD, TN

LOCATION.--Lat 36°07'05", long 88°48'39", Weakley County, Hydrologic Unit 08010203, on left bank 75 ft (23 m) downstream from bridge on U.S. Highway 45E, 1.1 mi (1.8 km) downstream from Mosley Branch, 2.5 mi (4.0 km) south of Greenfield, and 9.7 mi (15.6 km) upstream from confluence with Middle Fork.

DRAINAGE AREA.--383 mi² (992 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1929 to current year,

REVISED RECORDS.--WSP 1311: 1936(M). WSP 1920: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 300.36 ft (91.550 m) National Geodetic Vertical Datum of 1929. Prior to June 22, 1939, recording gage at site 75 ft (23 m) upstream at same datum.

REMARKS.--Records fair. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--50 years, 586 ft³/s (16.60 m³/s), 20.78 in/yr (528 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,600 ft³/s (725 m³/s) Jan. 22, 1937, gage height, 17.82 ft (5.432 m), from floodmarks, from rating curve extended above 14,000 ft³/s (396 m³/s); minimum, 61 ft³/s (1.73 m³/s) Aug. 21, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft) (m)
Dec. 10	1300	12900 365	16.18 4.932	Apr. 3	1600	*18700 530	16.79 5.118
Jan. 3	unknown	unknown	unknown	Apr. 14	0800	6530 185	15.10 4.602
Jan. 23	2400	3930 111	14.34 4.371	May 5	2300	8230 233	15.45 4.709
Feb. 25	2200	7500 212	15.31 4.666	Sept. 24	1800	5790 164	14.92 4.548

Minimum discharge, 121 ft³/s (3.43 m³/s) Oct. 1, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	128	182	1700	469	1990	1870	346	377	160	211	700
2	133	128	153	5000	419	1420	10600	557	294	169	202	749
3	132	128	935	5800	419	1580	17100	2030	280	189	191	581
4	131	128	1840	3000	423	1690	13100	5560	275	280	182	391
5	129	126	1540	2200	411	1580	7680	7420	268	307	175	282
6	127	125	1590	1750	401	1570	4310	7850	240	247	178	235
7	126	128	2040	960	391	1460	2020	5760	238	205	185	208
8	125	132	6140	663	394	930	1380	3260	221	1010	177	187
9	125	134	10200	556	390	648	1810	1690	207	790	168	175
10	126	133	12400	497	385	825	1800	935	195	871	164	173
11	127	131	9470	462	381	810	2320	638	183	1060	915	159
12	123	130	6110	452	491	928	5080	760	172	1340	609	156
13	126	129	3660	640	678	843	5310	596	164	1370	549	318
14	148	129	1880	725	898	639	6360	532	159	1330	444	757
15	162	132	1050	645	995	517	4930	469	154	1240	315	958
16	171	140	739	642	890	448	2560	402	154	1080	243	1150
17	173	260	614	676	746	408	1280	355	153	670	208	1280
18	165	235	549	638	606	387	713	324	151	384	186	1270
19	156	295	513	839	501	430	539	306	150	276	173	821
20	153	295	690	1690	464	452	439	425	149	273	166	448
21	149	248	911	1890	924	466	381	539	148	451	173	1610
22	140	201	837	2220	1030	485	357	1050	175	211	178	1720
23	134	198	936	3090	2210	1470	379	1300	302	203	182	2410
24	132	215	870	3620	3380	1530	419	1230	377	194	395	5220
25	132	238	705	2370	6670	1640	447	1120	348	219	861	5250
26	134	255	583	1820	6890	1850	468	1100	287	209	680	3370
27	137	259	510	1640	5180	1810	488	910	240	491	475	1650
28	138	248	471	1260	3190	1140	520	565	206	313	325	668
29	137	245	450	825	---	718	484	381	183	238	255	384
30	132	220	465	673	---	613	407	301	168	271	351	293
31	130	---	975	570	---	739	---	455	---	236	609	---
TOTAL	4280	5493	70008	49513	40226	32016	95551	49166	6618	16287	10125	33573
MEAN	138	183	2258	1597	1437	1033	3185	1586	221	525	327	1119
MAX	173	295	12400	5800	6890	1990	17100	7850	377	1370	915	5250
MIN	123	125	153	452	381	387	357	301	148	160	164	156
CFSM	.36	.48	5.90	4.17	3.75	2.70	8.32	4.14	.58	1.37	.85	2.92
IN.	.42	.53	6.80	4.81	3.91	3.11	9.28	4.78	.64	1.58	.98	3.26
CAL YR 1978 TOTAL	238769			654	MAX 12400	MIN 118	CFSM 1.71	IN 23.19				
WTR YR 1979 TOTAL	412856			MEAN 1131	MAX 17100	MIN 123	CFSM 2.95	IN 40.10				

OBION RIVER BASIN

07024500 SOUTH FORK OBION RIVER NEAR GREENFIELD, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--1964-65, July to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, JS- PENL ⁵⁰ (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
11...	1230	121	125	16.0	--	--	--
NOV							
07...	1445	128	--	14.0	--	--	--
DEC							
07...	1000	2020	140	7.5	--	--	--
JAN							
10...	1345	486	75	.5	--	--	--
FFB							
01...	1315	453	64	1.5	--	--	--
MAR							
14...	1300	637	80	12.5	--	--	--
MAY							
14...	1745	523	50	20.5	--	--	--
JUN							
21...	1030	152	50	24.5	--	--	--
JUL							
25...	0915	189	90	25.0	90	46	91
AUG							
21...	1000	203	49	26.5	102	56	69
SEP							
26...	1030	3440	41	19.0	137	1270	35

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
SEP												
26...	1030	.0	1	.00	.00	.0	.0	0	.00	.0	.00	.0

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
SEP										
26...	.00	.0	.00	.0	.00	.00	.0	.00	.0	.00

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOXA- PHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
SEP											
26...	.00	.0	.00	.0	.00	.00	0	0	.00	.00	.00

OBION RIVER BASIN

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07026000 OBION RIVER AT OBION, TN
(National stream-quality accounting network station)

LOCATION.--Lat 36°15'04", long 89°11'33", Obion County, Hydrologic Unit 08010202, near left bank on downstream end of pier of bridge on U.S. Highway 51, 0.5 mi (0.8 km) upstream from Richland Creek, 0.6 mi (1.0 km) south of Obion, 14.5 mi (23.3 km) downstream from North Fork, and at mile 62.4 (100.4 km). Water quality sampling site at railroad bridge 250 ft (76 m) upstream.

DRAINAGE AREA.--1,852 mi² (4,797 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1929 to September 1958, October 1966 to current year. Gage height and discharge records at this site from 1964 to 1975 are in reports of Corps of Engineers.

REVISED RECORD.--WSP 1211: 1930, 1943. WSP 2120: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 246.48 ft (75.127 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1932, nonrecording gage at present site at datum 5.00 ft (1.524 m) higher; Oct. 1, 1932, to Aug. 2, 1939, nonrecording gage, and Aug. 3, 1939, to Sept. 1958, water-stage recorder at present site at datum 15.00 ft (4.572 m) higher.

REMARKS.--Records fair.

COOPERATION.--Twenty-four discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE--42 years, (water years 1930-58, 1967-79), 2,701 ft³/s (76.49 m³/s), 19.80 in/yr (503 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 99,500 ft³/s (2,820 m³/s) Jan. 24, 1937, gage height 40.4 ft (12.31 m), present datum; minimum, under conditions of no backwater, 230 ft³/s (6.51 m³/s) Oct. 7-9, 1943; minimum daily discharge, 15 ft³/s (0.42 m³/s), backwater from Mississippi River, Feb. 4, 1937; reverse flow of 57 ft³/s (1.61 m³/s) measured by current meter on that date.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 38,300 ft³/s (1,090 m³/s) Apr. 5, gage height, 34.57 ft (10.537 m); minimum, 459 ft³/s (13.00 m³/s) Oct. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	484	485	839	10300	1400	15000	10000	1620	3270	704	1110	2230
2	488	485	778	11400	1300	12500	17700	1460	1730	2960	940	1970
3	480	480	7400	10300	1380	11000	21800	8540	1340	3520	884	1490
4	480	480	17200	6600	1560	17100	27700	15700	1490	1420	786	1160
5	477	475	18400	4750	1460	16500	35500	18800	1240	1130	733	925
6	472	480	16000	3400	1290	12000	35900	21300	1110	997	717	817
7	472	490	15300	2500	1250	9000	22500	22600	1040	897	717	755
8	477	510	23500	2000	1250	6600	15500	20500	1060	3490	713	709
9	480	550	31200	1700	1120	5000	19200	12000	1010	5600	696	673
10	484	534	32000	1550	845	6330	14500	7000	936	4620	688	661
11	488	527	33200	1400	1090	5920	12000	4400	876	3340	4230	646
12	498	514	33700	1300	1160	3900	14000	9670	833	4000	2760	632
13	493	514	25000	1250	2250	2600	15900	9150	824	5870	1450	652
14	497	468	17500	4550	3610	1850	15500	4200	798	4300	1190	3330
15	534	497	12500	2980	8390	1550	14200	1950	774	2790	988	3690
16	506	568	9200	2020	7030	1400	10000	1500	753	2620	837	2310
17	527	1380	6900	2230	3820	1300	7600	1300	737	2060	765	1990
18	527	1680	5000	3400	2100	1250	5800	1200	725	1430	696	2010
19	518	948	3500	5600	1600	1200	4400	1150	721	1190	660	1790
20	510	810	4000	11100	1420	2550	3300	2520	709	1090	628	1230
21	510	738	4620	11900	5200	3480	2500	5730	975	1870	616	7680
22	493	683	3100	11000	7960	2520	2000	4740	1480	1240	967	11100
23	480	762	2000	10000	15300	8800	1900	9520	1180	1030	1020	11000
24	472	914	1500	13600	18300	11500	3140	10400	2240	1010	915	10600
25	468	831	1150	13700	23700	10200	3180	7540	1410	1030	2020	7800
26	531	2900	1050	12000	25200	7000	3520	4000	1060	1410	1810	6100
27	545	6320	960	8000	23700	5000	3470	2500	906	3080	1470	4900
28	520	2240	920	5000	19600	3750	2600	1550	820	1610	1480	3450
29	500	1160	880	3250	---	2600	2160	1300	770	1590	1230	1920
30	490	939	870	2300	---	2000	1860	1200	745	1120	886	1340
31	485	---	2730	1650	---	3690	---	1550	---	988	2140	---
TOTAL	15386	30362	332897	182730	184285	195090	349330	216590	33562	70006	36742	95560
MEAN	496	1012	10740	5895	6582	6293	11640	6987	1119	2258	1185	3185
MAX	545	6320	33700	13700	25200	17100	35900	22600	3270	5870	4230	11100
MIN	468	468	778	1250	845	1200	1860	1150	709	704	616	632
CFSM	.27	.55	5.80	3.18	3.55	3.40	6.29	3.77	.60	1.22	.64	1.72
IN.	.31	.61	6.69	3.67	3.70	3.92	7.02	4.35	.67	1.41	.74	1.92
CAL YR 1978	TOTAL	1118913	MEAN	3066	MAX	33700	MIN	419	CFSM	1.66	IN	22.47
WTR YR 1979	TOTAL	1742540	MEAN	4774	MAX	35900	MIN	468	CFSM	2.58	IN	35.00

OBION RIVER BASIN

07026000 OBION RIVER AT OBION, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1975 to current year.

WATER TEMPERATURE: June 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1975.

REMARKS.--Interruptions in the water temperature and specific conductance records were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 488 micromhos Dec. 14, 1976; minimum, 35 micromhos July 21, 22, 1975.

WATER TEMPERATURES: Maximum, 33.5°C June 18, 1978; minimum, -0.5°C several days in Jan. and Feb., 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--A water temperature of 90°F (32°C) was observed Aug. 21, 1952; a water temperature of 37°F (3°C) was observed Mar. 25, 1955, and Feb. 11, 1958.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 196 micromhos Sept. 13; minimum, 41 micromhos Apr. 9.

WATER TEMPERATURE: Maximum, 30.0°C Aug. 7, 8, 9; minimum, -0.5°C several days in January and February.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 24...	1030	468	65	6.4	13.0	21	9.4	--	--	20	0	4.9
NOV 16...	1030	560	80	6.3	11.0	30	9.6	K1500	1000	21	0	5.1
DEC 14...	1200	17500	37	5.6	3.0	95	11.1	K1200	3000	11	0	2.4
JAN 18...	1030	3320	92	5.8	2.0	75	11.9	3200	21000	22	5	5.3
FEB 14...	1000	3240	92	6.0	2.5	70	12.1	640	13000	25	10	6.4
MAR 21...	1000	3620	80	5.9	14.0	350	8.2	23000	47000	25	6	6.4
APR 12...	1230	14000	50	5.6	17.0	250	6.8	12000	50000	14	1	3.5
MAY 16...	1100	1500	87	6.5	20.0	60	7.6	1100	730	31	5	7.8
JUN 14...	1030	794	100	6.7	24.0	25	7.8	140	K46	32	0	8.1
JUL 12...	1130	3360	53	--	23.0	150	6.5	2100	11000	16	3	4.2
AUG 16...	0930	1050	78	--	20.5	50	6.1	K700	380	22	3	5.4
SEP 14...	0915	2800	75	6.8	19.5	200	6.1	K81000	K16000	20	4	4.9

K--Results based on colony count outside acceptable range (non-ideal colony count)

OBION RIVER BASIN

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07026000 OBION RIVER AT OBION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
OCT 24...	2.0	5.8	36	.6	1.2	21	2.7	3.7	.0	13	52	46
NOV 16...	2.0	6.6	39	.6	1.5	22	3.5	4.7	.1	12	52	49
DEC 14...	1.1	2.0	24	.3	2.3	11	6.6	2.0	.1	4.4	46	28
JAN 18...	2.2	5.0	30	.5	2.3	17	10	5.7	.0	8.4	62	49
FEB 14...	2.3	5.3	29	.5	2.0	15	11	6.5	.1	7.8	61	50
MAR 21...	2.2	4.1	24	.4	2.3	19	6.2	3.6	.1	7.0	64	43
APR 12...	1.2	2.1	22	.2	1.8	13	5.7	2.3	.1	3.6	42	28
MAY 16...	2.7	4.9	25	.4	1.6	26	6.3	4.4	.1	9.6	54	53
JUN 14...	2.9	8.0	34	.6	1.2	36	3.8	4.8	.1	12	--	63
JUL 12...	1.3	3.1	28	.3	1.4	13	5.7	2.8	.1	8.0	42	35
AUG 16...	2.0	5.0	31	.5	1.7	19	11	1.5	.1	11	--	49
SEP 14...	1.8	4.6	31	.5	2.3	16	3.6	3.6	.1	8.1	52	40

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 24...	.07	65.7	.45	--	.02	.22	.24	.01	.69	.120	.030	1.6
NOV 16...	.07	78.6	.52	--	.16	--	--	1.3	--	.160	.050	--
DEC 14...	.06	2170	.29	--	.11	--	--	2.0	--	.250	.050	5.8
JAN 18...	.08	556	.94	--	.33	--	--	3.4	--	.280	.060	--
FEB 14...	.08	534	.90	--	.28	.82	1.1	.89	2.0	.240	.050	5.9
MAR 21...	.09	626	.70	--	.29	1.8	2.1	1.6	2.8	.700	.040	15
APR 12...	.06	1590	.42	--	.22	2.5	2.7	1.2	3.1	.960	.030	--
MAY 16...	.07	219	.66	--	.06	.48	.54	.25	1.2	.190	.030	9.8
JUN 14...	.07	135	.53	--	.08	.34	.42	.13	.95	.100	.060	5.2
JUL 12...	.06	381	.33	--	.12	1.3	1.4	1.1	1.7	.510	.020	--
AUG 16...	.04	139	.40	--	.10	--	--	.89	--	.170	.040	12
SEP 14...	.07	393	.44	.36	.34	.86	1.2	.75	1.6	.540	.020	11

OBION RIVER BASIN

07026000 OBION RIVER AT OBION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	BIOMASS CHLORO- PHYLL RATIO PERI- PHYTON (UNITS)	PERI- PHYTON BIOMASS TOTAL ASH WEIGHT G/SQ M	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	LENGTH OF EXPO- SURE (DAYS)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 24...	--	--	--	--	--	--	--	--	--	64	81	96
NOV 16...	2.2	--	2500	--	75.8	79.7	23	15.6	3.63	207	313	84
DEC 14...	--	--	--	--	--	--	--	--	--	469	22200	54
JAN 18...	4.8	.8	--	--	.000	.000	34	.040	.000	311	2790	84
FEB 14...	--	--	--	--	--	--	--	--	--	503	4400	93
MAR 21...	--	--	9200	--	.870	.950	35	.220	.000	10	100	95
APR 12...	--	--	--	--	.000	.000	22	.000	.000	4690	177000	70
MAY 16...	--	--	3500	--	--	--	--	--	--	380	1540	46
JUN 14...	--	--	4600	--	--	--	--	--	--	104	223	60
JUL 12...	4.6	3.7	77	5071	3.62	4.33	28	.140	.000	1130	10300	89
AUG 16...	--	--	7000	--	--	--	--	--	--	136	386	83
SEP 14...	--	--	1100	--	--	--	--	--	--	1760	13300	87

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
NOV 16...	1	0	0	0	3	2	10	0	2
JAN 18...	5	0	100	0	0	0	10	0	2
APR 12...	1	0	400	0	0	4	40	<10	14
JUL 12...	1	1	200	30	0	1	30	10	26

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
NOV 16...	1	3	1	2800	190	7	5	300	220
JAN 18...	3	16	1	7000	80	8	5	340	180
APR 12...	0	32	4	46000	150	13	8	1800	50
JUL 12...	1	9	2	18000	290	12	1	900	80

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 16...	<.5	<.5	0	0	0	0	20	10
JAN 18...	<.5	<.5	0	0	0	0	30	0
APR 12...	<.5	<.5	0	0	0	0	10	0
JUL 12...	<.5	<.5	0	0	0	0	90	8

07026000 OBION RIVER AT OBION, TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 16,78 1030	MAK 21,79 1000	MAY 16,79 1100	JUN 14,79 1030
TOTAL CELLS/ML	2500	9200	3500	4600
DIVERSITY: DIVISION	1.5	1.3	1.6	1.5
..CLASS	1.5	1.3	1.6	1.5
...ORDER	2.3	2.0	2.4	1.9
....FAMILY	2.7	2.3	3.2	2.5
.....GENUS	3.1	2.4	0.0	3.2

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
....CHARACIACEAE								
.....SCHROEDERIA	14	1	--	--	58	2	120	3
....COELASTRACEAE								
.....COELASTRUM	--	--	--	--	350	10	140	3
....MICRACINIACEAE								
.....GOLENKINIA	55	2	--	--	--	--	--	--
.....MICRACINIUM	--	--	--	--	58	2	--	--
....ODCYSTACEAE								
.....ANKISTRODESMUS	28	1	*	0	140	4	280	6
.....CHODATELLA	--	--	--	--	86	2	--	--
.....CLOSTERIOPSIS	--	--	--	--	*	0	--	--
.....DICTYOSPHAERIUM	--	--	--	--	120	3	190	4
.....KIRCHNEKIELLA	--	--	420	5	--	--	--	--
....ODCYSTIS	--	--	--	--	--	--	--	--
.....POLYEDRIOPSIS	--	--	--	--	*	0	--	--
.....TETRAEDRON	--	--	--	--	--	--	*	0
.....TREUBARIA	--	--	--	--	--	--	*	0
.....WESTELLA	--	--	--	--	--	--	140	3
....SCENEDESMACEAE								
.....CRUCIGENIA	55	2	--	--	--	--	--	--
.....SCENEDESMUS	110	4	650	7	500	15	560	12
....TETRASPOALES								
...COCCOMYXACEAE								
....ELAKATOTHRIX	--	--	--	--	29	1	--	--
...VOLVOCALES								
....CHLAMYDOMONADACEAE	--	--	--	--	*	0	--	--
....CHLAMYDOMONAS	--	--	--	--	--	--	280	6
...VOLVOCAEAL								
....PANDORINA	--	--	--	--	230	7	--	--
...ZYGNEMATALES								
....DESMIDIACEAE								
.....CLOSTERIUM	--	--	--	--	--	--	--	--
.....COSMARIUM	--	--	--	--	--	--	--	--
....SPONDYLUSIUM	110	4	--	--	--	--	--	--
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
....COSCINODISCAEAE								
.....CYCLOTELLA	14	1	110	1	*	0	140	3
.....MELOSIHA	42	2	62	1	130	4	70	2
...PENNALES								
....CYMBELLACEAE								
.....CYMBELLA	28	1	--	--	--	--	--	--
....FRAGILARIACEAE								
.....FRAGILARIA	--	--	1600#	18	--	--	*	0
.....SYNEDRA	28	1	*	0	*	0	--	--
....NAVICULACEAE								
.....NAVICULA	42	2	*	0	--	--	*	0
....PINNULARIA	55	2	--	--	--	--	--	--
....PLEUROSIGMA	--	--	--	--	--	--	--	--
....NITZSCHIACEAE								
.....NITZSCHIA	360	14	520	6	170	5	300	7
....SURIARELLACEAE								
.....SURIARELLA	14	1	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
.....AGMENELLUM	220	9	--	--	120	3	560	12
.....ANACYSTIS	420#	16	3900#	42	690#	20	1600#	35
....HORMOGONALES								
.....NOSTOCACEAE								
.....APHANIZOMENON	--	--	--	--	--	--	--	--
....OSCILLATORIACEAE								
.....LYNGBYA	--	--	*	0	--	--	--	--
....OSCILLATORIA	870#	35	1800#	19	580#	17	--	--

NOTE: * - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

OBION RIVER BASIN

07026000 OBION RIVER AT OBION, TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	NOV 16,78 1030		MAR 21,79 1000		MAY 16,79 1100		JUN 14,79 1030	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)								
•EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	42	2	--	-	43	1	87	2
....PHACUS	--	-	--	-	29	1	*	0
....TRACHELOMONAS	--	-	--	-	72	2	*	0
PYRRHOPHYTA (FIRE ALGAE)								
•DINOPHYCEAE								
..PERIDINIALES								
...PERIDINIACEAE								
....PERIDINIUM	14	1	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07026000 OBION RIVER AT OBION, TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 12.79 1130	AUG 16.79 0930	SEP 14.79 0915			
TOTAL CELLS/ML	77	7000	1100			
DIVERSITY: DIVISION	0.0	0.8	1.1			
..CLASS	0.0	0.8	1.1			
...ORDER	0.0	1.7	1.4			
...FAMILY	0.0	1.9	1.7			
....GENUS	0.0	2.5	1.8			
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....CHAKACIACEAE						
....SCHROEDERIA	77#100		--	-	--	-
....COELASTHACEAE						
....COELASTRUM	--	-	--	-	--	-
....MICRACTINIACEAE						
....GOLENKINIA	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	--	-
....OOCYSTACEAE						
....ANKISTRODESUS	--	-	*	0	--	-
....CHUDATFLLA	--	-	--	-	--	-
....CLOSTERIOPSIS	--	-	--	-	--	-
....DICTYOSPHAERIUM	--	-	430	6	--	-
....KIRCHNERIELLA	--	-	43	1	--	-
....OOCYSTIS	--	-	110	2	--	-
....POLYEDRIOPSIS	--	-	*	0	--	-
....TETRAEDRON	--	-	--	-	--	-
....TREUBAKIA	--	-	--	-	--	-
....WESTELLA	--	-	--	-	--	-
...SCENEDESMACEAE						
....CRUCIGENIA	--	-	200	3	--	-
....SCENEDESMUS	--	-	440	6	20	2
..TETRASPORALES						
...COCCOMYXACEAE						
....ELAKATOTHIK	--	-	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	--	-	--	-
...VOLVOCAEAE						
....PANDORINA	--	-	--	-	--	-
..ZYGNEATALES						
...DESMIDIACEAE						
....CLOSTERIUM	--	-	--	-	*	0
....COSMAKIUM	--	-	43	1	*	0
....SPONDYLIUM	--	-	--	-	--	-
CHRYSTOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
....COSCINODISCACEAE						
....CYCLOTELLA	--	-	--	-	--	-
....MELOSIHA	--	-	--	-	60	6
...PENNALES						
....CYMBELLACEAE						
....CYMBELLA	--	-	--	-	--	-
...FRAGILARIACEAE						
....FRAGILARIA	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	*	0
...NAVICULACEAE						
....NAVICULA	--	-	--	-	200#	18
....PINNULARIA	--	-	--	-	--	-
....PLEUROSIGMA	--	-	--	-	*	0
...NITZSCHACEAE						
....NITZSCHIA	--	-	43	1	150	13
...SURIPELLACEAE						
....SURIPELLA	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
....AGMENELLUM	--	-	920	13	--	-
....ANACYSTIS	--	-	1900#	27	--	-
...HORMOGONALES						
...NOSTOCACEAE						
....APHANIZOMENON	--	-	103	1	--	-
...OSCILLATORIACEAE						
....LYNGBYA	--	-	--	-	--	-
....OSCILLATORIA	--	-	2700#	38	650#	59

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

OBION RIVER BASIN

07026000 OBION RIVER AT OBION, TN--Continued
 PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	JUL 12,79 1130		AUG 16,79 0930		SEP 14,79 0915	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
....EUGLENACEAE						
.....EUGLENA	--	-	*	0	--	-
.....PHACUS	--	-	*	0	--	-
.....TRACHELOMONAS	--	-	*	0	--	-
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
....PERIDINIACEAE						
.....PERIDINIUM	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

OBION RIVER BASIN

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07026000 OBION RIVER AT OBION, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	75	72	73	89	84	87	---	---	---	86	71	76
2	70	63	66	87	84	86	---	---	---	70	69	69
3	69	63	66	86	83	84	---	54	---	70	68	68
4	70	66	68	84	81	83	59	56	57	71	70	71
5	68	65	66	81	78	80	62	60	61	71	69	70
6	65	63	64	77	74	75	64	63	63	72	69	70
7	66	63	64	77	73	75	69	59	64	77	72	75
8	65	62	63	79	76	77	59	49	54	85	77	81
9	62	55	59	77	74	75	51	50	51	91	84	88
10	57	55	56	76	71	74	52	51	51	98	92	96
11	61	55	59	74	71	72	52	51	52	99	95	97
12	60	56	58	76	70	73	56	53	54	102	98	100
13	93	89	91	75	68	71	56	54	55	116	101	107
14	94	89	92	69	65	67	61	56	58	119	86	98
15	92	86	88	72	64	69	63	60	62	89	79	85
16	86	84	85	72	70	72	66	63	64	93	88	91
17	86	84	85	104	69	82	70	65	68	105	92	98
18	89	84	88	95	66	77	76	69	73	106	89	95
19	79	77	78	100	84	91	83	76	80	112	90	97
20	83	79	81	---	---	---	91	83	85	90	74	82
21	85	83	84	---	---	---	88	80	85	77	65	74
22	89	83	87	---	---	---	82	80	81	71	69	70
23	86	84	85	---	---	---	85	81	83	82	67	73
24	91	90	78	---	---	---	84	82	83	64	60	61
25	95	90	93	---	---	---	84	82	83	63	60	61
26	116	91	97	---	---	---	86	84	85	67	63	65
27	110	91	97	---	---	---	89	85	87	78	67	71
28	93	90	91	---	---	---	92	88	90	82	77	80
29	92	88	90	---	---	---	93	90	92	80	77	78
30	87	85	86	---	---	---	94	91	93	85	80	83
31	86	84	85	---	---	---	112	91	102	87	84	86
MONTH	116	55	78	104	64	77	112	49	72	119	60	81
FEBRUARY			MARCH			APRIL			MAY			
1	87	85	86	73	60	63	170	70	131	95	93	94
2	93	87	90	65	61	63	66	53	55	100	95	98
3	99	92	95	82	51	63	56	53	55	100	47	69
4	109	98	104	56	52	55	53	46	50	57	47	50
5	98	90	93	60	56	57	50	45	48	52	47	50
6	93	91	92	63	60	62	50	48	49	48	45	46
7	93	91	92	68	62	65	54	49	51	53	47	50
8	93	91	92	74	68	71	62	54	57	54	51	52
9	95	91	93	80	74	78	59	41	46	60	54	57
10	96	95	96	94	74	84	45	42	44	66	60	63
11	100	96	98	72	69	71	53	44	46	74	66	70
12	104	97	100	76	71	74	58	48	50	79	65	74
13	118	98	108	80	76	78	49	47	48	74	64	69
14	97	85	92	83	81	82	51	47	49	83	74	79
15	87	73	82	84	83	83	53	50	52	86	83	85
16	84	81	82	87	83	85	56	52	54	88	86	87
17	84	82	83	90	86	88	63	56	60	92	88	90
18	88	84	86	91	89	90	100	63	78	96	91	93
19	95	88	92	91	87	88	109	99	104	---	---	---
20	103	94	100	104	82	90	104	97	103	---	---	---
21	117	83	93	85	73	78	108	93	101	---	---	---
22	88	65	82	85	75	81	109	91	106	---	---	---
23	68	51	57	101	77	83	110	90	101	---	---	---
24	54	52	53	84	78	82	122	112	118	---	---	---
25	64	49	53	87	82	85	121	110	115	---	---	---
26	54	51	52	98	86	91	122	101	112	---	---	---
27	56	53	55	111	97	104	103	91	96	---	---	---
28	70	56	59	126	111	118	97	91	94	---	---	---
29	---	---	---	144	126	135	95	92	94	---	---	---
30	---	---	---	166	143	153	95	92	94	---	---	---
31	---	---	---	174	166	171	---	---	---	---	---	---
MONTH	118	49	84	174	51	86	170	41	75	100	45	71

OBION RIVER BASIN

07026000 OBION RIVER AT OBION, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	89	86	87	---	---	---	51	48	49
2	---	---	---	---	---	---	---	---	---	54	49	51
3	---	---	---	---	---	---	---	---	---	60	54	56
4	---	---	---	73	67	71	---	---	---	71	59	64
5	---	---	---	76	73	75	---	---	---	79	64	69
6	---	---	---	80	74	77	---	---	---	86	69	78
7	---	---	---	84	80	82	---	---	---	93	75	82
8	---	---	---	---	---	---	---	---	---	83	70	76
9	---	---	---	---	---	---	---	---	---	88	69	77
10	---	---	---	---	---	---	---	---	---	106	72	85
11	---	---	---	---	---	---	---	---	---	148	93	127
12	---	---	---	58	49	54	---	---	---	147	105	133
13	---	---	---	56	51	54	---	---	---	196	113	166
14	---	---	---	59	54	56	---	---	---	189	105	164
15	---	---	---	58	54	56	---	---	---	---	---	---
16	---	---	---	84	56	72	---	---	---	---	---	---
17	---	---	---	75	62	68	---	---	---	---	---	---
18	---	---	---	103	74	85	---	---	---	---	---	---
19	---	---	---	120	104	112	---	---	---	---	---	---
20	---	---	---	165	120	136	---	---	---	---	---	---
21	---	---	---	183	92	129	79	72	75	---	---	---
22	---	---	---	151	69	102	89	60	74	---	---	---
23	---	---	---	86	71	76	64	58	61	---	---	---
24	---	---	---	82	74	78	76	65	70	---	---	---
25	---	---	---	98	77	82	78	45	57	---	---	---
26	---	---	---	158	83	128	---	---	---	---	---	---
27	89	86	87	134	54	101	---	---	---	57	52	56
28	89	85	88	---	---	---	---	---	---	64	56	60
29	90	87	89	---	---	---	64	53	61	71	58	66
30	91	87	89	---	---	---	71	65	68	76	65	72
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	91	85	88	183	49	85	89	45	67	196	48	85

OBION RIVER BASIN

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07026000 OBION RIVER AT OBION, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	20.5	18.5	19.5	15.5	14.0	15.0	9.0	8.0	8.5	9.0	4.0	7.5
2	20.0	18.5	19.5	15.5	14.0	15.0	10.0	8.5	9.0	4.0	1.0	2.5
3	20.0	18.5	19.0	15.5	14.0	15.0	14.0	10.0	12.0	1.0	.5	.5
4	19.0	16.0	18.0	15.5	13.5	14.5	13.5	9.0	11.0	.5	.0	.5
5	19.0	17.0	18.5	15.0	13.5	14.5	8.5	7.0	7.5	.5	.5	.5
6	18.5	16.0	17.0	15.0	13.5	14.0	7.0	7.0	7.0	.5	.0	.5
7	16.5	14.5	15.5	14.0	11.5	12.5	10.0	7.0	8.0	.5	.5	.5
8	15.5	13.0	14.5	11.5	10.0	11.0	10.5	4.0	7.0	.5	-0.5	.0
9	15.5	14.0	15.0	11.5	9.5	10.5	4.0	3.0	3.5	.0	-0.5	-0.5
10	16.0	14.5	15.5	12.0	10.0	11.0	3.0	2.5	2.5	.5	-0.5	.0
11	17.0	16.0	16.5	14.0	11.0	12.5	2.5	2.5	2.5	1.0	-0.5	.0
12	20.5	17.0	17.5	14.5	13.5	14.0	3.0	2.5	3.0	3.0	.5	1.5
13	21.5	17.5	19.5	16.0	14.0	15.0	3.5	3.0	3.0	4.0	2.5	3.5
14	17.0	15.5	16.5	16.0	13.5	15.0	3.5	3.0	3.0	2.0	.0	.5
15	16.5	14.5	15.5	13.5	12.0	12.5	3.0	3.0	3.0	.0	-0.5	-0.5
16	16.0	14.5	15.5	12.5	11.5	12.0	4.0	3.0	3.5	1.5	.0	1.0
17	16.0	13.5	15.0	13.5	12.5	13.5	4.0	4.0	4.0	3.0	1.5	2.5
18	16.0	14.0	15.0	13.0	12.0	12.5	4.5	4.0	4.0	2.5	1.5	2.0
19	15.0	13.0	14.0	12.0	11.0	11.5	6.5	4.5	5.5	2.5	2.0	2.0
20	15.0	13.0	14.0	11.0	10.0	10.5	10.0	7.0	8.5	5.0	2.5	4.0
21	15.5	13.5	14.5	10.5	10.0	10.5	10.0	9.0	10.0	4.0	2.0	3.0
22	16.5	14.0	15.5	10.5	10.5	10.5	9.0	7.0	7.5	2.0	1.5	1.5
23	16.5	15.0	15.5	11.5	10.5	11.0	6.5	5.5	6.0	1.5	1.5	1.5
24	15.0	13.0	14.0	11.5	11.5	11.5	6.0	5.5	6.0	2.0	.5	1.5
25	14.5	12.5	13.5	11.5	11.0	11.0	5.5	4.5	5.0	.5	.0	.5
26	15.0	13.5	14.5	11.5	9.0	10.5	5.0	4.5	5.0	1.0	.5	.5
27	13.5	11.5	13.0	9.5	8.5	9.0	4.5	3.5	4.0	1.5	1.0	1.0
28	13.5	11.5	12.5	9.5	9.0	9.0	4.0	3.0	3.5	1.5	1.0	1.5
29	13.5	11.5	12.5	9.0	8.5	9.0	5.0	4.0	4.5	1.5	.5	1.0
30	14.5	12.0	13.0	9.0	8.5	9.0	6.5	5.0	5.5	2.0	1.5	1.5
31	15.5	14.0	15.0	---	---	---	9.0	6.5	7.5	2.5	2.0	2.0
MONTH	21.5	11.5	15.5	16.0	8.5	12.0	14.0	2.5	6.0	9.0	-0.5	1.5
FEBRUARY			MARCH			APRIL			MAY			
1	2.0	1.0	1.5	6.5	6.0	6.5	15.5	13.0	14.5	19.5	17.5	19.0
2	2.0	1.0	1.5	7.5	6.5	7.0	14.5	14.5	14.5	19.5	17.0	19.0
3	3.5	2.0	2.5	13.0	8.0	10.0	14.5	13.5	14.0	18.0	16.5	17.0
4	3.5	2.5	3.0	13.0	10.5	12.0	14.5	13.5	14.0	18.0	16.0	17.0
5	3.0	2.0	2.5	10.5	9.0	9.5	14.0	13.0	13.5	17.0	15.0	15.5
6	2.5	1.5	2.5	10.0	9.0	9.5	14.0	13.0	13.5	17.0	16.0	16.5
7	2.0	.5	1.5	10.5	10.0	10.0	14.5	13.0	13.5	19.5	16.5	17.5
8	1.5	.5	1.0	10.5	9.5	10.0	15.0	14.5	15.0	22.0	20.0	20.5
9	.5	-0.5	.0	10.0	8.5	9.0	15.0	12.0	13.5	22.5	22.0	22.0
10	1.5	-0.5	.5	10.0	9.0	9.5	12.5	11.5	12.0	24.0	22.0	23.5
11	3.0	.5	1.5	9.0	7.5	8.0	16.0	12.5	14.0	24.0	22.5	23.5
12	4.0	2.5	3.5	10.5	8.0	9.0	18.5	16.5	17.5	22.5	16.0	17.5
13	3.5	2.0	2.5	12.5	10.0	11.0	18.5	18.0	18.5	18.5	15.5	17.0
14	2.5	2.0	2.5	12.5	11.5	12.0	18.0	17.0	17.0	20.0	18.0	19.0
15	4.5	2.0	3.0	12.5	10.5	11.0	19.0	18.0	18.5	21.0	20.0	20.5
16	5.0	4.0	4.5	11.5	10.0	11.0	19.0	18.5	18.5	21.5	20.5	21.0
17	4.0	2.0	3.0	13.0	11.0	12.0	18.5	18.0	18.5	22.5	20.0	21.5
18	2.5	1.5	2.0	15.5	13.0	14.0	19.0	18.5	19.0	23.0	20.5	22.0
19	3.5	1.5	2.5	15.5	15.0	15.5	19.5	19.0	19.0	---	---	---
20	3.5	2.5	3.0	15.5	15.0	15.0	20.5	19.0	19.5	---	---	---
21	4.0	2.5	3.0	16.0	15.0	15.5	20.5	19.0	20.0	---	---	---
22	9.5	4.0	6.0	16.0	15.5	16.0	19.5	18.5	19.0	---	---	---
23	12.5	9.5	11.0	16.5	14.0	14.5	19.0	17.5	18.0	---	---	---
24	12.5	10.0	11.0	14.0	11.0	13.0	18.0	17.0	17.5	---	---	---
25	10.0	5.0	6.5	11.0	8.0	9.5	19.0	18.0	18.5	---	---	---
26	5.0	3.5	4.0	9.0	7.5	8.0	19.0	16.5	18.0	---	---	---
27	5.0	4.0	4.0	10.5	9.0	10.0	16.5	15.5	16.0	---	---	---
28	6.0	5.0	5.0	13.0	11.0	12.0	16.5	15.5	16.0	---	---	---
29	---	---	---	15.0	13.0	14.0	17.0	15.5	16.5	---	---	---
30	---	---	---	16.0	15.0	15.5	18.5	16.5	17.5	---	---	---
31	---	---	---	16.0	15.5	16.0	---	---	---	---	---	---
MONTH	12.5	-0.5	3.5	16.5	6.0	11.5	20.5	11.5	16.5	24.0	15.0	19.5

OBION RIVER BASIN

07026000 OBION RIVER AT OBION, TN--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	26.5	24.5	25.5	28.5	26.0	26.5	24.0	23.5	23.5
2	---	---	---	26.0	22.0	24.0	26.5	24.5	26.0	25.0	23.0	24.0
3	---	---	---	26.5	23.0	24.5	26.5	25.0	26.0	25.5	24.0	25.0
4	---	---	---	27.5	25.0	26.5	27.5	25.0	26.0	26.0	24.5	25.5
5	---	---	---	28.0	26.0	27.0	29.0	25.5	27.0	26.0	25.0	25.5
6	---	---	---	26.5	24.5	25.5	29.5	26.0	28.0	25.5	24.0	25.0
7	---	---	---	24.5	23.5	24.0	30.0	27.0	29.0	25.0	24.0	24.5
8	---	---	---	24.5	22.0	23.5	30.0	27.0	29.0	24.5	23.0	23.0
9	---	---	---	23.5	22.0	23.0	30.0	27.0	28.5	22.5	21.0	21.5
10	---	---	---	23.5	22.0	23.0	29.0	26.5	28.0	22.5	21.0	21.5
11	---	---	---	24.0	23.0	23.5	28.0	21.5	23.5	22.5	21.5	22.0
12	---	---	---	24.0	22.5	23.0	23.5	21.5	22.5	22.5	22.0	22.0
13	---	---	---	24.5	22.0	23.5	23.5	23.0	23.0	22.5	21.0	22.0
14	---	---	---	26.0	24.0	25.0	24.0	23.0	23.5	---	---	---
15	---	---	---	26.5	25.5	26.0	24.0	22.5	23.0	---	---	---
16	---	---	---	27.5	25.5	26.5	22.5	20.5	21.5	---	---	---
17	---	---	---	27.5	26.0	27.0	24.0	23.0	23.5	---	---	---
18	---	---	---	27.0	25.5	26.0	26.0	23.5	25.0	---	---	---
19	---	---	---	26.5	25.5	26.0	28.5	26.0	27.0	---	---	---
20	---	---	---	26.0	25.5	26.0	29.0	27.0	28.0	---	---	---
21	---	---	---	26.0	24.0	25.0	28.5	27.0	27.5	---	---	---
22	26.5	25.0	26.0	26.5	24.0	25.0	27.0	25.0	26.0	---	---	---
23	27.0	24.5	25.5	26.5	25.5	26.0	26.5	24.5	25.5	---	---	---
24	26.0	22.0	23.5	26.5	25.5	26.0	26.0	24.0	25.0	---	---	---
25	24.0	20.0	22.0	26.0	25.0	26.0	24.0	23.0	23.5	---	---	---
26	24.5	22.0	23.5	26.0	25.0	25.5	24.0	23.5	23.5	---	---	---
27	25.5	23.0	24.5	24.5	23.5	24.0	25.0	23.5	24.0	21.0	20.0	20.5
28	26.5	24.0	25.0	25.5	23.5	24.0	24.5	24.0	24.0	22.0	20.0	21.0
29	27.0	24.0	25.5	26.0	24.0	25.5	25.5	23.5	24.0	23.0	20.0	21.5
30	27.0	24.5	26.0	28.5	26.0	27.0	25.5	24.5	25.5	23.5	21.0	22.5
31	---	---	---	28.5	26.5	28.0	25.0	23.5	24.0	---	---	---
MONTH	27.0	20.0	24.5	28.5	22.0	25.0	30.0	20.5	25.5	26.0	20.0	23.0

OBION RIVER BASIN

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07027000 REELFOOT LAKE NEAR TIPTONVILLE, TN

LOCATION.--Lat 36°21'09", long 89°25'07", Lake County, Hydrologic Unit 08010202, at Middle Landing in Reelfoot Lake State Park, 0.4 mi (0.6 km) east of Blue Bank, 0.8 mi (1.3 km) west of the spillway and 3.3 mi (5.3 km) south-east of Tiptonville.

DRAINAGE AREA.--240 mi² (622 km²).

PERIOD OF RECORD.--December 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 270.22 ft (82.363 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Lake frozen over several days in January and February.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 15.65 ft (4.770 m), from recorded range in stage, about Apr. 26, 1973; minimum, 10.95 ft (3.338 m) from recorded range in stage, about Mar. 20, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1937 reached a stage of about 17.0 ft (5.18 m), at spillway, present datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 14.42 ft (4.395 m) Apr. 4; minimum, 11.16 ft, (3.402 m) Oct. 25.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.48	11.31	12.40	12.43	12.67	13.53	13.42	12.33	12.04	11.55	11.57	11.68
2	11.45	11.30	12.41	12.38	12.67	13.45	14.20	12.23	12.02	11.62	11.57	11.67
3	11.44	11.30	12.91	12.38	12.67	13.44	14.34	12.49	11.96	11.63	11.55	11.67
4	11.44	11.28	13.23	12.38	12.67	13.55	14.38	12.86	11.91	11.68	11.55	11.67
5	11.41	11.28	13.36	12.38	12.67	13.53	14.25	13.00	11.88	11.69	11.53	11.64
6	11.40	11.35	13.38	12.38	12.67	13.43	14.23	13.03	11.90	11.66	11.51	11.62
7	11.38	11.32	13.65	12.37	12.66	13.37	14.06	13.00	11.86	11.64	11.50	11.63
8	11.36	11.30	14.31	12.37	12.64	13.24	14.16	12.93	11.88	11.63	11.48	11.60
9	11.34	11.28	14.38	12.37	12.64	13.22	14.09	12.86	11.88	11.64	11.45	11.55
10	11.33	11.26	14.37	12.37	12.64	13.10	13.96	12.77	11.87	11.63	11.47	11.52
11	11.32	11.27	14.26	12.37	12.64	12.90	13.89	12.75	11.84	11.66	11.59	11.51
12	11.31	11.27	14.11	12.37	12.64	12.82	14.00	12.65	11.81	11.65	11.64	11.51
13	11.37	11.23	14.03	12.34	12.64	12.70	13.97	12.56	11.79	11.63	11.70	11.64
14	11.33	11.37	13.86	12.34	12.12	12.72	13.84	12.45	11.75	11.61	11.75	11.60
15	11.29	11.43	13.74	12.34	12.11	12.50	13.74	12.35	11.73	11.61	11.78	11.57
16	11.31	11.45	13.63	12.33	12.15	12.38	13.63	12.24	11.70	11.62	11.78	11.57
17	11.28	11.54	13.48	11.99	12.15	12.26	13.49	12.13	11.68	11.62	11.75	11.53
18	11.25	11.61	13.31	12.03	12.15	12.13	13.35	12.07	11.65	11.58	11.73	11.53
19	11.26	11.68	13.13	12.17	12.15	12.18	13.21	12.08	11.63	11.56	11.72	11.53
20	11.25	11.69	13.12	12.34	12.10	12.28	13.07	12.24	11.61	11.52	11.71	11.73
21	11.23	11.69	12.97	12.44	12.11	12.28	12.97	12.22	11.61	11.50	11.68	11.98
22	11.23	11.70	12.86	12.46	12.22	12.25	12.88	12.18	11.59	11.48	11.68	12.06
23	11.25	11.74	12.70	12.56	12.75	12.47	12.94	12.23	11.67	11.47	11.68	12.18
24	11.21	11.76	12.62	12.59	13.17	12.67	12.91	12.19	11.68	11.47	11.70	12.25
25	11.22	11.75	12.49	12.69	13.47	12.72	12.86	12.18	11.67	11.46	11.73	12.29
26	11.35	12.06	12.40	12.70	13.52	12.75	12.84	12.09	11.63	11.54	11.72	12.31
27	11.34	12.22	12.34	12.67	13.50	12.71	12.74	12.13	11.60	11.56	11.72	12.31
28	11.34	12.35	12.27	12.67	13.50	12.61	12.63	12.13	11.59	11.61	11.71	12.29
29	11.34	12.40	12.21	12.67	---	12.62	12.52	12.09	11.60	11.62	11.71	12.29
30	11.32	12.43	12.26	12.67	---	12.63	12.46	12.11	11.57	11.60	11.71	12.29
31	11.32	---	12.32	12.67	---	12.67	---	12.06	---	11.59	11.70	---
TOTAL	351.15	347.62	408.51	385.22	353.69	397.11	405.03	384.63	352.60	359.33	361.07	354.22
MEAN	11.33	11.59	13.18	12.43	12.63	12.81	13.50	12.41	11.75	11.59	11.65	11.81
MAX	11.48	12.43	14.38	12.70	13.52	13.55	14.38	13.03	12.04	11.69	11.78	12.31

WTR YR 1979 TOTAL 4460.18 MEAN 12.22 MAX 14.38

HATCHIE RIVER BASIN

07029500 HATCHIE RIVER AT BOLIVAR, TN
(National stream-quality accounting network station)

LOCATION.--Lat 35°16'31", long 88°58'36", Hardeman County, Hydrologic Unit 08010208, on left bank on upstream end of bridge pier on State Highway 18, 250 ft (76 m) upstream from Illinois Central Gulf Railroad bridge, 0.6 mi (1.0 km) downstream from Spring Creek, and 1.5 mi (2.4 km) northeast of Bolivar and at mile 135.1 (217.4 km).

DRAINAGE AREA.--1,480 mi² (3,833 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1929 to current year.

GAGE.--Water-stage recorder. Datum of gage is 323.49 ft (98.600 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--50 years, 2,402 ft³/s (68.02 m³/s), 22.04 in/yr (560 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,600 ft³/s (1,740 m³/s) Mar. 18, 1973, gage height, 21.66 ft (6.602 m), from rating curve extended above 34,000 ft³/s (963 m³/s); minimum, 78 ft³/s (2.21 m³/s) Sept. 2, 1943.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,500 ft³/s (241 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)	Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)
Dec. 10	0500	15300 433	16.56 5.048	Apr. 5	1200	*27200 770	18.17 5.538
Jan. 5	1300	15600 442	16.60 5.060	Apr. 15	1800	20400 578	17.29 5.270
Jan. 25	2300	12900 365	16.06 4.895	May 7	1600	13900 394	16.45 5.014
Mar. 7	0500	9150 259	15.42 4.700	Sept.21	1700	9600 272	15.68 4.779

Minimum discharge, 208 ft³/s (5.89 m³/s) Oct. 8, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	238	272	797	6070	5960	8080	5940	3360	2020	1220	2390	1010
2	238	274	724	8800	5380	7750	9710	2720	2200	1060	1790	1570
3	236	277	1040	9260	4890	8130	11800	3290	4860	1010	1340	2070
4	237	276	5240	12500	4040	9410	18300	9110	4920	907	1360	2880
5	230	274	6370	15200	3030	9470	24700	8760	4920	802	1470	2750
6	224	278	5910	14300	2450	9480	23300	10200	4480	719	1380	2300
7	218	286	5910	13700	2310	9070	18300	13400	4100	654	1250	1800
8	213	294	7380	13000	2570	8870	14600	13000	3840	657	1080	1200
9	211	298	12200	12500	3070	8310	12700	11100	3610	1070	923	830
10	213	301	14300	12500	3440	7760	11200	9260	3270	1500	833	760
11	219	304	14800	12300	3750	7090	9970	7810	2710	1810	840	740
12	225	303	14400	11300	4110	6410	13100	7440	2070	2230	899	770
13	246	305	13100	10000	4310	5810	13200	6830	1580	2760	923	1010
14	269	309	11200	8830	4300	5270	14000	6120	1220	3180	905	4230
15	284	316	9470	7770	4150	4750	19300	5350	1030	3230	814	5850
16	311	373	8090	6970	3790	4240	17200	4650	940	3040	721	7150
17	312	684	7130	6270	3200	3540	14100	4060	869	3060	665	7640
18	279	1270	6310	5730	2550	2670	11100	3350	804	3100	627	7700
19	258	1540	5610	5390	2100	2110	9050	2520	755	3030	598	7560
20	254	1440	4850	6800	1950	1930	7610	1920	841	2800	587	7220
21	259	1050	3880	7610	2190	2350	6650	1610	927	2390	600	8610
22	258	700	3100	7550	2850	2780	5960	1500	812	1900	634	8730
23	255	664	2900	7360	4120	5020	5550	1940	883	1580	714	8110
24	251	788	2760	9420	5420	6110	5110	3970	1450	1340	895	7490
25	245	946	2530	12300	6850	6010	4770	3980	1810	1190	1000	7120
26	250	904	2210	12200	7190	5590	4530	3780	2310	1220	1110	7070
27	264	819	1870	10900	7830	5470	4450	3000	2410	1680	1180	7030
28	277	880	1580	9490	8120	5440	4410	2410	2080	2140	1340	6680
29	283	1080	1340	8270	---	5360	4230	2210	1850	2530	1390	6120
30	281	970	1220	7370	---	5180	3920	2180	1540	2730	1230	5540
31	274	---	1670	6630	---	5540	---	2100	---	2730	1070	---
TOTAL	7812	18475	179891	298290	115920	185000	328760	162930	67111	59269	32558	139540
MEAN	252	616	5803	9622	4140	5968	10960	5256	2237	1912	1050	4651
MAX	312	1540	14800	15200	8120	9480	24700	13400	4920	3230	2390	8730
MIN	211	272	724	5390	1950	1930	3920	1500	755	654	587	740
CFSM	.17	.42	3.92	6.50	2.80	4.03	7.41	3.55	1.51	1.29	.71	3.14
IN.	.20	.46	4.52	7.50	2.91	4.65	8.26	4.10	1.69	1.49	.82	3.51

CAL YR 1978 TOTAL 949703 MEAN 2602 MAX 32000 MIN 211 CFSM 1.76 IN 23.87
WTR YR 1979 TOTAL 1595556 MEAN 4371 MAX 24700 MIN 211 CFSM 2.95 IN 40.10

HATCHIE RIVER BASIN

07029500 HATCHIE RIVER AT BOLIVAR, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964, 1968, 1977 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
MAR 23...	0900	4360	90	6.0	15.5	100	6.8	3200	3500	18	7
APR 11...	1100	9970	60	5.4	15.5	50	7.8	130	150	16	1
MAY 08...	0930	13200	39	5.9	21.0	60	5.9	K340	K400	13	1
JUN 06...	1000	4510	56	6.3	21.5	60	5.8	320	790	17	3
13...	1030	1600	80	6.5	24.0	30	5.4	K60	430	26	5
JUL 10...	0930	1470	52	6.4	23.0	100	6.0	4900	K6800	16	4
24...	0930	1360	73	--	25.0	35	5.7	K120	490	22	1
AUG 14...	0930	880	79	--	24.0	40	6.3	K180	640	19	4
23...	1030	699	82	--	24.5	30	6.2	240	580	19	6
SEP 12...	0900	765	81	6.4	22.0	20	6.2	150	210	21	4

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
MAR 23...	5.0	1.3	2.9	24	.3	1.3	11	6.9	3.5	.0	6.8
APR 11...	4.6	1.2	2.2	21	.2	1.3	15	5.5	2.8	.1	6.4
MAY 08...	3.7	.9	2.3	26	.3	1.3	12	5.0	1.7	.1	5.8
JUN 06...	5.0	1.2	2.7	23	.3	1.5	14	6.4	3.9	.1	7.8
13...	7.8	1.7	3.3	20	.3	1.2	21	4.8	3.4	.1	9.7
JUL 10...	4.5	1.1	3.4	30	.4	1.3	12	5.2	3.4	.1	8.1
24...	6.4	1.4	4.8	31	.4	1.4	21	5.8	5.0	.1	9.6
AUG 14...	5.3	1.3	6.0	39	.6	1.4	15	5.1	6.8	.1	9.6
23...	5.3	1.3	5.6	38	.6	1.3	13	3.8	7.0	.1	9.6
SEP 12...	6.2	1.4	5.5	34	.5	1.6	17	5.3	7.1	.1	9.8

K--Results based on colony count outside acceptable range (non-ideal colony count)

HATCHIE RIVER BASIN

07029500 HATCHIE RIVER AT BOLIVAR, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
MAR 23...	48	34	.07	565	.18	--	.14	--	--	1.8
APR 11...	39	33	.05	1050	.14	--	.10	.34	.44	.30
MAY 08...	38	28	.05	1350	.20	--	.08	--	--	1.5
JUN 06...	52	37	.07	633	.26	--	.17	.57	.74	.34
13...	51	45	.07	220	.23	--	.08	.25	.33	.25
JUL 10...	48	35	.07	191	.38	--	.15	--	--	2.4
24...	55	47	.07	202	.31	--	.18	.32	.50	.46
AUG 14...	--	45	.11	107	.34	--	.26	.47	.73	.57
23...	53	42	.07	100	.33	--	.23	.30	.53	.39
SEP 12...	59	49	.08	122	.30	.31	.22	--	--	.91

DATE	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAR 23...	--	.110	.020	7.1	--	--	300	95	1120	89
APR 11...	.58	.080	.010	--	--	--	--	124	3340	24
MAY 08...	--	.140	.030	8.4	--	--	570	219	7810	35
JUN 06...	1.0	.110	.010	5.0	--	--	77	49	597	74
13...	.56	.070	.010	9.2	--	--	--	45	194	68
JUL 10...	--	.240	.020	--	7.2	2.7	1000	217	861	85
24...	.81	.080	.010	7.7	--	--	--	79	290	69
AUG 14...	1.1	.090	.090	5.1	--	--	520	59	140	86
23...	.86	.070	.010	4.1	--	--	--	133	251	41
SEP 12...	--	.070	.010	--	7.1	1.1	100	51	105	65

HATCHIE RIVER BASIN

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07029500 HATCHIE RIVER AT BOLIVAR, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
APR 11...	1	0	0	0	1	1	10	10	1
JUL 10...	1	1	100	30	0	1	50	20	2
AUG 23...	2	2	0	30	0	0	10	10	0
SEP 12...	--	4	--	50	--	2	--	<10	--

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
APR 11...	0	8	2	3400	170	12	10	90	40
JUL 10...	0	13	6	7700	390	6	2	500	230
AUG 23...	2	3	1	2300	140	5	0	390	280
SEP 12...	1	--	3	--	250	--	0	--	410

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
APR 11...	<.5	<.5	0	0	1	0	10	0
JUL 10...	<.5	<.5	0	0	0	0	50	10
AUG 23...	<.5	<.5	0	0	0	0	10	1
SEP 12...	--	<.5	--	0	--	0	--	10

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO SEPTEMBER 1979

DATE TIME	MAR 23,79 0900	MAY 8,79 0930	JUL 10,79 0930	AUG 14,79 0930	SEP 12,79 0900					
TOTAL CELLS/ML	300	570	1000	520	100					
DIVERSITY: DIVISION	1.1	1.6	1.5	1.0	1.0					
..CLASS	1.1	1.6	1.5	1.0	1.0					
...ORDER	1.5	1.9	1.5	1.8	1.0					
...FAMILY	3.1	2.7	1.9	2.0	1.5					
....GENUS	3.1	2.8	1.9	2.4	1.5					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHARACIACEAE										
....SCHROEDERIA	--	-	--	-	--	-	14	3	--	-
...MICRACTINIACEAE										
....MICRACTINIUM	--	-	--	-	--	-	57	11	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	15	5	14	2	--	-	14	3	--	-
....CLOSTERIOPSIS	--	-	14	2	--	-	--	-	--	-
...SCENEDESMACEAE										
....SCENEDESMUS	60#	20	56	10	460#	46	--	-	--	-
...VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	--	-	28	5	--	-	--	-	--	-
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
....COSCINODISCACEAE										
....CYCLOTELLA	30	10	28	5	--	-	--	-	--	-
...PENNALES										
....CYMBELLACEAE										
....CYMBELLA	30	10	--	-	77	8	--	-	--	-
...FRAGILARIACEAE										
....FRAGILARIA	30	10	--	-	--	-	--	-	--	-
....HANNAEA	--	-	14	2	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	--	-	--	-	15	15
...GOMPHONEMACEAE										
....GOMPHONEMA	15	5	28	5	--	-	--	-	--	-
...NAVICULACEAE										
....NAVICULA	45	15	--	-	--	-	--	-	5	5
...NITZSCHIA										
....NITZSCHIA	15	5	14	2	77	8	14	3	20#	20
...SURIRELLACEAE										
....SURIRELLA	45	15	--	-	77	8	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
..CRYPTOPHYCEAE										
...CRYPTOMONADALES										
....CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	14	2	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
....ANACYSTIS	--	-	--	-	310#	31	170#	33	--	-
...HORMOGONALES										
...NOSTOCACEAE										
....ANABAENA	--	-	200#	34	--	-	--	-	--	-
...OSCILLATORIACEAE										
....LYNGBYA	--	-	--	-	--	-	110#	22	--	-
...OSCILLATORIA	--	-	150#	27	--	-	110#	22	--	-
...SCHIZOTHRIX	--	-	--	-	--	-	--	-	60#	60
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
....EUGLENA	--	-	--	-	--	-	14	3	--	-
...TRACHELOMONAS	15	5	14	2	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

LOOSAHATCHIE RIVER BASIN

337

07030240 LOOSAHATCHIE RIVER NEAR ARLINGTON, TN

LOCATION.--Lat 35°18'37", long 89°38'23", Shelby County, Hydrologic Unit 08010209, on left bank 20 ft (6 m) downstream from bridge on U.S. Highways 70 and 79, 1.5 mi (2.4 km) upstream from Beaver Creek, 1.5 mi (2.4 km) northeast of Arlington, and at mile 30.4 (48.9 km).

DRAINAGE AREA.--262 mi² (679 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 250 ft (76 m), from topographic map.

REMARKS.--Records poor. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--10 years, 368 ft³/s (10.42 m³/s), 19.07 in/yr (484 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft³/s (671 m³/s) Mar. 13, 1975, gage height, 24.96 ft (7.608 m); minimum, 66 ft³/s (1.87 m³/s) Apr. 6, 7, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,500 ft³/s (156 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 4	Unknown	Unknown	Unknown	Mar. 4	0915	8080 229	21.27 6.483
Dec. 8	0400	Unknown	Unknown	Apr. 2	2215	12900 365	22.98 7.004
Jan. 1	2400	6290 178	20.26 6.175	Apr. 13	0245	9180 260	21.77 6.635
Jan. 20	2330	6210 176	20.21 6.160	May 4	2045	*14200 402	23.32 7.108
Feb. 24	0430	7840 222	21.16 6.450	June 3	1745	5940 168	20.03 6.105

Minimum discharge, 79 ft³/s (2.24 m³/s) Oct. 1-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	82	98	5600	153	799	1300	133	123	100	97	1060
2	79	82	97	3370	149	347	9420	399	1260	100	97	619
3	79	82	1810	371	170	3580	6270	1580	5500	99	107	115
4	79	82	5870	181	183	6660	2060	8950	1380	98	120	104
5	79	82	3060	169	161	1400	623	8670	194	98	97	101
6	79	82	526	169	158	264	322	965	142	97	96	100
7	79	82	1730	502	241	206	247	294	129	97	96	100
8	79	82	3120	263	257	179	345	213	122	116	96	99
9	79	82	1480	158	230	162	498	182	119	300	95	98
10	79	84	1140	145	181	1120	246	167	115	106	96	98
11	79	84	278	137	202	381	1460	157	112	100	212	98
12	79	85	196	136	904	197	6610	1730	110	337	119	98
13	82	86	176	377	550	170	4830	308	108	124	100	105
14	81	86	165	518	260	157	455	172	107	102	97	203
15	80	87	161	174	221	145	253	150	105	98	96	109
16	80	95	158	150	186	142	198	139	103	97	95	103
17	80	221	155	183	162	140	178	134	102	96	95	103
18	80	120	152	248	159	137	164	131	101	95	95	103
19	80	97	151	712	162	167	157	129	100	95	95	102
20	80	95	335	5340	177	276	153	127	121	96	95	131
21	80	95	916	3860	947	255	149	126	148	103	103	2620
22	80	96	238	733	469	233	149	174	102	97	103	398
23	81	110	172	983	5160	4530	997	1620	140	97	103	119
24	81	105	159	2210	5680	1440	345	1910	1660	97	101	101
25	81	99	151	339	5560	245	263	191	244	100	106	95
26	82	113	144	239	1860	177	471	134	125	104	656	93
27	83	131	139	236	405	177	288	126	110	97	143	92
28	83	105	138	204	380	172	167	126	105	101	181	92
29	82	101	137	169	---	155	146	180	103	103	165	91
30	82	99	182	164	---	169	138	130	101	98	106	90
31	82	---	2250	161	---	796	---	132	---	97	101	---
TOTAL	2488	2932	25484	28201	25327	24978	38902	29579	12991	3545	3964	7440
MEAN	80.3	97.7	822	910	905	806	1297	954	433	114	128	248
MAX	83	221	5870	5600	5680	6660	9420	8950	5500	337	656	2620
MIN	79	82	97	136	149	137	138	126	100	95	95	90
CFSM	.31	.37	3.14	3.47	3.45	3.08	4.95	3.64	1.65	.44	.49	.95
IN.	.35	.42	3.62	4.00	3.60	3.55	5.52	4.20	1.84	.50	.56	1.06

CAL YR 1978 TOTAL 114176 MEAN 313 MAX 6030 MIN 68 CFSM 1.20 IN 16.21
WTR YR 1979 TOTAL 205831 MEAN 564 MAX 9420 MIN 79 CFSM 2.15 IN 29.22

LOOSAHATCHIE RIVER BASIN

07030240 LOOSAHATCHIE RIVER NEAR ARLINGTON, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August to September 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
OCT						
06...	1100	79	50	14.5	--	--
NOV						
09...	0930	83	50	10.5	--	--
JAN						
04...	1550	173	60	4.5	--	--
FEB						
27...	1040	418	55	5.5	--	--
MAR						
29...	1645	152	--	18.0	--	--
MAY						
30...	1505	130	58	20.0	--	--
JUN						
18...	1245	101	60	22.5	--	--
28...	1310	104	53	21.5	--	--
AUG						
01...	1015	97	43	23.0	64	17
30...	0945	107	49	21.5	298	86
SEP						
28...	0830	105	50	17.5	25	7.1

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)
SEP											
28...	0830	.0	2	.00	.00	.0	.0	0	.00	2.1	.00

DATE	TIME	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
SEP											
28...		2.7	.00	4.4	.00	.0	.00	.00	.0	.00	.0

DATE	TIME	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOXA- PHENE, TOTAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)
SEP											
28...		.00	.0	.00	.0	.00	.0	.00	.00	0	0

LOOSAHATCHIE RIVER BASIN

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07030295 LOOSAHATCHIE RIVER TRIBUTARY AT NEW ALLEN ROAD AT MEMPHIS, TN

LOCATION.--Lat 35°14'17", long 89°57'04", Shelby County, Hydrologic Unit 08010209, on right bank at downstream end of bridge at the intersection of New Allen Road and Hawkins Mill Road in Memphis, 0.82 mi (1.32 km) east of Illinois Central Gulf Railroad, and 3.4 mi (5.5 km) east of U.S. Highway 51.

DRAINAGE AREA.--1.26 mi² (3.26 km²).

PERIOD OF RECORD.--November 1976 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 243 ft (74.1 m), from topographic map.

REMARKS.--Records fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 830 ft³/s (23.5 m³/s) Apr. 1, 1979, gage height 6.54 ft (1.993 m); no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Peaks above base of 175 ft³/s (4.96 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)	Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)
Dec. 3	1110	221 6.26	3.53 1.076	Apr. 1	2125	*830 23.5	6.54 1.993
Dec. 8	0130	221 6.26	3.53 1.076	Apr. 11	1930	281 7.96	3.94 1.201
Feb. 23	0505	218 6.17	3.51 1.070	May 3	2238	697 19.7	6.03 1.838
Mar. 3	0810	464 13.1	4.97 1.515				

No flow many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.01	.08	19	.24	.95	102	.24	.16	.01	.07	13
2	.02	.01	.08	2.2	1.0	.44	29	.16	9.5	.03	.04	.84
3	.02	.02	50	1.2	1.8	62	.90	57	1.6	.03	.18	.21
4	.01	.01	3.8	.53	.30	2.9	5.9	31	.08	.09	1.2	.08
5	.01	.01	.75	.16	.24	.95	.75	2.5	.06	.13	.03	.07
6	.01	.03	.16	.16	3.2	.63	.33	.75	.04	.03	.26	.07
7	.01	.20	23	.33	2.5	.33	.16	.44	.06	.03	.02	.06
8	.01	.01	57	.24	.31	.24	.34	.44	.04	.34	.03	.04
9	.01	.01	3.1	.16	.35	.60	.27	.33	.04	.02	.03	.04
10	.01	.01	.84	.11	1.1	8.5	.24	.33	.06	.02	.04	.04
11	.01	.01	.33	.11	2.0	.84	28	.24	.04	.11	4.5	.04
12	.02	.00	.33	.11	1.0	.33	4.2	5.9	.04	.67	.06	.05
13	1.5	.00	.16	1.9	.25	.24	.42	.95	.06	.03	.02	.41
14	.48	.00	.16	2.1	.16	.24	.11	.63	.06	.02	.02	.08
15	.05	.00	.16	.33	.16	.16	.11	.44	.06	.02	.02	.04
16	.02	2.6	.16	.33	.24	.16	.16	.33	.04	.03	.02	.04
17	.01	10	.16	2.0	.16	.16	.16	.24	.06	.03	.02	.04
18	.01	.07	.08	.88	2.5	.16	.19	.24	.06	.02	.02	.20
19	.01	.02	.08	10	.35	1.0	.16	.33	.04	.02	.02	.06
20	.02	.02	3.4	21	4.0	8.5	.24	.33	.04	.02	.03	10
21	.02	.02	1.3	4.3	2.4	.50	.40	.33	.04	.02	.03	4.9
22	.02	.83	.24	1.1	8.0	13	4.7	1.5	.03	.02	.73	.46
23	.01	2.6	.16	21	52	9.0	41	1.4	.06	.10	.04	.11
24	.01	.16	.16	3.7	10	.30	2.6	.75	5.4	.10	1.6	.08
25	.01	.04	.16	.84	15	.22	.71	.24	.02	.15	.27	.06
26	.02	4.1	.16	.30	2.5	.30	.33	.24	.03	.29	.03	.06
27	.02	1.3	.16	.45	.84	.65	.17	.33	.03	.09	.02	.06
28	.01	.16	.16	.27	1.5	.35	.19	.33	.03	.19	7.2	.08
29	.01	.16	.16	.22	---	.33	.33	.33	.01	.03	.25	.06
30	.01	.11	3.9	.20	---	5.0	.33	.46	.00	.03	.07	.05
31	.02	---	21	.20	---	5.4	---	.33	---	.02	.06	---
TOTAL	2.42	22.52	171.39	95.43	114.10	124.38	224.40	109.06	17.79	2.74	16.93	31.33
MEAN	.078	.75	5.53	3.08	4.08	4.01	7.48	3.52	.59	.088	.55	1.04
MAX	1.5	10	57	21	52	62	102	57	9.5	.67	7.2	13
MIN	.01	.00	.08	.11	.16	.16	.11	.16	.00	.01	.02	.04
CFSM	.06	.60	4.39	2.44	3.24	3.18	5.94	2.79	.47	.07	.44	.83
IN.	.07	.66	5.06	2.82	3.37	3.67	6.62	3.22	.52	.08	.50	.92
CAL YR 1978	TOTAL	817.42	MEAN	2.24	MAX	143	MIN	.00	CFSM	1.78	IN	24.11
WTR YR 1979	TOTAL	932.49	MEAN	2.55	MAX	102	MIN	.00	CFSM	2.02	IN	27.51

WOLF RIVER BASIN

07031650 WOLF RIVER AT GERMANTOWN, TN

LOCATION.--Lat 35°06'59", long 89°48'05", Shelby County, Hydrologic Unit 08010210, on left bank at bridge on Germantown Road at Germantown, 3.6 mi (5.8 km) downstream from Grays Creek, 6.4 mi (10.3 km) upstream from Fletcher Creek, and at mile 18.9 (30.4 km).

DRAINAGE AREA.--699 mi² (1,810 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to current year. Published as "near Germantown" prior to 1978.

GAGE.--Water-stage recorder. Datum of gage is 235.76 ft (71.860 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

REMARKS.--Records fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--10 years, 1,029 ft³/s (29.14 m³/s), 19.99 in/yr (508 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft³/s (946 m³/s) Mar. 14, 1975, gage height, 27.98 ft (8.528 m); minimum, 190 ft³/s (5.38 m³/s) Sept. 15, 16, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft³/s (198 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)	Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)
Dec. 3	2130	11200 317.1	18.18 5.541	Apr. 2	0830	10800 305.8	16.98 5.176
Dec. 8	1830	11200 317.1	18.13 5.526	Apr. 12	0500	10000 283.2	16.39 4.996
Feb. 25	0615	9480 268.5	15.98 4.870	May 4	1045	*13900 393.6	19.13 5.831
Mar. 3	1600	9540 270.2	16.02 4.886	June 3	0145	8310 235.3	15.02 4.578

Minimum discharge, 256 ft³/s (7.25m³/s) Oct. 8, 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	234	255	394	5000	677	3030	1490	702	751	1090	621	2770
2	236	255	386	6000	608	2320	7310	780	2780	735	645	2330
3	233	255	4990	5800	601	5850	6400	2420	5980	623	755	2330
4	234	254	4960	4500	616	5290	8370	12500	3950	553	1140	1490
5	234	252	5840	4000	592	5180	7110	10200	2410	504	900	1090
6	232	252	5370	3200	578	4960	4910	8140	2060	468	660	969
7	227	257	4650	2700	781	3690	3430	6690	2000	464	671	934
8	223	252	7970	5000	898	2950	2660	4560	1450	453	665	923
9	222	252	5320	4000	924	2280	2600	3190	853	556	614	841
10	222	252	4230	3500	817	2040	2120	2400	658	606	543	676
11	233	254	4560	2800	822	1640	2810	1740	563	655	513	551
12	237	257	4590	2300	1120	1480	8400	1740	510	755	667	475
13	270	260	3340	2000	989	1210	8060	1580	469	832	555	440
14	252	263	2570	1500	849	997	6210	1450	434	822	487	485
15	284	264	1970	1000	744	871	4500	1390	408	768	460	602
16	289	322	1170	860	659	767	3700	1200	391	742	437	704
17	283	624	832	800	585	681	2800	956	376	731	419	926
18	274	489	709	1000	547	629	2200	807	358	692	401	1150
19	266	466	644	1400	535	602	1700	699	353	600	388	1450
20	259	443	790	4890	546	707	1300	626	346	534	378	1850
21	253	443	1210	4030	1120	785	1000	584	493	530	381	2300
22	249	466	862	3540	1250	704	950	876	539	485	440	1760
23	249	498	760	3780	5250	2820	5000	2530	483	477	430	1860
24	248	479	680	4050	5060	2460	4500	1870	856	501	420	2150
25	247	441	653	3230	7830	2680	2500	1260	1040	538	440	2480
26	254	469	623	2470	6540	2560	2100	908	1210	574	2200	2120
27	252	506	574	1960	4280	2430	1200	989	1220	565	1800	1820
28	252	447	521	1550	3640	2120	923	1150	1350	590	1200	1390
29	252	418	487	1150	---	1590	830	1880	1460	592	1300	829
30	252	394	570	906	---	1020	756	1080	1550	619	1200	660
31	256	---	2340	784	---	1200	---	883	---	648	1110	---
TOTAL	7708	10739	74565	89700	49458	67543	107839	77780	37301	19302	22840	40355
MEAN	249	358	2405	2894	1766	2179	3595	2509	1243	623	737	1345
MAX	289	624	7970	6000	7830	5850	8400	12500	5980	1090	2200	2770
MIN	222	252	386	784	535	602	756	584	346	453	378	440
CFSM	.36	.51	3.44	4.14	2.53	3.12	5.14	3.59	1.78	.89	1.05	1.92
IN.	.41	.57	3.97	4.77	2.63	3.59	5.74	4.14	1.99	1.03	1.22	2.15
CAL YR 1978 TOTAL	335768	MEAN	920	MAX	11800	MIN	200	CFSM	1.32	IN	17.87	
WTR YR 1979 TOTAL	605130	MEAN	1658	MAX	12500	MIN	222	CFSM	2.37	IN	32.20	

WOLF RIVER BASIN

07031650 WOLF RIVER AT GERMANTOWN, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September, 1979

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
05...	1140	300	50	18.5	--	--	--
31...	1015	264	60	15.0	--	--	--
NOV							
29...	1130	411	46	10.5	--	--	--
JAN							
30...	1100	919	44	2.0	--	--	--
FEB							
27...	1515	4430	36	5.5	--	--	--
APR							
03...	0815	6290	50	14.0	--	--	--
AUG							
30...	1145	1200	--	28.0	--	--	--
SEP							
07...	0915	1040	38	25.0	126	354	86
27...	1315	1890	38	20.5	237	1210	46

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
SEP												
27...	1315	.0	2	.00	.00	.0	.0	0	.00	.0	.00	.0

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR TOT. IN BOTTOM MATL. (UG/KG)
SEP										
27...	.00	.0	.00	.0	.00	.00	.0	.00	.0	.00

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
SEP											
27...	.00	.0	.00	.0	.00	.00	0	0	.00	.00	.00

WOLF RIVER BASIN

07031680 FLETCHER CREEK NEAR CORDOVA, TN

LOCATION.--Lat 35°11'21", long 89°45'42", Shelby County, Hydrologic Unit 08010210, on right bank at upstream side of bridge at Berryhill Road, 1.3 mi (2.1 km) south of U.S. Highway 64, and 2.5 mi (4.0 km) north of Cordova.

DRAINAGE AREA.--1.45 mi² (3.76 km²).

PERIOD OF RECORD.--June 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 319 ft (97 m), from topographic map.

REMARKS.--Records fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--5 years, 2.72 ft³/s (.077 m³/s), 25.47 in/yr (647 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 740 ft³/s (21.0 m³/s) Mar. 12, 1975, gage height, 13.00 ft (3.962 m), from graphic comparison with nearby stations; no flow many days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)	Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)
Dec. 3	1245	660 18.7	11.13 3.392	May 3	2225	666 18.9	11.16 3.401
Dec. 8	0930	345 9.77	9.09 2.770	June 2	1535	526 14.9	10.35 3.155
Mar. 3	0935	516 14.6	10.29 3.136	Aug. 24	1950	314 8.89	8.84 2.694
Apr. 1	2235	*686 19.4	11.27 3.435				

No flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.00	.00	45	.14	3.5	69	.07	.20	.00	.00	9.2
2	.00	.00	.00	4.0	.15	.87	44	.39	68	.00	.00	1.3
3	.00	.00	129	.79	1.7	81	4.4	77	17	.00	5.9	.34
4	.00	.00	6.7	.48	.73	7.3	2.1	46	1.2	.00	.53	.11
5	.00	.00	1.0	.69	.36	1.2	7.0	6.3	.30	.00	.01	.03
6	.00	.00	1.0	1.3	2.1	.46	.60	1.0	.17	.00	.00	.00
7	.00	.00	28	8.9	5.6	.26	.36	.28	.16	.00	.00	.00
8	.00	.00	94	1.2	3.8	.13	.48	.13	.10	.00	.00	.00
9	.00	.00	4.6	.59	2.7	.09	.59	.08	.07	.00	.00	.00
10	.00	.00	.26	.53	.90	8.9	.29	.04	.07	.00	.00	.00
11	.00	.00	.08	.22	5.8	.89	33	.02	.07	.00	.00	.00
12	.00	.00	.04	.67	18	.33	18	5.4	.05	3.4	.00	.00
13	.20	.00	.03	14	4.2	.26	1.1	.11	.05	.01	.00	.00
14	.00	.00	.02	7.0	2.4	.11	.53	.04	.03	.00	.00	.00
15	.00	.00	.08	.59	1.4	.06	.34	.02	.00	.00	.00	.00
16	.00	4.4	.16	.68	.66	.04	.26	.01	.00	.00	.00	.00
17	.00	12	.12	5.8	.41	.04	.19	.01	.00	.00	.00	.00
18	.00	.26	.12	3.1	.35	.03	.13	.01	.00	.00	.00	.00
19	.00	.08	.13	18	.52	.69	.08	.00	.00	.00	.00	.00
20	.00	.01	19	80	1.1	1.6	.08	.00	.00	.00	.00	10
21	.00	.00	7.0	14	4.0	.24	.08	.01	.00	.00	6.5	28
22	.00	1.9	.81	3.1	15	.70	4.3	.18	.00	.00	.19	1.9
23	.00	4.2	.36	18	43	25	52	21	.00	.00	.00	.49
24	.00	.39	.28	10	16	2.4	6.3	1.9	4.2	.00	34	.17
25	.00	.16	.16	2.4	32	.81	4.2	.27	.02	.00	5.7	.06
26	.01	4.7	.13	2.1	1.7	.41	2.4	.17	.00	.00	2.7	.02
27	.00	.22	.09	1.9	.82	.41	.57	.50	.00	.00	.39	.01
28	.00	.01	.12	.66	6.6	.36	.24	3.0	.00	.45	5.4	.00
29	.00	.01	.13	.27	---	.27	.16	2.6	.00	.00	.91	.00
30	.00	.01	8.4	.33	---	3.9	.11	.91	.00	.00	.24	.00
31	.00	---	49	.26	---	9.1	---	.37	---	.00	.06	---
TOTAL	.28	28.35	350.82	246.56	172.14	151.36	252.89	167.82	91.69	3.86	62.53	51.63
MEAN	.009	.95	11.3	7.95	6.15	4.88	8.43	5.41	3.06	.12	2.02	1.72
MAX	.20	12	129	80	43	81	69	77	68	3.4	34	28
MIN	.00	.00	.00	.22	.14	.03	.08	.00	.00	.00	.00	.00
CFSM	.006	.66	7.79	5.48	4.24	3.37	5.81	3.73	2.11	.08	1.39	1.19
IN.	.01	.73	8.99	6.32	4.41	3.88	6.48	4.30	2.35	.10	1.60	1.32

CAL YR 1978 TOTAL 776.16 MEAN 2.13 MAX 129 MIN .00 CFSM 1.47 IN 19.90
WTR YR 1979 TOTAL 1579.93 MEAN 4.33 MAX 129 MIN .00 CFSM 2.99 IN 40.51

WOLF RIVER BASIN

343

07031683 FLETCHER CREEK AT WHITTEN ROAD AT MEMPHIS, TN

LOCATION.--Lat 35°11'16", long 89°50'09", Shelby County, Hydrologic Unit 08010210, on left bank at upstream end of bridge on Whitten Road, 0.9 mi (1.45 km) north of I-40 and 1.0 mi (1.6 km) south of U.S. Highway 70.

DRAINAGE AREA.--21.4 mi² (55.4 km²).

PERIOD OF RECORD.--November 1977 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 240 ft (73.2 m), from topographic map.

REMARKS.--Records fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,160 ft³/s (203 m³/s) Apr. 2, 1979, gage height, 18.46 ft (5.627 m); no flow several days each year.

EXTREMES FOR WATER YEARS 1978-79.--Peak discharges above base of 1,500 ft³/s (42.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 5, 1977	0040	1660 47.0	11.96 3.645	Feb. 23, 1979	0705	2210 62.6	13.92 4.243
Jan. 24, 1978	0905	2080 58.9	13.49 4.112	Feb. 24, 1979	2325	1690 47.9	12.08 3.682
Mar. 13, 1978	2225	3160 89.5	15.38 4.688	Mar. 3, 1979	1035	3740 106	16.10 4.907
May 7, 1978	0700	5960 169	17.76 5.413	Apr. 2, 1979	0005	*7160 203	18.46 5.627
				Apr. 11, 1979	2115	4280 121	16.56 5.047
Dec. 3, 1978	1400	4590 130	16.81 5.124	Apr. 23, 1979	0930	2070 58.6	13.44 4.096
Dec. 8, 1978	1030	2320 65.7	14.17 4.319	May 4, 1979	0130	6140 174	17.87 5.447
Jan. 20, 1979	0145	2200 62.3	13.87 4.228	June 2, 1979	1700	2080 58.9	13.49 4.112

No flow several days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	31	1.0	3.3	98	.82	98	.22	.08	.51	.10
2		---	11	.60	3.7	446	.58	1.6	10	.15	.74	.06
3		---	5.4	.31	3.1	101	.63	193	.17	.08	.64	.03
4		.11	113	.35	2.9	16	.38	29	.08	.04	52	.00
5		.58	482	.78	2.6	8.1	.24	3.1	.12	.03	1.3	.00
6		1.0	9.9	2.4	1.2	7.9	.14	45	59	.01	.60	.00
7		.10	8.2	19	1.1	11	.11	1590	85	53	.30	.00
8		.06	13	544	.99	15	.10	294	2.0	2.5	.19	.00
9		.04	18	19	.99	14	.10	182	.91	27	.14	.36
10		.03	2.9	6.0	1.2	16	2.6	10	.43	1.4	212	.06
11		.02	2.5	3.3	1.4	10	33	4.9	.14	3.3	7.2	.01
12		.01	3.1	7.5	4.7	9.4	1.1	8.7	.12	.12	3.5	.00
13		.00	104	9.0	46	430	.30	5.4	.10	.04	6.1	.54
14		.00	56	4.5	6.8	343	.13	3.8	.12	8.5	.62	9.2
15		.00	10	2.6	3.7	25	.24	3.0	.12	1.2	.11	.43
16		75	6.8	373	3.6	32	.20	2.6	.13	.06	.07	.05
17		17	15	301	3.7	12	.15	2.1	.22	.01	.01	.02
18		5.4	5.4	26	4.5	8.1	.20	2.2	4.8	.15	.00	.00
19		1.9	3.5	9.6	3.0	5.5	.08	84	1.3	.06	.00	.00
20		.40	2.5	6.5	5.6	5.5	.07	8.1	21	.01	.00	.00
21		292	1.4	4.8	8.6	24	.07	107	265	.00	.00	.00
22		13	.73	6.2	5.6	9.8	.06	3.2	6.8	.00	.00	.00
23		3.5	1.5	14	9.3	6.3	4.3	1.8	1.5	.02	.00	.00
24		1.2	1.2	788	6.0	5.8	10	.69	.33	.07	.00	.00
25		.72	1.2	747	5.0	5.3	2.2	1.4	.08	.08	.00	.00
26		2.8	.60	60	3.4	3.2	.06	1.7	.04	.13	.00	.00
27		120	.63	24	3.2	3.5	.04	2.2	.03	2.4	.00	.00
28		18	.48	8.5	33	2.7	.03	2.2	.05	.17	.00	.00
29		576	.61	5.5	---	2.3	.65	1.0	.03	.16	1.7	.00
30		169	3.0	4.0	---	1.3	.07	.80	.03	.14	48	.00
31		---	1.3	3.7	---	1.9	---	1.7	---	.31	.19	---
TOTAL		---	915.85	3002.14	178.18	1679.6	58.65	2694.19	459.87	101.22	335.92	10.86
MEAN		---	29.5	96.8	6.36	54.2	1.96	86.9	15.3	3.27	10.8	.36
MAX		---	482	788	46	446	33	1590	265	53	212	9.2
MIN		---	.48	.31	.99	1.3	.03	.69	.03	.00	.00	.00
CFSM		---	1.38	4.52	.30	2.53	.09	4.06	.72	.15	.51	.02
IN.		---	1.59	5.22	.31	2.92	.10	4.68	.80	.18	.58	.02

WOLF RIVER BASIN

07031683 FLETCHER CREEK AT WHITTEN ROAD AT MEMPHIS, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.17	557	1.1	23	663	1.1	1.4	.05	.13	76
2	.00	.00	.11	25	1.3	8.3	1240	5.9	530	.04	.32	5.6
3	.00	.00	1390	7.4	10	1000	31	420	219	.03	12	.18
4	.00	.00	148	4.0	4.7	118	142	1430	13	.01	11	.06
5	.00	.00	8.2	5.2	2.3	16	16	80	5.4	.00	1.2	.05
6	.00	6.0	3.1	8.2	10	8.7	7.6	16	3.2	.00	.11	.01
7	.00	.15	412	53	28	6.6	5.2	8.0	2.4	3.3	.14	.00
8	.00	.10	1160	8.1	19	4.2	5.8	4.4	1.2	.70	.06	.00
9	.00	.05	74	3.6	9.1	3.4	8.0	2.3	.62	.80	.04	.00
10	.00	.02	8.9	3.4	4.7	117	3.7	1.4	.28	.27	.06	.00
11	.00	.01	3.7	1.7	35	11	693	1.1	.27	.57	13	.00
12	.00	.00	2.2	2.5	134	6.3	239	185	.20	.44	.22	.00
13	3.7	.00	2.0	118	17	4.6	21	8.3	.17	1.5	.09	1.7
14	.17	.00	1.4	31	8.3	2.9	9.0	2.8	.14	.31	.07	.40
15	.04	.00	1.4	3.7	6.4	1.7	5.4	1.8	.09	.12	.06	.01
16	.01	35	2.2	3.4	3.2	1.4	3.6	1.9	.08	.08	.03	.00
17	.00	182	1.6	30	1.5	1.3	2.5	1.8	.07	.06	.01	.00
18	.00	1.9	1.2	15	4.4	1.3	1.7	2.3	.05	.05	.00	.01
19	.00	.33	1.4	184	5.1	7.9	1.2	2.6	.03	.03	.00	.04
20	.00	.33	171	873	15	17	.84	1.6	.01	.01	.00	116
21	.00	.18	52	151	77	8.5	.59	3.7	.00	.00	2.6	215
22	.00	20	5.6	17	123	12	20	19	.00	.18	25	7.4
23	.00	24	2.6	254	777	261	754	435	.00	4.2	1.2	.11
24	.00	2.0	2.5	83	258	14	70	19	95	4.3	286	.04
25	.00	.36	1.4	13	458	5.7	34	4.8	.65	2.1	38	.00
26	.10	82	1.2	8.6	31	3.2	21	2.3	.13	45	2.8	.00
27	.03	8.6	.97	9.5	13	4.2	8.8	7.8	.07	11	.17	.00
28	.01	1.1	1.1	4.6	35	3.0	4.4	47	.05	26	45	45
29	.00	1.1	1.7	2.6	---	2.3	2.6	37	.10	1.2	2.6	2.6
30	.00	.35	76	3.1	---	28	1.7	7.7	.07	.16	.12	.12
31	.00	---	514	2.6	---	80	---	3.7	---	.09	.05	---
TOTAL	4.06	365.58	4051.65	2486.2	2092.1	1782.5	4016.63	2765.3	873.68	146.16	442.08	470.33
MEAN	.13	12.2	131	80.2	74.7	57.5	134	89.2	29.1	4.71	14.3	15.7
MAX	3.7	182	1390	873	777	1000	1240	1430	530	45	286	215
MIN	.00	.00	.11	1.7	1.1	1.3	.59	1.1	.00	.00	.00	.00
CFSM	.006	.57	6.12	3.75	3.49	2.69	6.26	4.17	1.36	.22	.67	.73
IN.	.01	.64	7.04	4.32	3.64	3.10	6.98	4.81	1.52	.25	.77	.82
CAL YR 1978	TOTAL	12941.92	MEAN	35.5	MAX	1590	MIN	.00	CFSM	1.66	IN	22.50
WTR YR 1979	TOTAL	19496.27	MEAN	53.4	MAX	1430	MIN	.00	CFSM	2.50	IN	33.89

WOLF RIVER BASIN

345

07031777 LICK CREEK AT DICKINSON STREET AT MEMPHIS, TN

LOCATION.--Lat 35°09'24", long 90°00'12", Shelby County, Hydrologic Unit 08010210, on right bank 100 ft (30 m) upstream from bridge on Dickinson Street, and 1,200 ft (366 m) south of Jackson Avenue in Memphis.

DRAINAGE AREA.--2.96 mi² (7.67 km²).

PERIOD OF RECORD.--December 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 234 ft (71 m), from topographic map.

REMARKS.--Records poor. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,620 ft³/s (45.9 m³/s) Aug. 10, 1978, gage height, 12.29 ft (3.746 m); minimum, 0.10 ft³/s (0.003 m³/s) Sept. 18, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft³/s (15.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)	Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)
Dec. 3	1040	1330 37.7	11.20 3.414	Apr. 11	0205	713 20.2	8.41 2.563
Dec. 7	1705	831 23.5	9.00 2.743	Apr. 11	1920	1070 30.3	10.09 3.075
Jan. 19	2245	738 20.9	8.54 2.603	May 3	Unknown	Unknown	Unknown
Mar. 3	0805	1040 29.5	9.94 3.030	June 24	0450	590 16.7	7.75 2.362
Apr. 1	2030	*1540 43.6	12.01 3.661				

Minimum discharge, 0.28 ft³/s (0.008 m³/s) Oct. 27, Dec. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	.69	.49	31	1.9	2.5	203	1.7	2.0	2.8	2.5	30
2	2.0	.73	1.1	1.3	3.9	1.9	37	20	69	3.2	2.6	2.8
3	1.4	.81	173	1.3	5.9	120	3.7	165	14	3.5	1.4	2.0
4	1.3	.72	2.9	1.2	2.1	4.0	12	17	3.7	3.2	13	2.1
5	1.1	.58	1.2	3.6	2.0	2.1	1.4	6.3	2.6	3.5	1.3	2.1
6	1.3	4.2	1.8	7.0	10	2.2	1.1	1.7	5.9	3.4	1.4	2.0
7	1.4	7.0	64	6.2	9.4	2.0	1.3	1.8	3.7	8.0	1.4	2.6
8	1.4	1.5	70	1.7	6.9	1.5	15	2.0	4.2	7.8	1.5	2.0
9	1.6	1.4	4.0	1.5	2.7	4.6	1.8	2.1	3.4	4.0	1.3	2.3
10	1.3	1.5	3.0	.96	2.9	13	1.0	2.1	3.9	1.0	1.3	2.5
11	1.3	1.6	2.5	.90	3.9	1.7	111	2.2	5.1	23	10	1.7
12	1.6	1.8	1.9	.94	2.5	1.8	5.7	35	4.5	20	1.2	1.4
13	22	2.1	1.7	5.1	1.7	1.8	2.2	1.9	4.8	8.0	1.3	9.6
14	.52	1.8	1.3	1.2	1.5	2.7	1.8	1.7	3.9	3.5	1.3	1.3
15	.42	3.4	1.3	1.0	1.6	1.6	1.3	1.8	4.6	4.5	1.5	1.3
16	.62	51	2.2	1.1	1.7	1.6	1.0	2.0	3.9	6.0	1.3	1.1
17	.62	28	1.4	7.0	1.6	1.8	.85	1.7	4.2	5.4	1.4	1.7
18	.52	1.0	.92	1.7	6.2	1.8	1.4	1.6	5.4	6.0	1.2	5.2
19	.86	.74	1.7	56	1.5	3.9	1.0	6.2	4.5	6.0	1.1	2.6
20	.73	.74	20	40	9.3	11	2.2	1.7	4.8	5.6	1.1	25
21	.86	.96	2.0	5.8	4.2	1.0	4.0	6.7	6.6	4.4	1.3	50
22	.73	20	1.5	3.0	13	21	15	22	5.6	4.8	7.0	8.0
23	1.3	6.6	1.1	25	70	21	58	8.6	7.6	6.0	1.2	1.8
24	1.1	.62	2.4	3.8	27	3.1	15	1.9	45	7.0	40	1.5
25	1.0	.63	1.1	2.5	21	1.4	1.9	1.7	4.8	8.8	8.0	1.4
26	5.6	20	1.2	2.3	3.4	1.3	7.4	1.7	4.5	30	2.5	1.5
27	.38	.85	1.2	2.4	2.4	4.5	1.8	10	3.5	3.0	2.5	1.4
28	.40	.54	1.2	2.0	7.2	1.0	1.2	25	3.4	20	3.5	1.3
29	.50	1.2	2.9	1.8	---	1.1	1.4	5.7	11	1.6	1.9	1.5
30	.75	.49	17	1.8	---	15	1.5	1.9	3.0	1.5	1.8	1.4
31	.58	---	42	1.8	---	4.5	---	2.0	---	1.7	1.8	---
TOTAL	57.59	163.20	430.01	222.90	227.4	258.4	512.95	362.7	253.1	222.2	120.6	171.1
MEAN	1.86	5.44	13.9	7.19	8.12	8.34	17.1	11.7	8.44	7.17	3.89	5.70
MAX	22	51	173	56	70	120	203	165	69	30	40	50
MIN	.38	.49	.49	.90	1.5	1.0	.85	1.6	2.0	1.5	1.1	1.1
CFSM	.63	1.84	4.70	2.43	2.74	2.82	5.78	3.95	2.85	2.42	1.31	1.93
IN.	.72	2.05	5.40	2.80	2.86	3.25	6.44	4.56	3.18	2.79	1.52	2.15
CAL YR 1978	TOTAL	2559.72	MEAN	7.01	MAX	173	MIN	.38	CFSM	2.37	IN	32.16
WTR YR 1979	TOTAL	3002.15	MEAN	8.23	MAX	203	MIN	.38	CFSM	2.78	IN	37.72

MISSISSIPPI RIVER MAIN STEM

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN
(National stream-quality accounting and pesticide station)

LOCATION.--Lat 35°07'37", long 90°04'25", Shelby County, Hydrologic Unit 08010100, on left bank 50 ft (15 m) downstream from Harahan Bridge at Memphis, 1.3 mi (2.1 km) downstream from Beale Street gage, 3.5 mi (5.6 km) downstream from Wolf River, 62.4 mi (100.4 km) upstream from St. Francis River, and at mile 734.8 (1,182.3 km).

DRAINAGE AREA.--932,800 mi² (2,416,000 km²), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: January 1933 to September 1978. Monthly discharge only for some periods, published in WSP 1311.

Gage heights: October 1934 to September 1951 and October 1952 to September 1978 in reports of Geological Survey. Since November 1871, at Beale Street gage, in reports of Mississippi River Commission, December 1890 to August 1932 at Beale Street gage, September 1932 to December 1934 at nonrecording gage 1,000 ft (305 m) downstream, and since December 1934 at water-stage recorder at present site, in reports of National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 183.91 ft (56.056 m) National Geodetic Vertical Datum of 1929. Prior to Apr. 16, 1934, Beale Street nonrecording gage 1.3 mi (2.1 km) upstream at present datum. Apr. 16 to Dec. 21, 1934, nonrecording gage 1,000 ft (305 m) downstream at present datum.

REMARKS.--Flow regulated by many locks, dams, and reservoirs upstream.

COOPERATION.--Records furnished by Corps of Engineers. Records for 1979 water year were not available.

AVERAGE DISCHARGE.--45 years, 470,100 ft³/s (13,300 m³/s), 340,600,000 acre-ft/yr (420 km³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980,000 ft³/s (56,100 m³/s) Feb. 8, 1937; maximum gage height, 48.69 ft (14.841 m) Feb. 10, 1937; minimum discharge, 79,200 ft³/s (2,240 m³/s) Aug. 26, 1936; minimum gage height, -5.70 ft (-1.737 m) Sept. 21, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage prior to 1937, 46.55 ft (14.188 m) Apr. 9, 1913, at Beale Street gage or about 45.2 ft (13.78 m) at present site.

EXTREMES FOR 1978 WATER YEAR.--Maximum discharge, 1,350,000 ft³/s (38,200 m³/s) Apr. 2; maximum gage height, 34.21 ft (10.427 m) Apr. 2, 3; minimum daily discharge, 227,000 ft³/s (6,430 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	412000	501000	608000	636000	699000	282000	1310000	724000	729000	394000	382000	271000
2	410000	491000	633000	611000	737000	292000	1320000	714000	701000	388000	374000	285000
3	410000	477000	663000	586000	765000	315000	1310000	714000	664000	397000	374000	296000
4	413000	464000	710000	561000	780000	324000	1300000	719000	613000	416000	389000	312000
5	433000	461000	772000	536000	785000	327000	1290000	729000	563000	428000	399000	333000
6	466000	491000	815000	510000	781000	333000	1270000	735000	528000	438000	397000	352000
7	491000	543000	859000	487000	765000	341000	1250000	748000	505000	439000	392000	359000
8	505000	589000	895000	496000	730000	351000	1210000	723000	493000	436000	378000	348000
9	509000	614000	919000	493000	673000	367000	1160000	700000	480000	434000	365000	317000
10	507000	616000	927000	487000	598000	400000	1090000	706000	467000	435000	356000	289000
11	506000	611000	928000	488000	521000	436000	1020000	740000	457000	443000	350000	270000
12	512000	609000	915000	521000	456000	460000	936000	799000	452000	451000	351000	260000
13	528000	612000	930000	578000	410000	492000	865000	855000	451000	447000	355000	255000
14	543000	617000	932000	625000	382000	556000	808000	898000	454000	451000	351000	258000
15	548000	628000	921000	657000	367000	618000	773000	931000	456000	449000	347000	252000
16	543000	646000	904000	682000	361000	694000	758000	950000	452000	445000	339000	248000
17	532000	643000	882000	706000	358000	773000	753000	960000	435000	438000	334000	255000
18	514000	622000	856000	692000	359000	856000	755000	970000	409000	438000	334000	256000
19	486000	593000	830000	657000	358000	922000	758000	979000	381000	446000	332000	239000
20	455000	566000	811000	605000	354000	972000	754000	980000	356000	460000	322000	227000
21	427000	557000	798000	556000	350000	1020000	743000	976000	346000	472000	304000	240000
22	403000	550000	794000	513000	345000	1060000	727000	967000	344000	470000	292000	269000
23	385000	553000	802000	482000	341000	1100000	715000	957000	349000	451000	285000	300000
24	375000	568000	810000	475000	336000	1130000	708000	939000	355000	418000	277000	333000
25	374000	592000	808000	487000	329000	1160000	714000	914000	366000	387000	268000	359000
26	373000	607000	791000	490000	316000	1180000	723000	884000	376000	367000	255000	366000
27	367000	609000	774000	492000	298000	1210000	731000	854000	382000	355000	241000	360000
28	365000	599000	753000	505000	286000	1240000	734000	830000	388000	356000	232000	355000
29	387000	598000	729000	538000	---	1260000	733000	808000	394000	367000	233000	348000
30	446000	600000	699000	593000	---	1290000	727000	784000	397000	381000	248000	342000
31	494000	---	667000	649000	---	1300000	---	756000	---	386000	258000	---
TOTAL	14119000	17227000	25135000	17394000	13840000	23061000	27945000	25943000	13743000	13083000	10114000	8954000
MEAN	455500	574200	810800	561100	494300	743900	931500	836900	458100	422000	326300	298500
MAX	548000	646000	932000	706000	785000	1300000	1320000	980000	729000	472000	399000	366000
MIN	365000	461000	608000	475000	286000	282000	708000	700000	344000	355000	232000	227000
AC-FT	28010000	34170000	49860000	34500000	27450000	45740000	55430000	51460000	27260000	25950000	20060000	17760000
CAL YR 1977 TOTAL	155140000			MEAN 425000	MAX 932000	MIN 144000	AC-FT 307700000					
WTR YR 1978 TOTAL	210558000			MEAN 576900	MAX 1320000	MIN 227000	AC-FT 417600000					

MISSISSIPPI RIVER MAIN STEM

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07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1973 to current year.

WATER TEMPERATURES: February 1973 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)
OCT										
18...	0900	470	8.1	15.0	31	9.6	K2500	720	180	48
NOV										
22...	1230	513	7.9	11.0	26	9.7	1300	1700	170	64
JAN										
17...	0900	284	7.5	1.0	58	12.5	K600	--	120	57
MAR										
20...	1430	304	7.7	8.0	130	10.9	410	800	110	42
APR										
17...	1430	295	7.7	16.0	100	9.5	K67	390	120	45
MAY										
14...	1730	361	7.9	19.0	50	8.1	K210	K130	140	55
JUN										
19...	1630	376	8.2	22.0	120	7.3	1100	K60	160	48
JUL										
11...	1520	407	7.4	26.0	96	7.1	1000	K90	170	57
31...	1545	368	7.9	25.5	76	6.9	K120	K30	150	54
AUG										
30...	1030	419	8.0	26.0	60	6.6	470	<10	170	65

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT									
18...	45	16	28	25	.9	4.1	130	83	20
NOV									
22...	45	15	30	27	1.0	3.6	110	91	20
JAN									
17...	35	7.9	9.8	15	.4	1.8	63	43	16
MAR									
20...	31	8.5	11	17	.5	2.9	70	41	13
APR									
17...	32	9.5	11	16	.4	2.1	75	39	14
MAY									
14...	38	12	13	16	.5	2.9	89	45	24
JUN									
19...	42	13	14	22	.5	2.9	110	57	15
JUL									
11...	42	15	23	23	.8	3.4	110	67	21
31...	37	13	20	22	.7	3.3	92	59	20
AUG									
30...	43	14	19	20	.6	3.0	100	67	21

K--Results based on colony count outside acceptable range (non-ideal colony count)

MISSISSIPPI MAIN STEM

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	FLUORIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)
OCT 18...	.4	7.7	294	282	.40	1.3	.05	1.1	.91
NOV 22...	.2	4.7	291	276	.40	.99	.04	.85	.80
JAN 17...	.2	6.7	161	158	.22	1.2	.18	.53	.52
MAR 20...	.2	6.4	162	156	.22	1.6	.19	.67	.86
APR 17...	.2	7.5	174	162	.24	2.1	.06	.94	.60
MAY 14...	.2	6.1	199	195	.27	2.2	.02	.70	--
JUN 19...	.3	4.2	237	215	.32	1.8	.06	.78	.60
JUL 11...	.3	7.0	249	245	.34	1.8	.01	.38	.39
31...	.3	7.2	228	215	.31	1.4	.01	.77	.49
AUG 30...	.2	6.4	240	234	.33	1.5	.07	.93	.57

DATE	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 18...	2.4	.140	.130	--	5.5	1.6	--	123	70
NOV 22...	1.9	.240	.090	6.2	--	--	7900	163	81
JAN 17...	1.9	.210	.060	--	3.7	1.0	--	117	86
MAR 20...	2.5	.180	.040	7.1	--	--	770	393	37
APR 17...	3.1	.220	.050	--	6.2	12	--	312	61
MAY 14...	2.9	.220	.080	9.9	--	--	2500	--	--
JUN 19...	2.6	.220	.070	9.5	--	--	2500	218	95
JUL 11...	2.2	.200	.090	--	4.6	2.1	6800	260	97
31...	2.2	.150	.050	7.4	--	--	--	195	95
AUG 30...	2.5	.450	.070	8.4	--	--	13000	150	89

MISSISSIPPI MAIN STEM

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07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
OCT 18...	3	2	100	80	2	2	0	0	<3
JAN 17...	2	1	100	0	1	1	10	0	3
APR 17...	3	1	100	100	1	1	10	0	3
JUL 11...	3	1	100	80	1	1	10	0	3

DATE	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
OCT 18...	<3	81	17	1900	10	12	0	190	4
JAN 17...	1	18	7	4600	90	10	1	230	30
APR 17...	<3	43	12	6400	100	27	0	240	10
JUL 11...	<3	190	9	7400	420	54	0	350	30

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 18...	.0	.0	1	1	0	0	30	5
JAN 17...	.0	.0	0	0	0	0	70	50
APR 17...	.1	.1	0	0	0	0	340	340
JUL 11...	.1	.1	0	0	0	0	110	8

DATE	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)
NOV 22...	ND	ND	--	ND	--	ND	--	ND	--	ND
MAR 20...	ND	ND	--	ND	--	ND	--	ND	--	ND
MAY 14...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 30...	ND	ND	--	ND	--	ND	--	ND	--	ND

MISSISSIPPI MAIN STEM

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 22...	--	ND	--	ND	--	ND	ND	--	ND	--
MAR 20...	--	ND	--	ND	--	ND	ND	--	ND	--
MAY 14...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 30...	--	ND	--	ND	--	ND	ND	--	ND	--

DATE	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)
NOV 22...	ND	--	ND	--	ND	--	ND	--	ND
MAR 20...	ND	--	ND	--	ND	--	ND	--	ND
MAY 14...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 30...	ND	--	ND	--	ND	--	ND	--	ND

DATE	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOTAL TRI- THION (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 22...	--	ND	--	ND	--	ND	--	ND	--
MAR 20...	--	ND	--	ND	--	ND	--	ND	--
MAY 14...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 30...	--	ND	--	ND	--	ND	--	ND	--

MISSISSIPPI MAIN STEM

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07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued
 PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 22,78 1230	MAR 20,79 1430	MAR 23,79 0945	MAY 14,79 1730				
TOTAL CELLS/ML	7900	770	530	2500				
DIVERSITY: DIVISION	1.4	0.6	1.1	1.4				
..CLASS	1.4	0.6	1.2	1.4				
..ORDER	1.9	1.3	1.9	1.7				
...FAMILY	2.2	1.7	2.9	1.8				
....GENUS	2.9	1.7	3.3	2.1				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	42	2
...MICRACTINIUM	--	-	--	-	160#	31	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	140	2	--	-	15	3	28	1
....CHODATELLA	* 0		--	-	--	-	--	-
...DICHOTOMOCOCCUS	420	5	--	-	--	-	--	-
...DICTYOSPHAERIUM	450	6	--	-	--	-	--	-
...KIRCHNERIELLA	160	2	--	-	--	-	--	-
...OOCYSTIS	64	1	--	-	--	-	14	1
...QUADRIGULA	64	1	--	-	--	-	--	-
...SELENASTRUM	--	-	--	-	5	1	--	-
...TETRAEDRON	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	56	2
...CRUCIGENIA	110	1	120#	16	--	-	--	-
...SCENEDESMUS	610	8	--	-	--	-	250	10
...TETRASTRUM	380	5	--	-	20	4	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	10	2	28	1
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....COSCINODISCUS	* 0		--	-	--	-	--	-
...CYCLOTELLA	540	7	480#	63	46	9	170	7
...MELOSIRA	420	5	--	-	76	14	430#	18
...SKELETONEMA	--	-	--	-	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
...COCCONEIS	--	-	--	-	--	-	--	-
...CYMBELLACEAE								
...CYMBELLA	--	-	--	-	15	3	--	-
...DIATOMACEAE								
....DIATOMA	--	-	--	-	5	1	--	-
...FRAGILARIACEAE								
...FRAGILARIA	--	-	--	-	40	8	--	-
...SYNEDRA	--	-	40	5	15	3	--	-
...GOMPHONEMATAACEAE								
....GOMPHONEMA	--	-	--	-	5	1	14	1
...MERIDIONACEAE								
....MERIDION	--	-	40	5	--	-	--	-
...NAVICULACEAE								
....GYROSIGMA	--	-	--	-	5	1	--	-
...NAVICULA	--	-	40	5	40	8	--	-
...NITZSCHACEAE								
....NITZSCHIA	* 0		--	-	46	9	84	3
...SURIRELLACEAE								
...CYMATOPLEURA	--	-	40	5	--	-	--	-
..CHRYSOPHYCEAE								
...CHRYSOMONADALES								
...OCHROMONADACEAE								
....OCHROMONAS	--	-	--	-	5	1	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

MISSISSIPPI MAIN STEM

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued
 PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	NOV 22,78 1230		MAR 20,79 1430		MAR 23,79 0945		MAY 14,79 1730	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	1200#	15	--	-	--	-	--	-
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	--	-
...OSCILLATORIA								
....OSCILLATORIA	3200#	41	--	-	--	-	--	-
...SCHIZOTHRIX	--	-	--	-	--	-	--	-
...SCYTONEMATA								
....PLECTONEMA	--	-	--	-	--	-	1300#	55
EUGLENOPHYTA (EUGLENOIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
....EUGLENACEAE								
....EUGLENA	*	0	--	-	--	-	--	-
....TRACHELOMONAS	*	0	--	-	15	3	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	JUN 19,79 1630	JUL 11,79 1520	AUG 30,79 1030
TOTAL CELLS/ML	2500	6800	13000
DIVERSITY: DIVISION	1.2	1.5	1.2
..CLASS	1.2	1.5	1.2
...ORDER	1.2	1.7	1.3
...FAMILY	1.2	2.2	1.7
....GENUS	1.4	3.2	2.5

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
....COELASTRACEAE						
.....COELASTRUM	--	-	260	4	--	-
....HYDRODICTYACEAE						
.....PEDIASTRUM	--	-	--	-	250	2
....MICRACTINIACEAE						
.....GOLENKINIA	--	-	--	-	--	-
.....MICRACTINIUM	--	-	--	-	--	-
....OOCYSTACEAE						
.....ANKISTRODESMUS	--	-	--	-	130	1
.....CHODATELLA	--	-	--	-	--	-
.....DICHOTOMOCOCCUS	--	-	--	-	--	-
.....DICTYOSPHAERIUM	--	-	130	2	--	-
.....KIRCHNERIELLA	--	-	520	8	--	-
.....OOCYSTIS	--	-	230	3	--	-
.....QUADRIGULA	--	-	--	-	--	-
.....SELENASTRUM	--	-	--	-	--	-
.....TETRAEDRON	--	-	--	-	*	0
....SCENEDESMACEAE						
.....ACTINASTRUM	310	12	1000#	15	--	-
.....CRUCIGENIA	--	-	--	-	--	-
....SCENEDESMUS	230	9	650	10	510	4
.....TETRASTRUM	--	-	130	2	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	--	-	--	-
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
....COSCINODISCACEAE						
.....COSCINODISCUS	--	-	--	-	--	-
.....CYCLOTELLA	39	2	490	7	950	7
.....MELOSIRA	190	8	2100#	30	1000	8
.....SKELETONEMA	--	-	--	-	760	6
...PENNALES						
....ACHNANTHACEAE						
.....COCCONEIS	--	-	--	-	*	0
....CYMBELLACEAE						
.....CYMBELLA	--	-	--	-	--	-
....DIATOMACEAE						
.....DIATOMA	--	-	--	-	*	0
....FRAGILARIACEAE						
.....FRAGILARIA	--	-	--	-	--	-
.....SYNEDRA	--	-	--	-	--	-
....GOMPHONEMACEAE						
.....GOMPHONEMA	--	-	--	-	--	-
....MERIDIONACEAE						
.....MERIDION	--	-	--	-	--	-
....NAVICULACEAE						
.....GYROSIGMA	--	-	--	-	--	-
.....NAVICULA	--	-	--	-	*	0
....NITZSCHACEAE						
.....NITZSCHIA	--	-	65	1	280	2
....SURIPELLACEAE						
.....CYMATOPLEURA	--	-	--	-	--	-
..CHRYSOPHYCEAE						
...CHRYSOMONADALES						
....OCHROMONADACEAE						
.....OCHROMONAS	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

MISSISSIPPI RIVER MAIN STEM

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

PHYTOPLANKTON ANALYSES, OCTOBER 1978 TO AUGUST 1979

DATE TIME	JUN 19,79 1630		JUL 11,79 1520		AUG 30,79 1030	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	520	8	--	-
....ANACYSTIS	--	-	450	7	--	-
...HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	260	4	600	5
...OSCILLATORIACEAE						
....OSCILLATORIA	1700#	69	--	-	2100#	16
....SCHIZOTHRIX	--	-	--	-	6400#	49
...SCYTONEMATACEAE						
....PLECTONEMA	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE						
...EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	--	-	--	-
....TRACHELONAS	--	-	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.5	16.5	13.0			---	12.5	14.0	19.5	24.0	27.5	26.0
2	22.5	16.5	10.0			---	12.5	14.0	20.0	24.0	27.0	26.5
3	18.0	16.0	12.0			---	12.5	15.5	20.5	24.0	27.0	26.5
4	18.0	16.0	10.0			---	13.0	15.0	21.0	24.0	27.0	26.5
5	19.0	16.0	10.0			---	13.0	15.5	21.0	---	27.5	26.0
6	19.0	15.0	8.5			---	12.0	16.0	---	25.0	28.0	26.5
7	18.5	15.5	8.5			9.0	12.5	16.0	21.0	25.0	28.0	26.5
8	18.5	14.5	8.0			10.0	12.5	16.0	21.0	25.0	27.5	26.5
9	18.5	14.0	8.0			10.0	12.0	16.0	21.0	25.5	28.5	26.0
10	18.0	15.5	7.5			10.0	12.0	17.5	22.0	25.5	28.5	26.5
11	19.0	15.0	7.5			9.0	13.0	17.0	21.0	26.0	---	26.5
12	18.5	15.5	6.0			12.0	13.0	17.0	21.0	26.0	29.0	25.0
13	18.0	15.0	7.0			11.0	13.0	17.5	21.0	26.0	29.0	25.0
14	17.5	14.0	8.0			10.0	13.0	17.0	21.0	26.0	28.5	25.0
15	18.0	14.0	6.5			10.0	13.5	17.5	22.0	26.5	28.5	25.0
16	18.0	14.5	6.5			10.0	13.5	17.5	22.0	26.5	27.5	25.0
17	17.5	14.0	6.0			9.0	13.0	18.0	22.0	26.5	27.5	25.5
18	17.0	14.0	6.0			10.0	13.0	18.0	24.0	26.5	27.5	25.0
19	17.0	14.0	9.0			10.0	15.0	18.0	21.0	26.5	27.0	25.0
20	18.0	13.0	9.5			13.0	15.0	18.5	21.0	27.0	27.0	25.0
21	18.0	13.0	9.5			13.0	15.0	18.0	20.0	27.0	26.0	24.0
22	18.0	13.0	---			13.0	15.0	19.0	21.0	27.5	27.5	24.0
23	17.5	12.5	---			12.5	14.0	19.5	24.0	27.0	27.5	24.0
24	17.5	12.5	---			12.0	14.5	19.5	24.0	27.0	27.0	24.0
25	17.0	12.0	---			13.0	14.0	19.0	23.0	27.0	27.0	23.5
26	16.5	12.0	---			13.5	14.5	19.0	24.0	27.0	26.5	23.5
27	16.0	12.0	---			12.5	15.0	19.0	24.5	27.0	26.5	23.5
28	16.0	13.0	---			13.0	15.5	19.5	24.0	27.5	26.0	23.0
29	16.5	12.0	---			13.0	15.5	19.0	24.5	27.5	26.0	23.0
30	16.0	12.0	---			13.0	---	19.5	25.0	27.0	26.0	23.0
31	16.0	---	---			13.0	---	19.5	---	27.5	26.5	---
MEAN	18.0	14.0	8.5			11.5	13.5	17.5	22.0	26.0	27.5	25.0

MISSISSIPPI RIVER MAIN STEM

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07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	400	513	228	281	306	276	304	411	403	353	380	394
2	402	512	181	284	248	276	308	408	400	333	407	396
3	481	513	320	286	355	299	307	402	403	353	410	395
4	484	513	211	285	322	289	307	414	401	346	409	399
5	484	513	353	283	324	278	307	416	440	---	411	398
6	484	514	298	284	353	279	371	413	---	310	409	399
7	484	519	291	284	174	307	371	412	444	430	407	399
8	478	504	294	273	192	311	371	402	441	383	407	380
9	484	511	294	284	293	308	371	403	439	380	408	379
10	482	513	290	284	360	308	371	407	439	383	408	379
11	480	513	289	284	254	309	371	401	440	382	409	378
12	481	514	289	284	361	308	370	402	442	381	409	380
13	484	513	293	285	359	309	370	412	440	382	409	379
14	484	513	290	284	286	309	369	403	441	382	409	378
15	484	513	294	284	293	310	369	408	440	382	410	378
16	484	514	290	284	299	310	370	401	440	383	408	377
17	484	513	293	284	285	312	368	399	439	382	405	380
18	483	514	291	285	276	308	370	410	439	382	407	384
19	482	513	257	356	277	310	370	400	439	382	408	379
20	525	514	261	356	298	309	370	405	441	383	408	381
21	521	513	257	357	302	311	369	406	439	382	408	378
22	524	513	296	357	277	310	370	400	442	384	406	379
23	525	500	307	357	297	309	367	408	439	381	406	380
24	525	514	314	356	275	309	370	406	439	382	406	379
25	524	514	304	358	281	309	370	406	438	382	407	380
26	523	513	303	356	276	308	370	401	438	381	408	380
27	523	514	285	356	272	308	368	405	439	381	406	379
28	520	421	285	357	282	309	370	416	439	381	405	380
29	522	420	285	355	---	308	369	400	439	383	406	380
30	521	420	286	357	---	309	---	399	439	381	406	381
31	527	---	286	356	---	309	---	399	---	384	406	---
MEAN	493	503	284	314	292	304	359	406	435	376	407	384

NONCONNAH CREEK BASIN

07032200 NONCONNAH CREEK NEAR GERMANTOWN, TN

LOCATION.--Lat 35°02'59", long 89°49'08", Shelby County, Hydrologic Unit 08010211, on left bank at downstream side of bridge on Winchester Road, 2.6 mi (4.2 km) south of Germantown, and at mile 17.3 (27.8 km).

DRAINAGE AREA.--68.2 mi² (176.6 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1959-1964, 1969; October 1969 to current year.

REVISED RECORDS.--WRD TN 1974: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 262.92 ft (80.138 m) National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).

REMARKS.--Records fair.

AVERAGE DISCHARGE.--10 years, 109 ft³/s (3.09 m³/s), 21.70 in/yr (551 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,680 ft³/s (274 m³/s) Mar. 12, 1975, gage height, 27.11 ft (8.263 m); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,700 ft³/s revised (105 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)	Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)
Dec. 3	1445	*7420 210	23.37 7.123	Apr. 2	0145	5790 164	20.21 6.160
Dec. 8	1600	4090 116	16.45 5.014	Apr. 11	2115	6280 178	21.17 6.453
Dec. 31	1800	3840 109	15.86 4.834	Apr. 23	0915	4540 129	17.49 5.331
Jan. 20	0230	4930 140	18.40 5.608	May 4	0330	6590 187	21.78 6.639
Feb. 23	0900	6670 189	21.95 6.690	June 2	1815	5220 148	19.05 5.806
Feb. 25	0115	3720 105	15.57 4.746	Sep. 1	1445	4490 127	17.38 5.297
Mar. 3	1345	5690 161	20.00 6.096				

Minimum discharge, .005 ft³/s (<.001 m³/s) Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.47	.21	.68	2400	3.5	96	431	2.2	4.2	.69	1.5	1680
2	.40	.16	.68	538	.69	23	2920	311	1870	.70	224	313
3	.33	.27	3710	42	11	3040	509	1590	1820	.51	179	34
4	.34	.85	2220	13	13	1010	699	3780	172	.40	48	18
5	.42	.43	303	10	6.3	116	140	552	53	1.7	15	12
6	.20	1.1	63	58	28	41	40	115	29	1.1	5.1	8.4
7	.20	5.6	402	993	257	26	21	48	21	12	1.8	6.6
8	.24	1.6	2450	215	224	18	255	28	15	445	.86	5.5
9	.24	2.0	786	76	180	15	785	19	12	62	3.4	4.8
10	.17	2.0	66	26	56	642	75	14	7.9	8.0	1.7	4.1
11	1.4	2.0	23	13	182	111	1580	10	5.6	5.9	.87	3.8
12	.38	1.6	14	11	240	31	2870	337	5.6	121	.40	4.0
13	36	5.1	10	318	74	19	303	48	4.2	17	.24	11
14	6.7	5.1	6.5	202	32	14	70	14	4.6	6.3	.21	15
15	.68	3.4	4.8	54	22	10	38	5.6	4.2	3.3	.17	7.2
16	.21	.86	5.2	9.3	9.2	7.7	25	1.6	3.8	1.7	.31	4.9
17	.12	236	4.2	98	1.8	6.2	19	1.1	2.8	1.1	.38	4.4
18	.21	23	2.0	116	3.4	5.1	14	.68	2.0	.85	.34	12
19	.21	7.2	1.5	872	12	7.6	6.5	1.1	1.6	.98	.43	13
20	.16	1.6	221	2750	59	87	4.2	.70	7.7	59	.29	214
21	.16	.44	385	822	821	64	3.1	80	7.3	16	.33	515
22	.27	14	56	184	298	105	29	2000	2.8	2.7	44	54
23	.34	35	21	836	3700	1860	2160	3000	2.0	12	10	18
24	.27	10	12	770	1080	289	280	80	53	43	87	8.9
25	.27	2.0	13	128	1880	71	69	30	21	12	6.4	5.7
26	1.6	93	6.1	74	324	36	141	20	9.2	14	3.2	4.4
27	.85	59	2.4	78	46	46	36	450	4.2	55	1.1	3.1
28	1.1	6.1	1.3	44	56	48	15	45	1.3	210	40	2.6
29	.53	2.0	.85	19	---	24	7.1	20	2.6	15	16	2.4
30	.43	1.1	158	13	---	79	3.7	9.5	1.1	2.7	37	2.7
31	.34	---	1820	7.9	---	425	---	11	---	.57	60	---
TOTAL	55.24	607.86	12769.21	11790.2	9619.89	8372.6	13548.6	12624.48	4150.7	1132.20	789.03	2992.5
MEAN	1.78	20.3	412	380	344	270	452	407	138	36.5	25.5	99.8
MAX	36	236	3710	2750	3700	3040	2920	3780	1870	445	224	1680
MIN	.12	.16	.68	7.9	.69	5.1	3.1	.68	1.1	.40	.17	2.4
CFSM	.03	.30	6.04	5.57	5.04	3.96	6.63	5.97	2.02	.54	.37	1.46
IN.	.03	.33	6.96	6.43	5.25	4.57	7.39	6.89	2.26	.62	.43	1.63

CAL YR 1978 TOTAL 38575.16 MEAN 106 MAX 3710 MIN .07 CFSM 1.55 IN 21.04
WTR YR 1979 TOTAL 78452.51 MEAN 215 MAX 3780 MIN .12 CFSM 3.15 IN 42.79

NONCONNAH CREEK BASIN

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07032200 NONCONNAH CREEK NEAR GERMANTOWN, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August to September, 1979.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT							
05...	0945	.58	120	17.0	--	--	--
NOV							
01...	1215	.21	340	17.0	--	--	--
17...	1150	197	90	16.0	--	--	--
28...	1510	3.2	115	9.0	--	--	--
JAN							
03...	1440	35	47	.5	--	--	--
30...	1520	11	220	2.5	--	--	--
FEB							
27...	1130	58	62	4.5	--	--	--
MAR							
30...	0830	11	85	16.5	--	--	--
MAY							
31...	1115	11	83	21.5	--	--	--
JUN							
28...	1220	1.2	100	26.0	--	--	--
AUG							
01...	1000	1.6	--	--	86	.39	86
28...	0940	.34	145	25.5	36	.03	--
SEP							
27...	1430	3.4	75	24.0	23	.21	--

DATE	TIME	PCB, TOTAL (UG/L)	PCB, IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, IN BOT- TOM MA- TERIAL (UG/KG)
SEP												
27...	1430	.0	1	.00	.00	.0	.0	0	.00	.0	.00	.0

DATE	DDT, TOTAL (UG/L)	DDT, IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
SEP										
27...	.00	.0	.00	.0	.00	.00	.0	.00	.0	.00

DATE	LINDANE TOTAL (UG/L)	LINDANE IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, IN BOT- TOM MA- TERIAL (UG/KG)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOXA- PHENE, TOTAL (UG/L)	TOXA- PHENE, IN BOT- TOM MA- TERIAL (UG/KG)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
SEP											
27...	.00	.0	.00	.0	.00	.00	0	0	.00	.00	.00

NONCONNAH CREEK BASIN

07032222 JOHNS CREEK TRIBUTARY AT HOLMES ROAD NEAR MEMPHIS, TN

LOCATION.--Lat 35°00'20", long 89°52'16", Shelby County, Hydrologic Unit 08010211, on left bank at upstream side of bridge at Holmes Road, 1,200 ft (366 m) east of St. Louis-San Francisco Railroad, 2.0 mi (3.2 km) east of U.S. Highway 78, and 2.2 mi (3.5 km) southeast of Memphis city limits.

DRAINAGE AREA.--5.83 mi² (15.10 km²).

PERIOD OF RECORD.--March 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 304 ft (93 m), from topographic map.

REMARKS.--Records fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,970 ft³/s (55.8 m³/s) May 22, 1979, gage height, 12.99 ft (3.959 m); minimum, 0.03 ft³/s (<0.001 m³/s) Aug. 30, 31, Sept. 1, 4, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft³/s revised (24.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 3	1540	888 25.1	6.64 2.024	Apr. 1	2400	954 27.0	7.02 2.140
Jan. 20	0115	854 24.2	6.45 1.966	Apr. 11	2045	1340 37.9	9.27 2.826
Feb. 23	0600	955 27.0	7.03 2.143	May 22	2335	*1970 55.8	12.99 3.959
Mar. 3	0930	976 27.6	7.15 2.179	June 2	1725	866 24.5	6.52 1.987

Minimum discharge, 0.06 ft³/s (0.002 m³/s) Oct. 27, Nov. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

Y	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.11	.32	160	.75	2.9	61	.71	.87	.38	.45	105
2	.25	.15	.32	8.7	.73	2.1	172	1.3	188	.38	49	4.0
3	.28	.16	288	2.8	2.4	291	13	139	119	.38	5.9	.85
4	.32	.16	22	1.8	1.6	21	27	175	4.7	.41	42	.49
5	.33	.16	1.2	1.7	1.1	2.6	2.9	13	1.5	.45	2.2	.35
6	.22	.17	.63	9.8	6.0	1.1	1.3	4.9	.91	.45	.93	.48
7	.28	.20	23	4.4	12	.81	.79	2.1	.73	.62	.62	.30
8	.34	.14	220	4.5	8.8	.57	23	1.4	.51	47	.45	.20
9	.34	.16	14	2.5	5.9	.44	20	1.0	.45	.56	1.4	.20
10	.25	.16	2.9	2.0	2.5	30	1.8	.91	.34	.16	.38	.25
11	.28	.18	1.5	1.3	7.5	2.1	174	.86	.31	.22	.53	.32
12	.26	.20	1.1	1.7	9.7	.93	96	13	.30	3.1	.53	.34
13	.26	.19	.97	16	3.9	.63	7.7	1.2	.28	.17	.57	.46
14	.08	.23	.78	5.2	3.3	.50	3.4	.74	.34	.13	.69	.40
15	.09	.25	.71	1.3	2.8	.32	2.0	.61	.35	.15	.39	.21
16	.11	.88	.80	1.1	1.7	.34	1.4	.45	.38	.16	.38	.20
17	.13	22	.83	5.8	1.3	.36	1.2	.45	.38	.16	.38	.20
18	.11	1.9	.72	4.4	1.5	.41	1.0	.45	.40	.18	.44	.38
19	.14	.80	.71	106	3.6	.87	.98	1.1	.35	.23	.45	.37
20	.19	1.5	26	232	5.8	7.9	.48	.45	.33	77	.45	43
21	.23	.71	10	20	56	3.2	.45	.51	.35	1.9	.56	46
22	.27	1.8	2.0	3.9	29	8.7	7.3	124	.37	.62	1.7	2.4
23	.24	4.6	1.2	55	257	101	256	241	.35	.45	.59	.54
24	.25	1.5	1.0	15	90	3.2	31	8.0	.45	3.1	23	.31
25	.24	.81	.76	5.7	92	1.2	11	2.1	.22	.60	2.4	.25
26	.23	11	.65	2.9	14	.62	33	1.0	.25	18	.60	.21
27	.08	1.2	.62	2.9	7.5	5.2	4.3	28	.28	5.2	.41	.20
28	.08	.33	.61	1.6	3.9	1.8	1.7	4.1	.25	28	19	.16
29	.09	.35	.61	1.2	---	.57	1.2	3.3	.50	1.6	1.1	.18
30	.10	.35	13	1.2	---	19	.82	1.4	.38	.74	.34	.23
31	.11	---	154	1.1	---	25	---	1.1	---	.52	.32	---
TOTAL	6.38	52.35	790.94	723.1	632.28	536.37	957.72	773.14	323.83	193.02	158.16	208.48
MEAN	.21	1.75	25.5	23.3	22.6	17.3	31.9	24.9	10.8	6.23	5.10	6.95
MAX	.34	.22	288	232	257	291	256	241	188	77	49	105
MIN	.08	.11	.32	1.1	.73	.32	.45	.45	.22	.13	.32	.16
CFSM	.04	.30	4.37	4.00	3.88	.97	5.47	4.27	1.85	1.07	.88	1.19
IN.	.04	.33	5.05	4.61	4.03	.42	6.11	4.93	2.07	1.23	1.01	1.33
CAL YR 1978	TOTAL	3053.49	MEAN	8.37	MAX	306	MIN	.04	CFSM	1.44	IN	19.48
WTR YR 1979	TOTAL	5355.77	MEAN	14.7	MAX	291	MIN	.08	CFSM	2.52	IN	34.17

NONCONNAH CREEK BASIN

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07032224 JOHNS CREEK AT RAINES ROAD AT MEMPHIS, TN

LOCATION.--Lat 35°02'05", long 89°53'10", Shelby County, Hydrologic Unit 08010211, on right bank at upstream side of Raines Road, 500 ft (152 m) west of Mendenhall Road, and 1.0 mi (1.6 km) south of Winchester Road in Memphis.

DRAINAGE AREA.--19.4 mi² (50.2 km²).

PERIOD OF RECORD.--May 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 276 ft (84 m), from topographic map.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,340 ft³/s (151 m³/s) May 23, 1979, gage height, 17.90 ft (5.456 m); minimum, 0.04 ft³/s (0.001 m³/s) Sept. 12, 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,600 ft³/s revised (73.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 3	1345	5260 149	17.75 5.410	Apr. 11	2100	4490 127	16.29 4.965
Dec. 8	1045	2780 78.7	12.71 3.874	Apr. 23	0850	3340 94.6	13.94 4.249
Jan. 26	Unknown	Unknown	Unknown	May 4	0150	3330 94.3	13.93 4.246
Feb. 23	0650	3610 102	14.51 4.423	May 23	0030	*5340 151	17.90 5.456
Mar. 3	0945	3810 108	14.92 4.548	June 2	1745	3070 86.9	13.35 4.069
Apr. 2	0025	3740 106	14.78 4.505	June 3	0150	2700 76.5	12.53 3.819

Minimum discharge, 0.11 ft³/s (0.003 m³/s) Nov. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	.17	1.2	556	2.7	11	203	6.0	5.3	.62	1.1	405
2	.35	.17	1.1	32	3.0	7.0	795	12	735	.68	160	14
3	.33	.15	1890	13	8.0	1120	80	308	501	.80	15	5.9
4	.32	.15	101	4.7	5.1	92	135	973	22	.87	140	2.3
5	.40	.14	11	5.2	3.6	21	40	60	10	1.0	5.2	1.0
6	.35	.28	6.6	21	19	12	28	25	6.5	.75	2.1	1.4
7	.32	.84	206	119	42	9.2	21	14	5.6	5.8	1.6	.77
8	.35	.19	1050	14	31	6.6	173	9.7	4.1	233	1.1	.50
9	.39	.17	52	9.7	18	5.6	169	7.3	2.1	7.0	6.4	.44
10	.42	.20	16	10	9.1	106	41	5.9	1.4	2.4	1.2	.47
11	.52	.20	10	6.5	41	16	760	4.9	.90	3.7	1.1	.43
12	.54	.20	4.6	7.9	42	9.9	331	121	.90	20	.82	.41
13	4.1	.18	3.5	60	16	7.5	35	13	1.5	2.2	.77	2.3
14	.38	.20	2.6	15	11	5.8	17	7.7	4.1	1.5	.70	.72
15	.24	.44	1.9	3.8	9.7	4.5	11	6.5	2.9	1.1	.70	.38
16	.21	.14	2.1	3.4	5.7	4.0	9.7	5.4	3.2	1.0	.56	.41
17	.20	101	1.6	21	4.1	4.0	7.7	4.6	2.5	1.1	.51	.44
18	.29	2.5	1.3	13	7.5	4.3	6.7	4.6	1.8	.93	.49	2.4
19	.27	1.3	1.4	450	12	6.6	6.1	6.2	3.3	.94	.52	.66
20	.40	.95	70	845	21	22	5.3	4.6	.95	179	.55	104
21	.33	.85	35	900	149	15	5.1	4.8	.97	5.6	9.4	106
22	.37	10	5.4	12	92	31	36	259	.86	1.4	7.9	6.3
23	.27	14	2.9	200	1060	297	1080	775	.81	8.1	1.4	1.7
24	.26	1.8	2.2	70	369	18	139	20	3.5	12	169	1.0
25	.26	1.0	1.5	16	343	8.9	66	11	.93	2.0	23	.87
26	.90	57	1.3	9.4	45	5.9	144	4.6	.79	18	4.5	.94
27	.28	8.9	1.2	8.8	21	23	26	61	.69	11	1.7	.67
28	.28	1.7	.95	5.8	10	13	13	13	.62	135	76	.53
29	.22	2.7	1.2	4.0	---	7.6	8.9	10	2.4	6.0	5.4	.46
30	.23	1.6	.49	5.7	---	45	7.3	5.4	.73	2.2	2.0	.41
31	.26	---	543	4.2	---	86	---	4.7	---	1.3	1.3	---
TOTAL	14.40	222.98	4077.55	3446.1	2400.5	2025.6	4399.8	2767.9	1327.35	666.99	642.02	662.81
MEAN	.46	7.43	132	111	85.7	65.3	147	89.3	44.2	21.5	20.7	22.1
MAX	4.1	101	1890	900	1060	1120	1080	973	735	233	169	405
MIN	.20	.14	.95	3.4	2.7	4.0	5.1	4.6	.62	.62	.49	.38
CFSM	.02	.38	6.80	5.72	4.42	3.37	7.58	4.60	2.28	1.11	1.07	1.14
IN	.03	.43	7.82	6.61	4.60	3.88	8.44	5.31	2.55	1.28	1.23	1.27
CAL YR 1978	TOTAL	11299.17	MEAN	31.0	MAX	1890	MIN	.14	CFSM	1.60	IN	21.67
WTR YR 1979	TOTAL	22654.00	MEAN	62.1	MAX	1890	MIN	.14	CFSM	3.20	IN	43.44

NONCONNAH CREEK BASIN

07032241 BLACK BAYOU AT SOUTHERN AVENUE AT MEMPHIS, TN

LOCATION.--Lat 35°06'55", long 89°56'00", Shelby County, Hydrologic Unit 08010211, on right bank 130 ft (40 m) downstream from Southern Avenue, and 150 ft (46 m) east of Normal Street in Memphis.

DRAINAGE AREA.--0.59 mi² (1.53 km²).

PERIOD OF RECORD.--December 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 270 ft (82 m), from topographic map.

REMARKS.--Records poor. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD. Maximum discharge, 486 ft³/s (13.8 m³/s) Sept. 29, 1977, gage height, 9.05 ft (2.758 m); minimum, 0.04 ft³/s (0.001 m³/s) May 18, 1976, Nov. 16, 17, Dec. 22, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.08 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)	Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)
Dec. 3	1045	386 10.9	8.06 2.457	Apr. 11	0150	336 9.52	7.59 2.313
Dec. 7	1700	338 9.57	7.61 2.319	Apr. 11	1840	388 11.0	8.08 2.463
Apr. 1	2030	424 12.0	8.42 2.566	May 3	2140	*468 13.3	8.84 2.694
Apr. 1	2145	404 11.4	8.23 2.508	June 24	0420	290 8.21	7.15 2.179

Minimum discharge, 0.05 ft³/s (0.001 m³/s) several days in August and September, but may have been lower during period when control was disturbed.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	.51	.95	9.3	.47	.15	34	.78	.62	.23	.40	7.0
2	.73	.75	.83	.58	.67	.17	3.6	1.7	12	.22	.41	.21
3	.61	.89	38	.51	.73	20	.43	27	1.0	.24	.27	.22
4	.79	.94	1.2	.45	.44	.18	1.4	4.9	.38	.25	1.4	.21
5	.73	1.0	.78	.86	.36	.17	.37	.57	.37	.23	.27	.23
6	.66	1.5	.60	2.0	3.2	.15	.38	.42	.43	.23	.25	.24
7	.77	2.1	36	1.4	1.1	.34	.33	.41	.33	2.4	.29	.21
8	.72	.78	26	.70	.65	.42	1.8	.41	.35	.93	.24	.23
9	.67	.80	.64	.57	.53	.69	.47	.37	.35	.28	.29	.25
10	.73	.89	.53	.42	.76	1.1	.43	.41	.31	.27	.28	.19
11	.75	.83	.40	.40	.65	.35	31	1.9	.39	1.4	.61	.22
12	.61	.94	.44	.55	.60	.30	.70	4.8	.28	1.5	.21	.59
13	6.1	1.0	.62	1.3	.57	.42	.52	.41	.26	.33	.25	1.3
14	1.1	.73	.44	.36	.37	.39	.44	.43	.42	.28	.26	.24
15	.92	1.1	.25	.47	.31	.27	.48	.41	.39	.32	.19	.25
16	1.1	11	.42	.55	.65	.32	.52	.44	.30	.31	.21	.18
17	1.0	5.7	.24	2.1	.14	.31	.49	.45	.30	.31	.31	.50
18	.78	.78	.32	.59	.78	.25	.52	.49	.29	.37	.17	.70
19	.98	1.0	.35	16	.29	.49	.57	.92	.30	.35	.21	.18
20	.55	.67	8.8	8.0	.26	1.1	.62	.42	.32	.36	.21	7.0
21	.52	.84	.37	.93	.23	.38	.64	1.1	.30	.36	1.1	2.4
22	.88	4.5	.33	.59	.59	2.3	3.1	1.5	.26	.40	.88	.31
23	.94	.47	.24	3.7	7.3	1.9	18	1.0	.30	1.3	.42	.24
24	.82	.71	.37	.51	1.5	.34	1.5	.43	6.9	.61	9.3	.62
25	1.1	.99	.37	.43	.59	.33	.74	.47	.25	.59	.33	.43
26	2.3	4.8	.24	.33	.18	.34	1.0	.42	.25	.76	.27	.58
27	.78	1.0	.51	.44	.17	.63	.65	2.8	.21	.44	.10	.78
28	.83	1.5	.29	.49	.22	.33	.69	2.4	.24	2.8	1.4	.52
29	.99	.84	.46	.32	---	.34	.69	.50	.40	.47	.40	.40
30	.85	.63	3.0	.37	---	1.6	.75	.41	.26	.45	.24	.48
31	.91	---	11	.36	---	.69	---	.41	---	.44	.24	---
TOTAL	31.96	50.19	134.99	55.58	24.31	36.75	106.83	59.08	28.76	19.48	21.41	26.91
MEAN	1.03	1.67	4.35	1.79	.87	1.19	3.56	1.91	.96	.63	.69	.90
MAX	6.1	11	38	16	7.3	20	34	27	12	2.8	9.3	7.0
MIN	.52	.47	.24	.32	.14	.15	.33	.37	.21	.22	.10	.18
CFSM	1.75	2.83	7.37	3.03	1.48	2.02	6.03	3.24	1.63	1.07	1.17	1.53
IN.	2.01	3.16	8.50	3.50	1.53	2.31	6.72	3.72	1.81	1.23	1.35	1.69
CAL YR 1978	TOTAL	739.79	MEAN	2.03	MAX	38	MIN	.24	CFSM	3.44	IN	46.57
WTR YR 1979	TOTAL	596.25	MEAN	1.63	MAX	38	MIN	.10	CFSM	2.76	IN	37.53

NONCONNAH CREEK BASIN

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07032248 CANE CREEK AT EAST PERSON AVENUE AT MEMPHIS, TN

LOCATION.--Lat 35°06'02", long 90°00'43", Shelby County, Hydrologic Unit 08010211, on left bank 40 ft (12.2 km) upstream from bridge on East Person Avenue, 0.4 mi (0.6 km) east of Elvis Presley Boulevard, 0.6 mi (1.0 km) south of South Parkway East in Memphis, and at mile 2.8 (4.5 km).

DRAINAGE AREA.--4.98 mi² (12.90 km²).

PERIOD OF RECORD.--December 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 243 ft (74 m), from topographic map.

REMARKS.--Records good. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,020 ft³/s (85.5 m³/s) May 7, 1978, gage height, 12.98 ft (3.956 m); minimum, 0.70 ft³/s (0.020 m³/s) Aug. 5, 1979.

EXTREMES FOR CURRENT YEAR.--Peak discharges above a base of 1,400 ft³/s (39.6 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)	Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)
Dec. 3	1055	2290 64.9	11.55 3.520	Apr. 11	1920	2720 77.0	12.41 3.783
Dec. 7	1705	1620 45.9	10.06 3.066	May 3	2245	2810 79.6	12.58 3.834
Jan. 19	2250	1520 43.0	9.81 2.990	June 24	0445	1970 55.8	10.86 3.310
Mar. 3	0800	2000 56.6	10.93 3.332	Aug. 24	1835	2090 59.2	11.13 3.392
Apr. 1	2210	*2810 79.6	12.59 3.837				

Minimum discharge, 0.70 ft³/s (0.020 m³/s) Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	2.4	3.2	57	3.6	3.5	239	4.2	4.9	9.6	3.6	74
2	3.1	3.2	3.8	4.1	3.5	3.0	58	9.6	155	11	6.7	4.5
3	3.2	2.6	332	3.8	4.0	217	4.6	234	28	11	2.6	5.1
4	3.3	2.4	4.8	4.0	3.6	4.4	17	107	3.3	9.3	48	7.3
5	3.5	3.2	3.3	4.3	3.7	3.6	3.6	5.7	5.9	9.3	1.0	7.9
6	3.7	3.9	3.3	10	4.3	3.7	3.9	3.6	8.2	8.0	1.5	5.1
7	3.3	7.7	116	9.3	5.3	3.5	4.5	4.0	7.2	24	2.0	5.1
8	3.7	1.9	138	3.1	4.4	3.5	18	4.3	7.7	19	4.6	3.9
9	3.7	1.9	3.2	3.0	3.9	7.1	4.4	4.7	5.7	9.1	4.2	4.2
10	3.7	1.8	2.4	2.8	3.7	17	4.5	4.7	4.9	12	2.4	5.0
11	3.5	2.0	2.5	2.6	3.6	3.5	262	6.3	6.1	46	28	5.2
12	3.5	2.0	2.6	2.6	4.3	3.8	7.9	73	7.1	44	1.3	5.6
13	34	2.2	2.9	5.4	4.1	4.1	4.6	2.7	7.9	11	1.7	20
14	2.3	2.4	3.1	2.6	4.3	5.1	4.2	2.7	7.8	6.9	2.2	4.9
15	2.2	3.5	3.1	2.5	4.6	6.2	4.2	2.9	7.7	9.3	2.2	4.1
16	2.5	78	3.5	2.8	4.5	4.3	4.4	3.2	6.7	13	1.7	4.5
17	2.3	51	2.7	11	4.4	4.3	4.7	3.0	6.4	12	1.4	2.8
18	2.8	2.5	2.9	3.7	6.7	4.2	5.4	2.6	7.4	13	1.1	9.7
19	3.9	2.4	3.4	128	4.4	5.7	5.8	3.5	8.7	13	1.1	4.7
20	3.3	2.7	47	54	5.4	25	5.3	2.7	9.2	12	1.6	85
21	3.3	2.8	3.3	5.7	5.2	5.0	5.1	17	10	9.8	2.4	17
22	4.2	23	2.4	3.2	4.0	40	32	23	8.0	10	22	2.7
23	4.4	6.1	2.2	14	5.9	33	126	11	8.0	13	1.5	2.2
24	4.4	2.5	2.9	4.6	6.1	3.7	37	2.3	88	19	122	2.6
25	4.4	2.5	2.6	3.7	16	3.6	4.4	3.1	4.6	29	22	2.6
26	3.9	36	2.9	3.5	4.2	3.7	12	3.3	5.9	56	11	2.3
27	3.0	3.6	4.5	3.3	3.9	6.8	3.8	29	7.4	5.6	11	2.4
28	2.8	2.9	4.4	3.2	6.6	3.6	3.4	19	8.7	31	42	3.1
29	2.8	3.4	4.9	3.2	---	3.4	3.8	6.3	30	2.3	7.1	3.2
30	2.8	2.9	23	3.5	---	21	4.0	5.0	8.4	3.2	7.9	2.6
31	2.8	---	87	3.5	---	6.1	---	5.2	---	3.8	6.8	---
TOTAL	133.0	265.9	823.8	368.0	138.2	462.4	897.5	608.6	484.8	485.2	374.6	309.3
MEAN	4.29	8.86	26.6	11.9	4.94	14.9	29.9	19.6	16.2	15.7	12.1	10.3
MAX	34	78	332	128	16	217	262	234	155	56	122	85
MIN	2.2	1.8	2.2	2.5	3.5	3.0	3.4	2.3	3.3	2.3	1.0	2.2
CFSM	.86	1.78	5.34	2.39	.99	2.99	6.00	3.94	3.25	3.15	2.43	2.07
IN.	.99	1.99	6.15	2.75	1.03	3.45	6.70	4.55	3.62	3.62	2.80	2.31

CAL YR 1978 TOTAL 5183.7 MEAN 14.2 MAX 332 MIN 1.8 CFSM 2.85 IN 38.71
WTR YR 1979 TOTAL 5351.3 MEAN 14.7 MAX 332 MIN 1.0 CFSM 2.95 IN 39.97

MISSISSIPPI RIVER BASIN

07032260 CYPRESS CREEK AT NEELY ROAD AT MEMPHIS, TN

LOCATION.--Lat 35°01'36", long 90°03'23", Shelby County, Hydrologic Unit 08010211, on right bank at downstream end of bridge on Neely Road, 1.8 mi (2.9 km) west of U.S. Highway 51 and 1.1 mi (1.8 km) southeast of U.S. Highway 61 in Memphis.

DRAINAGE AREA.--3.18 mi² (8.24 km²).

PERIOD OF RECORD.--February 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 244 ft (74.4 m), from topographic map.

REMARKS.--Records poor. Due to construction and change in rating conditions data from May to September will be published in a later report. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,830 ft³/s (51.8 m³/s) Apr. 11, 1979, gage height, 12.72 ft (3.877 m); no flow several days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11.3 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)	Date	Time	Discharge (ft ³ /s)(m ³ /s)	Gage height (ft)(m)
Dec. 3	0835	497 14.1	6.67 2.033	Mar. 3	0815	1240 35.1	10.51 3.203
Dec. 3	1150	1680 47.6	12.25 3.734	Apr. 1	2205	1620 45.9	12.07 3.679
Dec. 7	1840	590 16.7	7.24 2.207	Apr. 8	2125	1200 34.0	10.35 3.155
Dec. 8	0900	630 17.8	7.48 2.280	Apr. 11	0155	622 17.6	7.43 2.265
Jan. 19	2330	509 14.4	6.75 2.057	Apr. 11	1915	*1830 51.8	12.72 3.877
Feb. 23	0420	620 17.6	7.42 2.262				

No flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.00	.10	99	.20	1.8	138	.26				
2	.05	.00	.20	26	.51	.40	42	.17				
3	.07	.00	314	.72	1.2	185	2.2	---				
4	.04	.00	4.9	.48	.27	16	14	---				
5	.04	.00	1.0	1.0	.26	.75	.56	---				
6	.04	.05	.48	13	4.8	.48	.10	---				
7	.02	2.7	74	13	4.7	.30	.07	---				
8	.02	.03	146	.75	2.0	.20	66	---				
9	.06	.01	2.4	13	.58	4.5	3.3	---				
10	.10	.00	.48	.53	.40	11	.38	---				
11	.06	.00	.23	.39	1.3	.40	201	---				
12	.03	.00	.14	.36	.79	.37	3.0	---				
13	12	.00	.12	3.2	.49	.30	.39	---				
14	.20	.00	.08	.49	.39	3.6	.04	---				
15	.03	1.3	.07	.19	.34	4.0	.02	---				
16	.02	37	1.5	.17	.27	.14	.01	---				
17	.01	31	.14	2.3	.26	.14	.01	---				
18	.01	.31	.05	.46	1.9	.12	.01	---				
19	.01	.05	.05	65	.32	3.8	.02	---				
20	.01	.03	27	52	4.9	16	.01	---				
21	.01	.02	1.6	4.3	4.7	3.3	.25	---				
22	.01	7.1	.24	.80	14	26	15	---				
23	.01	4.1	.13	20	109	22	75	---				
24	.00	.14	.42	2.6	3.7	5.0	13	---				
25	.00	.03	.12	.74	20	.78	1.9	---				
26	2.2	22	.06	.67	2.1	.26	20	---				
27	.03	1.0	.05	.60	.78	4.8	.99	---				
28	.01	.27	.05	.43	3.6	1.8	.63	---				
29	.00	1.1	.45	.34	---	1.7	.45	---				
30	.00	.23	12	.34	---	19	.24	---				
31	.00	---	54	.27	---	11	---	---				
TOTAL	15.11	108.47	642.06	323.13	183.76	344.94	598.58	---				
MEAN	.49	3.62	20.7	10.4	6.56	11.1	20.0	---				
MAX	12	37	314	99	109	185	201	---				
MIN	.00	.00	.05	.17	.20	.12	.01	---				
CFSM	.15	1.14	6.51	3.27	2.06	3.49	6.29	---				
IN.	.18	1.27	7.51	3.78	2.15	4.03	7.00	---				

CAL YR 1978 TOTAL 1808.44 MEAN 4.95 MAX 314 MIN .00 CFSM 1.56 IN 2.15

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first table is a table of discharge measurements at low-flow partial-record stations and the second is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table. Other measurements made for seepage investigations are listed in subsequent tables.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1979.

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Mobile River basin						
*02384900	Coahulla Creek near Cleveland, Tn.	Lat 35°07'00", long 84°50'18", Bradley County, at bridge on State Highway 74, 2.5 miles southeast of intersection of State Highways 60 and 74 in Cleveland.	4.35	1975-79	11-15-78	.25
Cumberland River basin						
03407879	Smoky Creek at Smoky Junction, Tn.	Lat 36°16'38", long 84°22'27", Scott County, 1.0 mile south- west of Smoky Junction, and at mile 0.9.	32.8	1975-79	10- 5-78	2.3
03414340	East Fork Obey River at Obey City, Tn.	Lat 36°11'02", long 85°09'53", Overton County, at county road bridge, 0.7 mile north of Obey City, 0.8 mile west of Cliff Springs, and at mile 39.6.	34.6	1975-76, 1978-79	11-13-78 9- 6-79	3.6 4.4
03414680	West Fork Obey River near Allred, Tn.	Lat 36°18'52", long 85°10'53", Overton County, at bridge on State Highway 85, 1.1 miles south of Allred, and at mile 15.4.	70.8	1975-76, 1978-79	11-13-78 9- 7-79	6.6 12
03417695	Roaring River at Okalona, Tn.	Lat 36°19'08", long 85°20'30", Overton County, at bridge on State Highway 42, 0.4 mile south of Okalona, 4.5 miles south of Livingston, and at mile 33.0.	15.3	1929, 1975-76, 1978-79	11-15-78	2.8
03418030	Spring Creek near Algood, Tn.	Lat 36°14'46", long 85°23'14", Overton County, at bridge on State Highway 42, 4.8 miles northeast of Algood, and at mile 21.2.	13.8	1929, 1975-76, 1978-79	11-15-78	2.9
03418180	Blackburn Fork near Dodson Branch, Tn.	Lat 36°20'53", long 85°34'00", Jackson County, at bridge on State Highway 135, 3.1 miles northwest of Dodson Branch, and at mile 0.24.	61.0	1974-76, 1978-79	11-15-78	15
03419270	Calfkiller River near Taylors, Tn.	Lat 36°01'53", long 85°20'10", White County, at bridge on State Highway 84, 1.9 miles northeast of Taylors, and at mile 34.7.	37.7	1975-76, 1978-79	11-14-78	11
03430120	McCrory Creek at Donelson, Tn.	Lat 36°09'27", long 86°38'10", Davidson County, at bridge on Stewarts Ferry Pike, 1.6 miles southeast of Donelson, and at mile 1.5.	8.64	1974-75, 1978-79	10- 3-78 11-14-78	.50 .82

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at low-flow partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
		Cumberland River basin--Continued				
03430140	Stoners Creek near Green Hill, Tn.	Lat 36°12'00", long 86°34'56", Davidson County, at bridge on Chandler Road, upstream from Louisville and Nashville Rail- road bridge, 2.4 miles east of Hermitage, 3.5 miles southwest of Green Hill, and at mile 5.2.	15.0	1974-75, 1978-79	11-14-78	1.4
03431570	Whites Creek near Jordonia, Tn.	Lat 36°13'34", long 86°49'21", Davidson County, at bridge on county road, 0.2 mile upstream from Ewing Creek, 2.7 miles northeast of Jordonia, and at mile 6.3.	35.9	1974-76, 1978-79	10- 3-78 11-14-78	3.2 2.6
03431578	Ewing Creek at Gwynwood Drive, near Jordonia, Tn.	Lat 36°13'58", long 86°47'32", Davidson County, at bridge on Gwynwood Drive, 0.3 mile down- stream from North Fork, 3.4 miles northeast of Bordeaux, and 4.5 miles northeast of Jordonia, and at mile 2.1.	9.98	1974-76, 1978-79	10- 3-78 11-14-78	a.10 .33
*03432925	Little Harpeth River at Granny White Pike at Brentwood, Tn.	Lat 36°01'30", long 86°49'09", Williamson County, at bridge on Granny White Pike, 2.0 miles southwest of Brentwood, and at mile 1.1.	22.0	1978-79	11-15-78	1.7
03433660	South Harpeth River at Fernvale, Tn.	Lat 35°57'15", long 87°04'43", Williamson County, at new county road bridge, at Fernvale, 3.1 miles southeast of Fairview, and at mile 14.0.	27.6	1974-75, 1978-79	11-14-78	14
03433700	South Harpeth River at Linton, Tn.	Lat 36°00'32", long 87°01'43", Davidson County, at new bridge on Old Harding Pike, 0.2 mile downstream from East Fork Creek, and 0.9 mile south of Linton.	59.7	1967-68, 1970-73, 1975, 1978-79	11-14-78	17
03433810	Brush Creek near Kingston Springs, Tn.	Lat 36°04'38", long 87°04'50", Cheatham County, at new county road bridge, 2.5 miles southeast of Kingston Springs.	27.2	1954, 1974-75, 1978-79	11-14-78	9.5
03433910	Turnbull Creek near New Hope, Tn.	Lat 36°01'55", long 87°12'48", Dickson County, at bridge on State Highway 96, 0.1 mile down- stream from Nails Creek, 0.25 mile downstream from I-40 bridge, 3.2 miles west of New Hope, and at mile 13.1.	66.2	1974-75, 1978-79	11-14-78	21
03434560	Trace Creek near White Bluff, Tn.	Lat 36°07'06", long 87°11'49", Dickson County, at county road bridge, 1.5 miles northeast of White Bluff, and at mile 3.5.	1.99	1974-75, 1978-79	11-14-78	1.3
03434590	Jones Creek near Burns, Tn.	Lat 36°06'15", long 87°19' 55", Dickson County, at bridge on Rock Church Road, 3.5 miles north of Burns, and at mile 21.9.	13.3	1974-76, 1978-79	11-14-78	1.2
03434620	Town Branch near Charlotte, Tn.	Lat 36°10'44", long 87°18'15", Dickson County, at bridge on Old Ashland City road, 2.0 miles east of Charlotte, and at mile 1.5.	8.33	1974-76, 1978-79	11-14-78	.93
03435007	Hurricane Creek near Salem, Tn.	Lat 36°25'34", long 87°19'02", Montgomery County, at Chapel Hill Road bridge, 2.4 miles south of Salem, 3.0 miles east of Orgains Crossroads, and 3.6 miles north of Southside.	11.2	1964, 1974-75, 1978-79	11-14-78	.84

See footnotes at end of the table.

Discharge measurements made at low-flow partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Cumberland River basin--Continued						
03435044	Red River near Orlinda, Tn.	Lat 36°38'36", long 87°40'46", Robertson County, at ford on county road, 3.6 miles north- east of Orlinda.	78.4	1974-76, 1978-79	11-15-78	8.4
03435110	South Fork Red River at Cross Plains, Tn.	Lat 36°33'30", long 86°41'32", Robertson County, at county road bridge, 0.7 mile north of Cross Plains, and at mile 24.4.	19.7	1974-76, 1978-79	11-15-78	1.5
03435120	South Fork Red River near Orlinda, Tn.	Lat 36°35'34", long 86°45'53", Robertson County, at bridge on State Highway 49, 2.75 miles west of Orlinda, and at mile 17.9.	69.2	1969, 1974-76, 1978-79	11-15-78	5.7
03436460	Little West Fork Red River near New Providence, Tn.	Lat 36°35'31", long 87°23'23", Montgomery County, at bridge on Peachers Mill Road, 3.0 miles north of New Providence.	179.0	1964, 1974, 1978-79	11-14-78	16
Tennessee River basin						
03454790	Trail Fork Big Creek at Del Rio, Tn.	Lat 35°54'27", long 83°01'26", Cocke County, at county road bridge, 1.0 mile south of Del Rio, and at mile 0.6.	32.6	1975-79	10- 3-78 11-13-78	8.2 7.7
03454850	Long Creek near Del Rio, Tn.	Lat 35°56'53", long 83°03'12", Cocke County, at bridge on U.S. Highways 25 and 70, 2.5 miles northwest of Del Rio, and at mile 0.1.	11.7	1953-54, 1975-79	10- 3-78 11-13-78	1.2 1.5
03466099	Jockey Creek at Limestone, Tn.	Lat 36°13'31", long 82°38'06", Washington County, 0.25 mile west of Limestone, at county road bridge 400 ft above mouth.	19.0	1954, 1972-73, 1976-77, 1979	10- 4-78 11-13-78	4.6 3.4
03466870	Roaring Fork near Greeneville, Tn.	Lat 36°13'18", long 82°52'05", Greene County, at county road bridge, 0.4 mile southeast of Bales Chapel, and 4.5 miles northwest of Greeneville.	20.6	1975-79	10- 4-78	3.1
03466880	Roaring Fork near Mosheim, Tn.	Lat 36°14'38", long 82°53'37", Greene County, at first bridge upstream from the mouth, and 4.5 miles northeast of Mosheim.	46.4	1975-79	10- 4-78	5.3
03467490	Bent Creek near Springvale, Tn.	Lat 36°11'14", long 83°09'53", Hamblen County, at bridge 0.6 mile above mouth, 2.4 miles southeast of Springvale.	41.2	1954, 1959, 1975-79	10- 4-78	4.6
03468140	Muddy Creek near Chestnut Hill, Tn.	Lat 35°56'57", long 83°20'51", Jefferson County, at county road bridge, 1.4 miles north of Chest- nut Hill, and at mile 0.7.	1.78	1976-79	10- 3-78 11-13-78	.03 .04
03470330	Tuckahoe Creek at Peters Mill, Tn.	Lat 35°58'02", long 83°42'07", Knox County, at county road bridge at Peters Mill, 4.0 miles east of Riverdale, and at mile 0.9.	28.3	1975-79	10- 5-78	5.1
03476515	Baidleman Creek near Caywood Ford, Tn.	Lat 36°31'28", long 82°07'53", Sullivan County, at second bridge upstream from mouth, 0.7 mile north of Caywood Ford, and 2.4 miles west of South Holston Dam.	27.4	1975-79	10-11-78 11-14-78	6.5 7.7
03499053	Culton Creek at Alcoa, Tn.	Lat 35°46'41", long 83°59'46", Blount County, at county road bridge, 1,000 ft upstream from Louisville and Nashville Railroad bridge, at Alcoa.	11.8	1975-79	10- 4-78 11-14-78	4.1 3.5

Discharge measurements made at low-flow partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Tennessee River basin--Continued						
03518470	Bald River near Tellico Plains, Tn.	Lat 35°19'20", long 84°10'40", Monroe County, just below Bald River Falls, 50 ft above mouth, and 7.0 miles southeast of Tellico Plains.	21.7	1927, 1975-79	10- 3-78 11-14-78	13 11
03518700	Cane Creek at Belltown Mill, Tn.	Lat 35°25'31", long 84°15'16", Monroe County, at county road bridge at Belltown Mill, 0.3 mile southwest of Cane Creek (Belltown P.O.).	18.2	1975-77, 1979	10- 3-78 11-14-78	1.9 1.7
03520170	Pond Creek near Adolphus, Tn.	Lat 35°42'20", long 84°27'35", Loudon County, 150 ft below county road bridge, 2.5 miles southwest of Prospect, 3.1 miles southwest of Adolphus, and 3.6 miles northwest of Philadelphia.	30.8	1953, 1975-77, 1979	10- 4-78 11-14-78	17 12
03531700	Mulberry Creek at Alanthus Hill, Tn.	Lat 36°33'18", long 83°22'51", Hancock County, at county road bridge, 1.0 mile southeast of Alanthus Hill, and at mile 0.1.	23.9	1975-77, 1979	10- 4-78 11-14-78	6.7 4.9
03543300	Little Sewee Creek near Center Point, Tn.	Lat 35°35'54", long 84°42'13", Meigs County, at bridge on Center Point Road, 1.6 miles southwest of Center Point, and at mile 0.9.	32.3	1959, 1975, 1977, 1979	10- 4-78	11
03566117	East Fork North Mouse Creek near Niota, Tn.	Lat 35°32'54", long 84°33'45", McMinn County, at first bridge upstream from mouth, 2.4 miles north of Niota, and at mile 0.5.	2.87	1975, 1977, 1979	10- 4-78	.30
03579900	Boiling Fork Creek at Cowan, Tn.	Lat 35°09'45", long 86°00'20", Franklin County, at bridge on county road, 1,200 ft southeast of intersection of county road and U.S. Highway 64 in Cowan, and at mile 14.6.	17.0	1955-79	11-14-78	.44
03582205	Norris Creek below Howell, Tn.	Lat 35°13'33", long 86°33'56", Lincoln County, at bridge on U.S. Highway 231, 2.6 miles east of Howell, 5.1 miles north of Fayetteville, and at mile 8.4.	15.1	1952, 1975, 1978-79	11-14-78	.45
03582591	Cane Creek near Egam, Tn.	Lat 35°11'13", long 86°37'38", Lincoln County, at county road bridge, 1.1 miles east of Egam, and at mile 3.8.	93.0	1975, 1979	11-14-78	2.0
03583320	Richland Creek at Milky Way, Tn.	Lat 35°18'46", long 87°01'48", Giles County, at bridge on U.S. Highway 31, 0.8 mile north of Milky Way, 1.0 mile downstream from Robertson Fork Creek, and at mile 44.2.	149.0	1956, 1975, 1979	11-14-78	9.0
03584300	Buchanan Creek near Tarpley, Tn.	Lat 35°07'13", long 86°58'29", Giles County, at bridge on U.S. Highway 31, 1.9 miles southeast of Tarpley, and at mile 2.8.	35.7	1952-54, 1975, 1979	11-14-78	2.8
03597800	Thompson Creek near Roseville, Tn.	Lat 35°27'19", long 86°19'57", Bedford County, at county road bridge, 1.8 miles west of Rose- ville, 4.1 miles west of Nor- mandy, and at mile 1.5.	18.3	1953-54, 1956-57, 1970, 1975, 1978-79	10- 6-78 11-14-78	3.8 3.4
03601100	Big Bigby Creek at Needmore, Tn.	Lat 35°32'43", long 87°14'05", Maury County, at county road bridge (Needmore Bridge), at Needmore, 1.2 miles downstream from West Fork, and 1.7 miles west of Mount Pleasant, Tn.	48.3	1934, 1969, 1972-73, 1975, 1978-79	11-14-78	12

* Also crest-stage partial-record station.

a Estimated.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with near-by continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1979

						Annual maximum	
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis- charge (ft ³ /s)
Mobile River basin							
*02384900	Coahulla Creek near Cleveland, Tn.	Lat 35°07'00", long 84°50'18", Bradley County, at bridge on State Highway 74, 2.5 miles southeast of intersection of State Highways 74 and 60 at Cleveland. Datum of gage is 828.3 ft National Geodetic Vertical Datum of 1929.	4.35	1955-79	3- 3-79	6.48	520
Green River basin							
03313600	West Fork Drakes Creek tributary near Fountain Head	Lat 36°33'34", long 86°27'26", Sumner County, at culvert under county road, 2.3 miles northeast of Fountain Head, and 0.4 mile upstream from mouth.	0.95	1967-79	12- 8-78	10.58	665
Cumberland River basin							
03409000	White Oak Creek at Sunbright, Tn.	Lat 36°14'38", long 84°40'14", Morgan County, at bridge on U.S. Highway 27 in Sunbright. Datum of gage is 1,294.05 ft National Geodetic Vertical Datum of 1929.	13.5	1933†, 1955-79	5- 4-79	12.01	-
03414700	Puncheon Camp Creek at Allred, Tn.	Lat 36°19'35", long 85°11'10", Overton County, at bridge on State Highway 85 at Allred, 3.9 miles south of inter- section of State Highways 85 and 52.	15.5	1955-79	12- 8-78	7.75	-
03417700	Mathews Branch trib- utary near Livingston, Tn.	Lat 36°20'04", long 85°20'23", Overton County, at culvert under State Highway 42, 3.0 miles south of intersection of State Highways 85 and 42, 2.9 miles southwest of Livingston.	0.49	1955-79	9-28-79	7.87	480
03418201	Doe Creek at Gainesboro, Tn.	Lat 36°21'23", long 85°39'20", Jackson County, at bridge on Highway 56, at Gainesboro. Datum of gage is 519.37 ft National Geodetic Vertical Datum of 1929.	5.72	1978-79	12- 8-78	4.29	-
03420360	Mud Creek tributary No. 2 near Summitville, Tn.	Lat 35°36'10", long 86°01'33", Coffee County, at culvert under county road, 3.5 miles northwest of Summitville, and 0.7 mile upstream from mouth.	2.28	1967-79	3- 3-79	4.88	488
03420500	Barren Fork near Trousdale, Tn.	Lat 35°39'55", long 85°53'00", Warren County, at county highway bridge on Trousdale- McMinnville pike, 3.2 miles east of Trousdale. Datum of gage is 925.61 ft National Geodetic Vertical Datum of 1929.	126	1933-57† 1958-79	3- 3-79	10.10	6,630

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1979--Continued

						Annual maximum	
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis-charge (ft ³ /s)
Cumberland River basin--Continued							
03420600	Owen Branch near Centertown, Tn.	Lat 35°42'30", long 85°53'05", Warren County, at bridge on U.S. Highway 70-S, 2.4 miles southeast of Centertown.	4.60	1955-79	9-27-79	4.00	585
03421200	Charles Creek near McMinnville, Tn.	Lat 35°43'00", long 85°46'05", Warren County, at bridge on county road at Faulkner Springs, 2.7 miles north of McMinnville.	31.1	1955-79	3- 3-79	8.78	2,790
03425500	Spring Creek near Lebanon, Tn.	Lat 36°10'49", long 86°14'29", Wilson County, at bridge on Eastover Road, 3.4 miles southeast of Lebanon. Datum of gage is 556.08 ft National Geodetic Vertical Datum of 1929.	35.3	1955-61† 1962-79	9-13-79	12.45	13,500
03425700	Spencer Creek near Lebanon, Tn.	Lat 36°14'20", long 86°24'03", Wilson County, at bridge on county road, 100 ft north of junction of county road and U.S. Highway 70, 6.5 miles west of square in Lebanon.	3.32	1955-79	9-13-79	7.33	1,320
03425800	Cedar Creek tributary at Green Hill, Tn.	Lat 36°13'52", long 86°31'40", Wilson County, at culvert under U.S. Highway 70, 0.2 mile east of Green Hill.	0.86	1955-57, 1959-79	12- 8-78	7.10	529
03426000	Drakes Creek above Hendersonville, Tn.	Lat 36°22'14", long 86°37'00", Sumner County, at bridge on Long Hollow Pike, 4.5 miles north of Hendersonville. Datum of gage is 503.06 ft National Geodetic Vertical Datum of 1929.	19.2	1955-61† 1962-79	12- 8-78	9.53	4,220
03428043	Lytle Creek at Sanbyrne Drive at Murfreesboro, Tn.	Lat 35°49'38", long 86°23'28", Rutherford County, at bridge on Sanbyrne Drive, 1 mile south of intersection of Highways 41 and 231 in Murfreesboro. Datum of gage is 591.91 ft National Geodetic Vertical Datum of 1929.	17.6	1978-79	9-13-79	0.79	-
03429500	Stewart Creek near Smyrna, Tn.	Lat 35°59'54", long 86°30'18", Rutherford County, at bridge on Fifteenth Avenue at former Sewart Air Force Base, 1.3 miles northeast of Smyrna. Datum of gage is 490.00 ft National Geodetic Vertical Datum of 1929.	69.7	1953-58† 1959-63, 1965-79	5-14-79	16.58	7,670
03430118	McCrory Creek at Ironwood Drive at Donelson, Tn.	Lat 36°09'07", long 86°39'02", Davidson County, at bridge under Ironwood Drive, 1.3 miles southeast of intersection of U.S. Highway 70 (Lebanon Road) and Donelson Pike in Donelson.	7.31	1977-79	9-13-79	9.63	2,760
03430400	Mill Creek at Nolensville, Tn.	Lat 35°57'32", long 86°40'31", Williamson County, at bridge on Sunset Road, 0.6 mile northwest of Nolensville. Datum of gage is 586.18 ft National Geodetic Vertical Datum of 1929.	12.0	1965-79	5- 4-79	9.45	11,400
03431000	Mill Creek near Antioch, Tn.	Lat 36°04'54", long 86°40'50", Davidson County, at bridge on Franklin-Limestone Road, 1.6 miles north of Antioch. Datum of gage is 472.57 ft National Geodetic Vertical Datum of 1929.	64.0	1954-61† 1962-63 1964-75† 1976-79	5- 4-79	23.78	30,100

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1979--Continued

						Annual maximum	
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis-charge (ft ³ /s)
Cumberland River basin--Continued							
03431040	Sevenmile Creek at Blackman Road, at Nashville, Tn.	Lat 36°04'21", long 86°44'00", Davidson County, at bridge on Blackman Road, 7.0 miles southeast of State capitol in Nashville. Datum of gage is 499.08 ft National Geodetic Vertical Datum of 1929.	12.2	1965-79	9-13-79	9.58	-
03431060	Mill Creek at Thompson Lane, near Woodbine, Tn.	Lat 36°07'04", long 86°43'08", Davidson County, at bridge on Thompson Lane, 1.5 miles northeast of intersection of Thompson Lane and Nolensville Road (U.S. Highway 31-A, 41-A) in Woodbine. Datum of gage is 432.55 ft National Geodetic Vertical Datum of 1929.	93.4	1965-79	5- 4-79	20.63	26,200
03431062	Mill Creek tributary at Glenrose Avenue at Woodbine, Tn.	Lat 36°07'02", long 86°43'37", Davidson County, at culvert under Glenrose Avenue, 1.1 miles northeast of intersection of Nolensville Road and Thompson Lane in Woodbine, and 750 ft upstream from mouth.	1.17	1977-79	5- 4-79	c9.10	-
03431120	West Fork Browns Creek at General Bates Drive, at Nashville, Tn.	Lat 36°06'29", long 86°47'07", Davidson County, at bridge on General Bates Drive, 4.0 miles south of State capitol in Nashville. Datum of gage is 499.94 ft National Geodetic Vertical Datum of 1929.	3.30	1965-79	9-13-79	6.63	1,820
03431240	East Fork Browns Creek at Baird-Ward Printing Company, at Nashville, Tn.	Lat 36°06'33", long 86°46'00", Davidson County, at bridge on access road to Baird-Ward Printing Co., Plant No. 1, 500 ft west of 100-Oaks Shopping Center, and 4.0 miles southeast of State capitol in Nashville. Datum of gage is 497.91 ft National Geodetic Vertical Datum of 1929.	1.58	1965-79	9-13-79	4.47	452
03431340	Browns Creek at Factory Street, at Nashville, Tn.	Lat 36°08'26", long 46°45'31", Davidson County, at bridge on Factory Street, 800 ft downstream from Louisville and Nashville Railroad bridge, and 2.3 miles southeast of State capitol in Nashville. Datum of gage is 418.92 ft National Geodetic Vertical Datum of 1929.	13.2	1965-79	9-13-79	a10.89	7,800
03431490	Pages Branch at Avondale, Tn.	Lat 36°12'22", long 86°46'24", Davidson County, at culvert under Trinity Lane, 900 ft east of intersection of Interstate 65 and Trinity Lane at Avondale, 0.9 mile upstream from mouth.	2.01	1977-79	12- 3-78	6.20	-
03431520	Claylick Creek at Lickton, Tn.	Lat 36°18'02", long 86°48'37", Davidson County, at bridge on Lickton Road in Lickton, 1,200 ft upstream from mouth.	4.13	1965-79	9-13-79	6.85	1,760
03431550	Earthman Fork at Whites Creek, Tn.	Lat 36°15'55", long 86°49'51", Davidson County, at bridge on Whites Creek Pike in town of Whites Creek, 1,800 ft upstream from mouth.	6.29	1965-79	12- 8-78	7.37	1,440
03431580	Ewing Creek at Knight Road, near Bordeaux, Tn.	Lat 36°13'55", long 86°48'14", Davidson County, at bridge on Knight Road, 3.0 miles northeast of Bordeaux. Datum of gage is 438.27 ft National Geodetic Vertical Datum of 1929.	13.3	1965-79	12- 3-78	9.87	3,980

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1979--Continued

						Annual maximum	
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis- charge (ft ³ /s)
Cumberland River basin--Continued							
03432925	Little Harpeth River at Granny White Pike at Brentwood, Tn.	Lat 36°01'30", long 86°49'09", Williamson County, at bridge on Granny White Pike, 2.0 miles southwest of Brentwood. Datum of gage is 618.29 ft National Geodetic Vertical Datum of 1929.	22.0	1979	5- 4-79	17.55	9,260
03435030	Red River near Portland, Tn.	Lat 36°33'24", long 86°34'14", Sumner County, at county road bridge, 1.5 miles upstream from Austin Branch, 3.5 miles southwest of Portland and at mile 93.0.	15.1	1966-75† 1976-79	12- 8-78	12.05	5,080
Tennessee River basin							
03461230	Caney Creek near Cosby, Tn.	Lat 35°47'03", long 83°12'11", Cocke County, at culvert under State Highway 32, 3.3 miles southeast of Cosby.	1.62	1967-79	3- 4-79	4.07	82
03465000	North Indian Creek near Unicoi, Tn.	Lat 36°10'35", long 82°17'36", Unicoi County, on right bank 900 ft upstream from Rocky Branch, 3.4 miles southeast of Unicoi. Datum of gage is 2,209.56 ft National Geodetic Vertical Datum of 1929.	15.9	1945-57† 1959-79	7-21-79	3.94	560
03467500	Nolichucky River near Morristown, Tn.	Lat 36°10'49", long 83°10'32", Hamblen County, on right bank along Southern Railway, 0.6 mile upstream from Susong Bridge, 7 miles south- east of Morristown. Datum of gage is 1,015.73 ft National Geodetic Vertical Datum of 1929.	1,679	1921-57† 1959-79	3- 5-79	14.50	22,100
03469110	Ramsey Creek near Pittman Center, Tn.	Lat 35°45'33", long 83°20'49", Sevier County, at culvert under State Highway 73, 1.5 miles southeast of Pittman Center.	2.18	1967-79	3- 4-79	5.51	228
03469130	Little Pigeon River near Sevierville, Tn.	Lat 35°51'38", long 83°30'13", Sevier County, at bridge on U.S. Highway 411, 2.9 miles east of Sevierville. Datum of gage is 928.21 ft National Geodetic Vertical Datum of 1929.	110	1954-79	3- 4-79	13.62	9,850
03469160	East Fork Little Pigeon River near Sevierville, Tn.	Lat 35°51'55", long 83°29'17", Sevier County, at bridge on U.S. Highway 411, 5.2 miles east of Sevierville. Datum of gage is 929.20 ft National Geodetic Vertical Datum of 1929.	64.1	1954-79	3- 4-79	8.96	1,830
03469500	West Prong Little Pigeon River near Pigeon Forge, Tn. ^{d/}	Lat 35°48'21", long 83°34'28", Sevier County, at bridge on old State Highway 71, 1.6 miles northwest of Pigeon Forge. Datum of gage is 965.23 ft National Geodetic Vertical Datum of 1929.	76.2	1946-49† 1954-79	3- 5-79	12.27	9,500
03481600	Corn Creek at Moun- tain City, Tn.	Lat 36°29'23", long 81°48'52", Johnson County, at bridge on county road, 600 ft north of junction of county road and U.S. Highway 421, 1 mile northwest of Mountain City.	5.34	1959-61, 1963-79	1979	<2.13	e

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1979--Continued

						Annual maximum	
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis- charge (ft ³ /s)
Tennessee River basin--Continued							
03482000	Roan Creek near Neva, Tn.	Lat 36°22'37", long 81°53'14", Johnson County, on right bank on Butler-Neva road, 1.7 miles southwest of Neva. Datum of gage is 2,103.11 ft National Geodetic Vertical Datum of 1929.	102	1943-55† 1959-79	3-24-79	5.15	1,950
03486225	Powder Branch near Johnson City, Tn.	Lat 36°19'03", long 82°16'40", Carter County, at culvert under county road, 4.0 miles east of Johnson City, 4.3 miles southwest of Elizabethton, and at mile 0.2.	4.88	1973-79	7-21-79	7.74	47
03491200	Big Creek tributary near Rogersville, Tn.	Lat 36°25'30", long 82°57'17", Hawkins County, at culvert under county road, 300 ft upstream from mouth, 2.8 miles northeast of Rogersville.	2.00	1955-79	3- 4-79	5.26	145
03498700	Nails Creek near Knoxville, Tn.	Lat 35°52'49", long 83°46'47", Sevier County, at culvert under State Highway 71, 0.8 mile southeast of Shooks Gap, 10.5 miles southeast of Knoxville.	0.36	1955-79	3- 4-79	2.95	52
03519610	Baker Creek trib- utary near Binfield, Tn.	Lat 35°41'56", long 84°02'46", Blount County at culvert under county road, 1.5 miles east of Binfield.	2.10	1966-77 1979f	5-24-79	3.63	69
03519640	Baker Creek near Greenback, Tn.	Lat 35°40'21", long 86°46'28", Blount County, at county road bridge, 1.0 mile upstream from Little Baker Creek, 3.4 miles east of Greenback, and at mile 15.0.	16.0	1965-75† 1976-79	12- 9-79	9.14	2,180
03520100	Sweetwater Creek near Loudon, Tn.	Lat 35°44'17", long 84°22'25", Loudon County, at bridge on State Highway 72, 2.0 miles west of Loudon. Datum of gage is 737.03 ft National Geodetic Vertical Datum of 1929.	62.2	1954-79	7-21-79	6.06	800
03534000	Coal Creek at Lake City, Tn.g/	Lat 36°13'14", long 84°09'27", Anderson County, at bridge on U.S. Highway 25-W, at Lake City. Datum of gage is 842.91 ft National Geodetic Vertical Datum of 1929.	24.5	1932-34† 1955-79	12- 4-78	7.13	4,450
03534500	Buffalo Creek at Norris, Tn.	Lat 36°11'05", long 84°03'34", Anderson County, at culvert under Norris Freeway (State Highway 71), 1.0 mile south- east of Norris. Datum of gage is 901.71 ft National Geodetic Vertical Datum of 1929.	h9.92	1948-50† 1955-79	7-21-79	7.56	695
03535180	Willow Fork near Halls Crossroads, Tn.	Lat 36°05'59", long 83°54'27", Knox County, at culvert under Quarry Road, 1.7 miles northeast of Halls Crossroads. Datum of gage is 1,027.82 ft National Geodetic Vertical Datum of 1929.	3.23	1967-79	7-21-79	5.74	103
03538130	Caney Creek near Kingston, Tn.	Lat 35°51'53", long 84°23'07", Roane County, 1.5 miles up- stream from mouth, 2.4 miles northeast of intersection of U.S. Highway 70 and Buttermilk Road, 7.5 miles east of Kingston.	5.55	1962-79	7-21-79	6.68	1,050
03538200	Poplar Creek near Oliver Springs, Tn.	Lat 36°01'20", long 84°18'37", Anderson County, at bridge on State Highway 61, 0.9 mile downstream from Brushy Fork, 2.5 miles southeast of Oliver Springs, 4 miles upstream from Indian Creek.	55.9	1954-79	5-31-79	16.54	5,000

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Annual maximum	
						Gage height (feet)	Dis-charge (ft ³ /s)
Tennessee River basin--Continued							
03538500	Emory River near Wartburg, Tn.	Lat 36°06'46", long 84°36'54", Morgan County, at bridge on Wartburg-Lancing Road, 1.2 miles northwest of Wartburg. Datum of gage is 1,003.06 ft National Geodetic Vertical Datum of 1929.	83.2	1935-57† 1958-66, 1967-68† 1969-79	2-25-79	11.88	4,030
03538600	Obed River at Crossville, Tn.	Lat 35°57'27", long 85°03'00" Cumberland County, at bridge on former U.S. Highway 70-S, 0.5 mile southwest of junction of U.S. Highways 70-S and 70-N, 1.5 miles northwest of Crossville.	12.0	1955-79	2-25-79	5.67	465
03538900	Self Creek near Big Lick, Tn.	Lat 35°47'54", long 85°02'33", Cumberland County, at culvert under county road, 1.3 miles southwest of Big Lick.	3.80	1968-79	1- 1-79	4.03	205
03541100	Bitter Creek near Camp Austin, Tn.	Lat 36°00'53", long 84°31'33", Morgan County, at culvert under U.S. Highway 27, 3.0 miles southeast of Camp Austin.	5.53	1967-79	7-21-79	7.17	2,020
03542500	Piney River at Spring City, Tn.	Lat 35°41'59", long 84°51'17", Rhea County, at bridge on U.S. Highway 27, 0.5 mile northeast of Spring City. Datum of gage is 749.65 ft National Geodetic Vertical Datum of 1929.	95.9	1928-30† 1955-79	3- 4-79	13.21	e
03544500	Richland Creek near Dayton, Tn.	Lat 35°30'17", long 85°01'20" Rhea County, 0.4 mile above bridge on State Highway 30, 1.0 mile northwest of Dayton. Datum of gage is 728.59 ft National Geodetic Vertical Datum of 1929.	50.2	1928-31† 1935-55† 1956-79j	3- 4-79	7.94	k6,200
03566200	Brymer Creek near McDonald, Tn.	Lat 35°07'20", long 84°57'00", Bradley County, at bridge on U.S. Highways 11 and 64, 1.9 miles east of McDonald.	9.68	1955-79	5-31-79	6.47	1,210
03570800	Little Brush Creek near Dunlap, Tn.	Lat 35°24'15", long 85°23'18", Sequatchie County, at bridge on former State Highway 8, 1.5 miles north of Dunlap.	15.4	1959-79	3- 4-79	7.31	1,960
03571800	Battle Creek near Monteagle, Tn.	Lat 35°08'03", long 85°46'15", Marion County, at bridge on former U.S. Highways 41 and 64, 9.2 miles southeast of Monteagle. Datum of gage is 621.51 ft National Geodetic Vertical Datum of 1929.	50.4	1955-79	9-28-79	9.09	4,750
03578500	Bradley Creek near Prairie Plains, Tn.	Lat 35°21'21", long 85°58'45", Coffee County, on left bank 165 ft downstream from highway bridge, 1.1 miles northwest of Prairie Plains. Datum of gage is 968.13 ft National Geodetic Vertical Datum of 1929.	41.3	1952-59† 1960-79	3- 3-79	9.70	1,760
03581500	West Fork Mulberry Creek at Mulberry, Tn.	Lat 35°12'34", long 86°27'46", Lincoln County, at old bridge 1,000 ft downstream from State Highway 50, 0.2 mile southwest of Mulberry. Datum of gage is 687.72 ft National Geodetic Vertical Datum of 1929.	41.2	1954-62† 1963-66, 1967-68† 1969-79	3- 3-79	12.15	5,540

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Annual maximum discharge at crest-stage partial-record stations during water year 1979--Continued

						Annual maximum	
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis-charge (ft ³ /s)
Tennessee River basin--Continued							
03582300	Norris Creek near Fayetteville, Tn.	Lat 35°09'53", long 86°32'45", Lincoln County, at bridge on old State Highway 50, 2.0 miles northeast of Fayetteville. Datum of gage is 666.27 ft National Geodetic Vertical Datum of 1929.	42.6	1954-79	5- 4-79 7-20-79	8.95	4,230
03583200	Chicken Creek at McBurg, Tn.	Lat 35°11'03", long 86°48'47", Lincoln County, at bridge on county highway R7374 in McBurg.	7.66	1955-79	5- 4-79	5.02	1,600
03583300	Richland Creek near Cornersville, Tn.	Lat 35°19'10", long 86°52'20", Marshall County, at bridge on U.S. Highway 31-A, 3.4 miles southwest of Cornersville. Datum of gage is 754.28 ft National Geodetic Vertical Datum of 1929.	47.5	1962-68† 1969-79	9-13-79	13.60	6,680
03587200	Bluewater Creek tributary near Leoma, Tn.	Lat 35°08'29", long 87°22'05", Lawrence County, at culvert under U.S. Highway 43, 1.8 miles southeast of Leoma.	0.49	1955-79	9-13-79	4.11	193
03587500	Shoal Creek above Little Shoal Creek at Lawrenceburg, Tn.m/	Lat 35°14'02", long 87°20'00", Lawrence County, at bridge on U.S. Highway 43, 0.5 mile south of intersection of U.S. Highways 43 and 64 in Lawrenceburg.	27.0	1932-33† 1955-79	9-13-79	4.62	770
03594200	Eagle Creek near Clifton Junction, Tn.	Lat 35°20'21", long 87°58'22", Wayne County, at bridge on State Highway 114, 2.5 miles northwest of Clifton Junction and 2.6 miles upstream from mouth.	19.0	1955-79	4-12-79	6.02	2,550
03594300	Cypress Creek tributary near Pope, Tn.	Lat 35°37'10", long 87°57'20", Perry County, at culvert under State Highways 20 and 100, in Craig Hollow, 2.0 miles east of Pope.	0.75	1955-79	12- 8-78	4.00	200
03597000	Garrison Fork at Fairfield, Tn.	Lat 35°33'59", long 86°17'00", Bedford County, at bridge on county road, 0.1 mile east of Fairfield. Datum of gage is 800.25 ft National Geodetic Vertical Datum of 1929.	66.3	1954-58† 1959-66, 1967-68† 1970-79	12- 8-78	13.56	4,600
03597300	Wartrace Creek above Bell Buckle, Tn.	Lat 35°37'45", long 86°21'22", Bedford County, at culvert under county road, 2.7 miles north of Bell Buckle.	4.99	1966-79	9-13-79	4.55	338
03597450	Kelly Creek tributary near Bell Buckle, Tn.	Lat 35°36'34", long 86°19'11", Bedford County, at bridge on county road, 3.0 miles north-east of Bell Buckle.	0.73	1966-79	9-13-79	4.34	325
03597500	Wartrace Creek at Bell Buckle, Tn.	Lat 35°35'16", long 86°20'22", Bedford County, at bridge on State Highway 82, 0.2 mile downstream from Kelly Creek, 0.9 mile east of Bell Buckle, and at mile 7.7. Datum of gage is 822.44 ft National Geodetic Vertical Datum of 1929.	16.3	1953-61† 1962-66 1966-75† 1979	12- 8-78	8.71	2,680

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1979--Continued

						Annual maximum	
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis-charge (ft ³ /s)
Tennessee River basin--Continued							
03598200	Weakley Creek near Rover, Tn.	Lat 35°38'05", long 86°33'03", Bedford County, at culvert under county road, 3.7 miles southeast of intersection of county road with U.S. Highway 41-A at Rover.	9.46	1955-79	9-13-79	5.26	1,560
03599200	East Rock Creek at Farmington, Tn.	Lat 35°30'05", long 86°42'50", Marshall County, at bridge on old State Highway 64, 0.2 mile west of Farmington.	43.1	1954-79	12- 8-78	11.06	4,430
03602100	Moss Spring Hollow at Centerville, Tn.	Lat 35°45'44", long 87°27'47", Hickman County, at bridge on State Highways 48 and 100, 1.2 miles south of Centerville.	3.68	1954-79	5- 4-79	n7.83	1,930
03604070	Coon Creek tributary near Hohenwald, Tn.	Lat 35°34'07", long 87°40'02", Perry County, at culvert under State Highway 20, 7 miles northwest of Hohenwald.	0.51	1967-79	7-28-76 4- 4-77 5- 8-78 5- 4-79	2.73 3.19 3.45 4.72	22 46 62 143
03604080	Hugh Hollow Branch near Hohenwald, Tn.	Lat 35°34'59", long 87°40'36", Perry County, at culvert under State Highway 20, 8 miles northwest of Hohenwald.	1.52	1967-79	7- 8-76 9-25-77 5- 8-78 5- 4-79	2.67 3.15 3.07 4.11	76 175 151 810
03604090	Coon Creek above Chop Hollow near Hohenwald, Tn.	Lat 35°35'19", long 87°41'09", Perry County, at bridge on State Highway 20, 9 miles northwest of Hohenwald.	6.02	1967-79	6-21-79	4.92	944
03605700	Deer Creek tributary near Waverly, Tn.	Lat 36°10'20", long 87°44'40", Humphreys County, at culvert under State Highway 13 in Smith Hollow, 8.0 miles northeast of Waverly.	1.04	1955-79	4- 2-79	3.05	-
Obion River basin							
07025220	Cane Creek near Martin, Tn.	Lat 36°19'36", long 88°51'05", Weakley County, at bridge on U.S. Highway 45-E, 1.2 miles south of Martin. Datum of gage is 350.67 ft National Geodetic Vertical Datum of 1929.	6.79	1955-79	12- 9-78	12.25	-
07028600	Cain Creek tributary near Trenton, Tn.	Lat 35°56'17", long 88°56'27", Gibson County, at culvert under U.S. Highway 45-W, 2.9 miles south of square in Trenton.	0.95	1955-57, 1959-79	4- 2-79	8.61	720
07028700	Cain Creek near Trenton, Tn.	Lat 35°57'56", long 88°57'14", Gibson County, at bridge on U.S. Highway 54, 1.6 miles southwest of Trenton.	14.4	1954-79	4- 2-79	13.07	5,200
07028940	Turkey Creek near Medina, Tn.	Lat 35°47'39", long 88°48'37", Gibson County, at county road (Lewis Road) bridge, 1.7 miles southwest of Medina.	7.87	1967-79	7- 8-79	16.32	3,860
Loosahatchie River basin							
07030270	Clear Creek near Arlington, Tn.	Lat 35°16'20", long 89°42'17", Shelby County, at bridge on U.S. Highways 70 and 79, 3.0 miles southwest of Arlington. Datum of gage is 245.78 ft National Geodetic Vertical Datum of 1929.	60.5	1954-56, 1959-79	5- 4-79	16.29	4,620
07030300	Loosahatchie River tributary at St. Elmo Avenue at Memphis, Tn.	Lat 35°13'56", long 89°58'51", Shelby County, 120 ft downstream from culvert under St. Elmo Avenue, at Memphis.	0.82	1975-79	5- 3-79	11.10	1,730

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Annual maximum discharge at crest-stage partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Annual maximum	
						Gage height (feet)	Dis- charge (ft ³ /s)
Wolf River basin							
07031653	Wolf River trib- utary at Willey Road, at Germantown, Tn.	Lat 35°05'54", long 89°48'36", Shelby County, 16 ft upstream from culvert on Willey Road and 700 ft west of Cordova Road, at Germantown.	0.21	1975-79	5- 3-79	9.68	195
07031657	Wolf River trib- utary at Neshoba Road, at Germantown, Tn.	Lat 35°06'21", long 89°49'54", Shelby County, 30 ft upstream from culvert on Neshoba Road and 150 ft west of Brookside Drive, at Germantown.	0.36	1975-79	5- 3-79	14.29	2,100
07031665	White Station Creek at Rich Road, at Memphis, Tn.	Lat 35°08'09", long 89°53'37", Shelby County, at downstream side of bridge on Rich Road, 2,000 ft west of White Station Road, at Memphis.	2.45	1975-79	5- 3-79	12.18	4,220
07031690	Fletcher Creek trib- utary at Whitten Road at Memphis, Tn.	Lat 35°09'38", long 89°50'13", Shelby County, at upstream end of culvert under Whitten Road, 0.5 mile north of Mullins Station Road, 1.1 miles northeast of Shelby Penal Farm.	0.54	1975-79	4- 1-79	7.35	240
07031694	Harrington Creek tributary at Elmore Park Road, at Bartlett, Tn.	Lat 35°12'08", long 89°51'26", Shelby County, 25 ft upstream from culvert under Elmore Park Road, 750 ft south of State Road, 1 mile east of Bartlett.	0.33	1975-79	4- 1-79	17.96	-
07031695	Harrington Creek tributary at Hawthorne Road, at Bartlett, Tn.	Lat 35°11'43", long 89°51'21", Shelby County, 25 ft downstream from culvert under Hawthorne Road, 30 ft west of Elmore Park Road, 1 mile southeast of Bartlett.	0.21	1975-79	5- 3-79	11.54	-
07031697	Harrington Creek tributary at Stage Road, at Bartlett, Tn.	Lat 35°12'30", long 89°53'05", Shelby County, 30 ft upstream from culvert under Stage Road, 300 ft west of Chaucer Road, 1 mile west of Bartlett.	0.91	1975-79	8-22-79	11.79	-
07031710	Harrison Creek at Charleswood Road at Memphis, Tn.	Lat 35°08'34", long 89°55'00", Shelby County, upstream side of bridge at Charleswood Road, 300 ft west of Waring Road, at Memphis.	1.59	1975-79	5- 3-79	13.95	1,980
07031725	Workhouse Bayou tributary at Isabelle Street, at Memphis, Tn.	Lat 35°09'24", long 89°56'01", Shelby County, 200 ft upstream from culvert under Isabelle Street, at Memphis.	0.09	1975-79	5- 3-79	5.26	118
07031761	Cypress Creek trib- utary at Cumberland Street at Memphis, Tn.	Lat 35°08'22", long 89°58'10", Shelby County, 2,900 ft south of Broad Street, 300 ft east of Missouri Pacific Railroad, and 150 ft west of Illinois Central Gulf Railroad, at Memphis.	0.47	1978-79	12- 3-78	9.27	-
07031765	Overton Bayou at North Drive, at Memphis, Tn.	Lat 35°09'20", long 89°58'52", Shelby County, beside Cypress Drive, 45 ft upstream from culvert under North Drive, at Memphis.	0.30	1975-79	4- 1-79	7.23	310
07031773	Lick Creek at Jefferson Avenue, at Memphis, Tn.	Lat 35°08'20", long 89°59'30", Shelby County, 20 ft upstream from culvert under Jefferson Avenue, at Memphis.	1.00	1975-79	4- 1-79	9.31	825
07031795	Wolf River trib- utary at Whitney Avenue, at Memphis, Tn.	Lat 35°12'31", long 90°01'15", Shelby County, at upstream end of culvert under Whitney Avenue, at Memphis.	0.35	1975-79	4- 1-79	10.82	-

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1979--Continued

						Annual maximum	
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis- charge (ft ³ /s)
Nonconnah Creek basin							
07032195	Nonconnah Creek, tributary at Shelby Drive, at Memphis, Tn.	Lat 35°01'13", long 89°49'57", Shelby County, at upstream end of culvert under Shelby Drive, at Memphis.	1.58	1975-79	5-22-79	16.16	e
07032242	Cherry Bayou at Park Avenue, at Memphis, Tn.	Lat 35°06'24", long 89°54'13", Shelby County, 20 ft down- stream from culvert under Park Avenue, 150 ft west of Colonial Road, at Memphis.	0.18	1975-79	5- 3-79	5.00	-
07032244	Cherokee Creek at Kimball Avenue, at Memphis, Tn.	Lat 35°05'43", long 89°57'31", Shelby County, at upstream end of culvert under Alamo Street, 80 ft north of Kimball Avenue, at Memphis.	0.49	1975-79	5- 3-79	10.18	1,040
07032246	Days Creek at Shelby Drive, at Memphis, Tn.	Lat 35°01'14", long 90°00'37", Shelby County, 75 ft upstream from culvert under Shelby Drive, at Memphis.	2.65	1975-79	4-11-79	8.40	1,100
07032247	Parkway Bayou at South Parkway East, at Memphis, Tn.	Lat 35°06'33", long 89°59'41", Shelby County, between one- way lanes of South Parkway East, 100 ft west of Castalia Street, at Memphis.	0.49	1975-79	5- 3-79	8.45	395
07032249	Latham Branch at Valley Boulevard, at Memphis, Tn.	Lat 35°05'56", long 90°02'43", Shelby County, between one- way lanes of Valley Boule- vard, 200 ft downstream from Dison Avenue, at Memphis.	0.05	1975-79	4- 1-79	14.35	72

* Also a low-flow partial-record station.

† Operated as a continuous-record gaging station.

a Determined from high-water marks.

b Furnished by Corps of Engineers, Nashville district.

c Backwater from Mill Creek.

d Published as West Fork Little Pigeon River prior to 1966.

e Discharge not determined.

f Gage damaged, no record for period October 1, 1977 to
May 3, 1979.

g Published as at Coal Creek prior to 1935.

h Includes 2.10 mi² without surface drainage.j Discontinued as a low-flow partial-record station;
established as a continuous-record station
June 4, 1980; peak listed is annual peak and
occurred during operation as crest-stage
partial-record station.

k Approximately.

m Published as Beeler Fork at Lawrenceburg
prior to 1934.

n Downstream gage; upstream gage destroyed.

Miscellaneous Sites

Measurements of streamflow at points other than gaging stations are given in the following table. Measurements of base flow are designated by an asterisk (*); measurements of peak flow by a dagger (†).

Discharge measurements made at miscellaneous sites during water year 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements Date	Discharge (ft ³ /s)
Green River basin						
03313870 Trammel Creek	Drakes Creek	Lat 36°34'20", long 86°13'03", Sumner County, 30 ft upstream from David Creek, 1.8 miles northeast of Westmoreland.	4.09	1975-76	11-15-78	*1.9
Cumberland River basin						
03430118 McCrory Creek	Stones River	Lat 36°09'08", long 86°39'01", Davidson County, at bridge under Ironwood Drive, 1.3 miles southeast of intersection of U. S. Highway 70 (Lebanon Road) and Donelson Pike in Donelson.	7.31	1976-77	9-13-79	†2,760
03430142 Stoners Creek	Stones River	Lat 36°12'07", long 86°35'29", Davidson County, at bridge on Tulip Grove Road, at Tulip Grove.	15.4	1968 1975-76	11-14-78	*1.9
03430400 Mill Creek	Cumberland River	Lat 35°57'32", long 86°40'31", Williamson County, at bridge on Sunset Road, 0.6 mile northwest of Nolensville.	12.0	1964-66 1970	5- 4-79	†11,400
03431000 Mill Creek	Cumberland River	Lat 36°04'54", long 86°40'50", Davidson County, at bridge on Franklin-Limestone Road, 1.6 miles north of Antioch.	64.0	1954-61† 1964-75†	5- 4-79	†30,100
03431069 Mill Creek	Cumberland River	Lat 36°08'30", long 86°42'52", Davidson County, at bridge on Interstate 40, at Nashville.	99.6	-	5- 4-79	†28,800
03432925 Little Harpeth River	Harpeth River	Lat 36°01'30", long 86°49'09", Williamson County, at bridge on Granny White Pike, 2.0 miles southwest of Brentwood.	22.0	-	5- 8-78 5- 8-78 4- 2-79 5- 4-79 5- 4-79	a 793 a 445 1,440 †9,260 1,610
03433920 Beaverdam Creek	Turnbull Creek	Lat 36°03'44", long 87°13'06", Dickson County, 750 feet below bridge on White Bluff Road, 3.1 miles south of White Bluff.	22.7	-	11-15-78	6.7
03434610 Town Branch	Jones Creek	Lat 36°10'39", long 87°20'11", Dickson County, at county road bridge (old State Highway 47 bridge) 1,700 ft east of intersection of State Highways 48 and 49 at Charlotte and 2,000 ft upstream from Matlock Branch.	2.05	1973 1975-76	11-14-78	*.24
03435111 Honey Run	South Fork Red River	Lat 36°32'20", long 86°41'23", Robertson County, at Payne bridge, 0.8 mile southeast of Cross Plains.	19.4	-	3- 7-78	a 52

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1979--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements Date	Discharge (ft ³ /s)
Tennessee River Basin						
360155083240900 Rimmer Creek	Douglas Lake	Lat 36°01'55", long 83°24'09", Jefferson County, 740 ft upstream from Riley Spring, 1.3 miles northeast of intersection of State Highways 66 and 92 in Dandridge, and at mile 0.4.	3.21	-	8-18-78	a*1.2
360153083240300 Rimmer Creek	Douglas Lake	Lat 36°01'53", long 83°24'03", Jefferson County, 150 ft upstream from Riley Spring, 1.3 miles northeast of intersection of State Highways 66 and 92 in Dandridge, and at mile 0.3.	3.23	-	8-18-78	a*1.8
360149083240000 Rimmer Creek	Douglas Lake	Lat 36°01'49", long 83°24'00", Jefferson County, 200 ft downstream from Riley Spring, 1.3 miles northeast of intersection of State Highways 66 and 92 in Dandridge, and at mile 0.2.	3.42	-	8-18-78	a*1.3
03587255 Bluewater Creek	Tennessee River	Lat 35°04'42", long 87°23'13", Lawrence County, at bridge on county road, 1.0 mile north of Brown Crossroads, 3.0 miles east of Loretto.	14.4	-	11-14-78	*4.9
03593098 Robinson Creek	Tennessee River	Lat 35°02'54", long 88°15'05", Hardin County, at bridge on State Highway 57, 1.3 miles northeast of Counce.	4.78	1977-78	11-15-78	2.4
03602100 Moss Spring Hollow	Indian Creek	Lat 35°45'44", long 87°27'47", Hickman County, at bridge on State Highway 48 and 100, 1.2 miles south of Centerville.	3.68	1962 1967	5- 4-79	†1,930
03602192 West Piney River	Piney River	Lat 36°01'39", long 87°27'00", Dickson County, at bridge on Highway 48, 4.8 miles southwest of Dickson.	21.2	1950-52 1962-63 1965	11-14-78	8.5
03602600 Beaverdam Creek	Duck River	Lat 35°47'07", long 87°37'32", Hickman County, at bridge on Highway 50, at Coble.	74.0	1943 1953 1954	5- 4-79	†14,700
03602603 Cow Hollow Creek	Beaverdam Creek	Lat 35°45'34", long 87°39'00", Hickman County, at bridge on Highway 50, 2.0 miles southwest of Coble.	1.36	-	5- 4-79	†1,140
03602658 Sugar Creek	Duck River	Lat 35°53'30", long 87°38'28", Hickman County, 0.2 mile below South Fork Sugar Creek, 0.2 mile upstream from Inter- state 40, at Bucksport.	21.4	-	10-20-78 11- 3-78 12- 6-78 1-29-79 2-26-79	10 9.6 65 55 163
03604208 Lower Sinking Creek	Cane Creek	Lat 35°43'13", long 87°42'26", Hickman County, at Highway 50, 0.9 mile northeast of county line, near Coble.	2.45	-	5- 4-79	†1,300

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at miscellaneous sites during water year 1979--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Obion River basin						
07025400 North Fork Obion River	Obion River	Lat 36°24'20", long 88°51'20", Weakley County, at bridge on U. S. Highway 45E, 4.0 miles north of Martin.	372	1939-78b	8-22-79	818
					9-25-79	333
07026370 North Reelfoot Creek	Reelfoot Creek	Lat 36°27'50", long 89°15'13", Obion County, at bridge on State Highway 22, 0.9 mile northwest of Clayton.	56.3	-	8-21-79	7.4
					9-26-79	33
					9-28-79	14
07029100 North Fork Forked Deer River	Forked Deer River	Lat 36°01'49", long 89°23'13", Dyer County, at bridge on business route of U. S. Highway 51, 0.2 mile south of county courthouse in Dyersburg, and at mile 7.2.	939	1939-78b	8-23-79	271
					9-25-79	2,470
					9-28-79	3,140
Mississippi River basin						
07032250 Nonconnah Creek	Mississippi River	Lat 35°04'32", long 90°03'47", Shelby County, at bridge on Horn Lake Road, 0.25 mile south of Interstate 55 and at mile 1.8.	182	1968	10-31-78	15
					11-14-78	11
					11-28-78	43
					12- 5-78	302
					2-20-79	115

* Base flow.

† Peak flow.

‡ Operated as a continuous-record station.

a Not previously published.

b Operated as a continuous-record station by Corps of Engineers.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Springs

In 1931 a study of large springs in Tennessee was made and the results published in WSP 713. From 1950 to 1954 a more detailed study, including some of these springs, was made. Results of this study and all subsequent spring measurements were published annually in WSP's from 1950 to 1960. Since 1960 results of measurements have been published in annual State reports.

Spring measurements made in the 1979 Water Year include 14 springs in Dickson and Williamson counties as part of a study of ground water resources of the Dickson and Fairview area's, two springs in Ruthford County as part of a continuing study of ground water resources of the Murfreesboro area, and a spring in Hickman County as part of an industrial use study. The results of measurements showing the discharge, and in some instances water temperature and specific conductance, are given in the following table.

Discharge measurements of springs during water year 1979

Site number and name	Location	Tributary to--	Date	Discharge (gpm)	Temp. (°C) Water	Specific Conduc- tance (umhos at 25°C)
Dickson County						
03602190 Bruce Spring	Lat 36°02'02", long 87°27'15", on farm of L. B. Bruce on left bank of Piney River 0.5 mile upstream from Dickson- Centerville Highway cross- ing, 4.5 miles southwest of Dickson.	West Piney River	7-11-79 7-19-79	640 600	15.5 14.0	240 175
360322087282000 Donegan Spring	Lat 36°03'22", long 87°28'20", 0.0 mile west of county road 1.2 miles west of Eno.	Coon Creek to West Piney River	7-11-79	380	17.0	270
03602180 Fielder Spring	Lat 36°02'00", long 87°27'44", on right bank of West Piney River, 0.8 mile northwest of bridge on State Highway 48, 5.1 miles southwest of Dick- son.	West Piney River	7-11-79	800	14.5	255
360632087204100 Grassy Spring	Lat 36°06'32", long 87°20'41", 150 ft above county road, 2.0 miles northeast of Dick- son.	Jones Creek	7-19-79	35	16.5	165
360239087275300 Redden Spring	Lat 36°02'39", long 87°27'53", 100 ft from county road, 1.2 miles southwest of Eno.	Fielder Branch to West Piney River	7-11-79 7-19-79	260 300	15.5 15.5	220 230
360052087215300 Spring in Lang- ford Hollow	Lat 36°00'52", long 87°21'53", 30 ft above county road, 230 ft above confluence with Turkey Creek, 1.7 miles west of Tidwell.	Turkey Creek to Piney River	7-19-79	9	15.5	310
360042087220700 Spring Tribu- tary to Tur- key Creek	Lat 36°00'42", long 87°22'07", at county road, 0.1 mile above confluence with Turkey Creek, 1.9 miles west of Tidwell.	Turkey Creek to Piney River	7-19-79	4	18.5	225
360657087284200 Walnut Grove Spring	Lat 36°06'57", long 87°28'42", 50 ft below county road, 300 ft above Yellow Creek, at Walnut Grove.	Yellow Creek	7-11-79 7-19-79	220 118	16.5 16.0	245 270
Hickman County						
03602657 Bucksnoth Spring	Lat 35°53'31", long 87°38'22", at left bank of Sugar Creek, 0.2 mile below South Fork Sugar Creek, 0.2 mile south- east of the I-40 Bucksnoth exit, 2.7 miles west of Spot.	Sugar Creek	11-3-78 12-6-78 1-29-79 2-26-79	380 1370 1590 1650	14.5 15.5 - -	225 135 - -
Jefferson County						
03468168 Swann Spring	Lat 36°02'29", long 83°21'18", 500 ft upstream from mouth of Spring Creek, 3.8 miles northeast of Dandridge.	Spring Creek to Douglas Lake	2- 8-78 8-29-78	b2310 b512	- 15.0	- -

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements of springs during water year 1979--Continued

Site number and name	Location	Tributary to--	Date	Discharge (gpm)	Temp. (°C) Water	Specific Conduc- tance (umhos at 25°C)
Jefferson County--Continued						
360I330832359 Riley Spring	Lat 36°01'53", long 83°23'59" 1,500 ft upstream from mouth of Rimmer Creek, 3.6 miles northeast of Dandridge.	Rimmer Creek to Douglas Lake	2- 8-78 8-18-78	b651 b207	- -	- -
Rutherford County						
03429052 Coleman Spring	Lat 36°01'09", long 86°24'18", near left bank of Fall Creek, 0.4 mile north of Powell Chapel Road, 2.5 miles northwest of Silver Hill.	Fall Creek	10-11-78	1280	18.5	420
03428047 Fox Camp Spring	Lat 35°48'15", long 86°20'52", 1.0 mile north of Mankinville, 3.7 miles southeast of Court- house in Murfreesboro	Todd Lake	10-11-78 11-13-78 12-11-78 1-26-79 3-22-79 5- 9-79 6-11-79 8- 9-79 8-22-79 9-17-79	250 110 3070 1830 660 750 740 200 660 1060	18.5 19.5 9.0 13.5 16.5 17.5 19.0 21.0 21.5 20.0	370 420 235 230 300 285 280 375 300 260
Williamson County						
355729087021900 Basin Spring	Lat 35°57'29", long 87°02'19", 0.2 mile east of county road at Tom Redford Ridge, 2.3 miles east of Fernvale.	Bedford Creek to South Har- peth River	7-31-79	a4	-	-
03433670 Chester Spring	Lat 35°58'01", long 87°07'20", on left bank of Hunting Camp Creek Tributary, 150 ft west of county road, 400 ft north of Chester Cemetery, 1.0 mile south of Fairview.	Hunting Camp Creek to South Har- peth River	7-31-79	0	-	-
355933087062600 Horn Tavern Spring	Lat 35°59'33", long 87°06'26", on right bank of Brush Creek, 50 ft north of county road, at Fairview.	Brush Creek to South Harpeth River	7-31-79	c55	14.0	190
03433800 Morgan Spring	Lat 35°59'34", long 87°06'43", on left bank of Brush Creek, 300 ft south of county road, at Fairview.	Brush Creek to South Harpeth River	7-31-79	310	14.0	190
355944087091900 Quinn Spring	Lat 35°59'44", long 87°09'19", on right bank of Quinn Branch, 50 ft east of county road, 1.9 miles northwest of Fair- view.	Quinn Branch to Little Turnbull Creek	7-31-79	a20	15.5	210
355807087095300 Spring Tribu- tary to Aden Branch	Lat 35°58'07", long 87°09'53", on right bank of Aden Branch, 150 ft south of county road, 1.4 miles southeast of Liber- ty Hill.	Aden Branch to Little Turnbull Creek	7-31-79	a110	15.5	170

a Estimated.

b Not previously published.

c Does not include 65 gpm pumpage.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Synoptic coal-hydrology partial-record stations

Measurements of streamflow in the coal resource area made at synoptic coal-hydrology partial-record stations are given in the following table. If the synoptic coal-hydrology station is located at an existing low-flow partial-record station, base-flow measurements are published in the low-flow partial-record table located elsewhere in this report. Measurements at the following synoptic stations were made during low-flow and floodflow streamflow conditions. Field water-quality determinations and samples for laboratory analyses were collected during the same visit to each station. Water-quality data for each station are also published in the water-quality sections of this report. All data and information at these stations are collected to help define the hydrology in the coal resource area, and to determine if the hydrologic regime changes in time.

Discharge measurements made at synoptic coal-hydrology partial-record stations during water year 1979

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis-charge (ft ³ /s)
Cumberland River basin							
03403697	Clear Fork at Highway 90 at Anthras, Tn.	Lat 36°32'46", long 83°59'36", Campbell County, Hydrologic Unit 05130101, 0.8 mile below Rose Creek, 1.0 mile southwest of Eagan, 14.5 miles southeast of Jellico.	49.0	1979	5-22-79 9- 4-79	1.98 1.71	32 12
03403710	Tackett Creek at Anthras, Tn.	Lat 36°32'25", long 84°00'20", Campbell County, Hydrologic Unit 05130101, 7.1 miles southeast of Jellico, 0.8 mile southwest of Anthras and 0.5 mile above mouth.	34.5	1945, 1979	5-22-79 9- 4-79	2.70 2.56	26 10
03403715	Stinking Creek near Newcomb, Tn.	Lat 36°30'26", long 84°08'36", Campbell County, Hydrologic Unit 05130101, at county road bridge near Stinking Creek School, 3.2 miles southeast of Newcomb, and 5.5 miles southwest of Jellico.	38.3	1979	5-23-79 9- 5-79	2.66 2.06	80 10
03403720	Lick Creek at Habersham, Tn.	Lat 36°30'01", long 84°04'32", Campbell County, Hydrologic Unit 05130101, 6 miles southeast of Jellico, 10 miles north of La Follette and 0.5 mile above mouth.	20.7	1979	5-22-79 9- 5-79	2.74 2.64	38 5.2
03403740	Hickory Creek at Morley, Tn.	Lat 36°33'00", long 84°02'42", Campbell County, Hydrologic Unit 05130101, 0.2 mile below White Oak Creek, 4.5 miles southeast of Jellico, 14.0 miles northwest of La Follette and 1.2 miles above mouth.	117	1945 1952-53 1979	5-22-79 9- 4-79	3.14 1.94	211 25
03403770	Elk Creek at Newcomb, Tn.	Lat 36°33'10", long 84°09'53", Campbell County, Hydrologic Unit 05130101, at Newcomb, 0.3 mile above Burnt Pine Creek, 0.6 mile below Whistle Creek and 3.1 miles southwest of Jellico.	40.5	1979	5-23-79 9- 5-79	5.89 5.35	35 12
03404150	Jellico Creek at Ketchen, Tn.	Lat 36°34'13", long 84°19'01", Scott County, Hydrologic Unit 05130101, 0.5 mile downstream from Gum Fork Creek and 9.0 miles northwest of Winfield, Tn.	28.2	1979	5-22-79 9- 5-79	3.82 3.65	11 9.4
03407850	New River at Stainville, Tn.	Lat 36°12'34", long 84°19'18", Anderson-Campbell County line, Hydrologic Unit 05130104, 400 ft below mouth of Ligias Fork, 0.6 mile northwest of Stainville.	66.0	1962 1975-79	5-23-79 9- 5-79	1.29 1.58	45 70
03407873	Beech Fork at Shea, Tn.	Lat 36°14'17", long 84°19'49", Campbell County, Hydrologic Unit 05130104, 500 ft above mouth to New River, 3 miles below Ligias Creek (mouth) at Shea.	27.9	1975 1979	5-23-79 9- 5-79	1.19 0.91	30 17

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at synoptic coal-hydrology partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis- charge (ft ³ /s)
Cumberland River basin--Continued							
03407890	Montgomery Fork at Montgomery, Tn.	Lat 36°19'43", long 84°22'01", Scott County, Hydrologic Unit 05130104, 3 miles northwest of Smoky Junction and 0.6 mile above mouth.	22.1	1975, 1979	5-23-79 9- 4-79	19.69 12.48	44 3.0
03407920	Buffalo Creek near Winona, Tn.	Lat 36°23'16", long 84°25'13", Scott County, Hydrologic Unit 05130104, 3 miles be- low Rockhouse Fork, 4.5 miles southeast of Hunts- ville, and 1.9 miles north- east of Winona.	42.5	1975-79	5-24-79 9- 5-79	12.56 6.66	1,660 9.5
03407960	Paint Rock Creek near Huntsville, Tn.	Lat 36°24'14", long 84°26'59", Scott County, Hydrologic Unit 05130104, 400 ft above tributary mouth on right bank, 2.4 miles southeast of Huntsville and 1.4 miles above mouth.	21.5	1975-79	5-23-79 9- 5-79	9.08 6.40	175 8.4
03408200	Brimstone Creek near Robbins, Tn.	Lat 36°20'43", long 84°32'22", Scott County, Hydrologic Unit 05130104 at Rural Road S-2342-1, at bridge 3.0 miles east of Robbins.	48.7	1955-71 1975-79	5-23-79 9- 6-79	4.04 1.98	369 8.4
03408550	North Prong Clear Fork near Grimsley, Tn.	Lat 36°18'25", long 84°54'35", Fentress County, Hydrologic Unit 05130104, 200 ft below Brushy Fork, 1.0 mile above Buck Spring Branch, 8.8 miles southeast of Jamestown, 4.8 miles northeast of Grimsley, Tn.	27.1	1979	5-22-79 9- 4-79	2.83 2.45	29 4.9
03408700	Clear Fork at Gatewood, Tn.	Lat 36°17'13", long 84°50'33", Fentress-Morgan County line, Hydrologic Unit 5130104, 0.9 mile above Joe Branch 1.2 miles below South Prong, 7 miles southwest of Armathwaite.	70.2	1979	5-23-79 9- 6-79	21.16 19.95	129 7.2
03408860	Clear Fork near Burrville, Tn.	Lat 36°19'28", long 84°47'13", Fentress-Morgan County line, Hydrologic Unit 05130104, 1.2 miles above Cave Creek, at Crooked Creek tributary, 3.0 miles northwest of Burrville, and 3.4 miles southwest of Armathwaite.	120	1929, 1979	5-23-79 9- 5-79	15.56 14.16	236 22
03409350	Bone Camp Creek near Burrville, Tn.	Lat 36°17'12", long 84°42'15", Morgan County, Hydrologic Unit 05130104, 75 ft below tributary on left bank, 0.3 mile below Buck Creek, 0.8 mile above Coon Creek, 2.5 miles southeast of Burrville, 3.0 miles northwest of Sunbright.	23.0	1929, 1979	5-23-79 9- 5-79	5.04 3.86	46 1.9
03409395	Black Wolf Creek near Glenmary, Tn.	Lat 36°19'16", long 84°39'13", Scott County, Hydrologic Unit 05130104, 0.6 mile below Wolfpen Branch, 150 ft above Potter Branch, 3.8 miles southeast of Rugby, 1.7 miles northwest of Glenmary, 1.4 miles above mouth.	31.4	1979	5-22-79 9- 5-79	4.08 3.33	19 3.6

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at synoptic coal-hydrology partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis- charge (ft ³ /s)
Cumberland River basin--Continued							
03410210	South Fork Cumberland River at Leatherwood Ford, Tn.	Lat 36°28'38", long 84°40'09", Scott County, Hydrologic Unit 05130104, 0.8 mile below Anderson Branch, 1.3 miles above North White Oak Creek, 10.1 miles south- west of Oneida and at river mile 70.	806	1961-62, 1979	5-23-79 9- 5-79	3.07 4.55	1,040 333
*03414340	East Fork Obey River at Obey City, Tn.	Lat 36°11'02", long 85°09'53", Overton County, Hydrologic Unit 05130105, at county bridge, 0.7 mile north of Obey City, 0.8 mile west of Cliff Springs, and at mile 39.6	34.6	1975-76, 1978-79	5-24-79	19.02	524
03414346	Hurricane Creek at Camp Ground, Tn.	Lat 36°11'42", long 85°04'06", Fentress County, Hydrologic Unit 05130105, at county road bridge 3.2 miles from intersection of State Highway 62 and U.S. Highway 127 - State Highway 28.	15.8	1979	5-24-79 9- 6-79	29.42 27.57	193 1.3
03414430	East Fork Obey River near Wilder, Tn.	Lat 36°16'24", long 85°02'40", Fentress County, Hydrologic Unit 05130105, at State Highway 85 bridge, 3.5 miles east of Wilder.	117	1979	5-24-79 9- 6-79	27.59	1,390 3.6
03414470	Buffalo Cove Creek near Boatland, Tn.	Lat 36°23'06", long 85°00'34", Fentress County, Hydrologic Unit 05130105, at county road bridge 3.4 miles south of junction with State Highway 52. Site 0.42 mile above mouth.	23.4	1965,1979	5-24-79 9- 5-79	- -	134 0
*03414680	West Fork Obey River near Allred, Tn.	Lat 36°18'52", long 85°10'53", Overton County, Hydrologic Unit 05130105, at State Highway 85 bridge, 250 ft above Cub Branch, 1.1 miles south of Allred.	70.8	1975-76 1978-79	5-24-79	17.04	430
03415960	Wolf River at Wolf River, Tn.	Lat 36°32'14", long 84°57'09", Fentress County, Hydrologic Unit 05130105, at county road bridge, 200 ft east of junction with State Highway 28 - U.S. Highway 127, 0.4 mile south of Pall Mall Post Office.	41.0	1979	5-24-79 9- 6-79	23.39 21.94	243 17
03415975	Rotten Fork Wolf near Pall Mall, Tn.	Lat 36°32'20", long 84°56'56", Fentress County, Hydrologic Unit 05130105, 0.25 mile above Wolf River at John W. Painter Memorial Bridge (county bridge) 1.3 miles southeast of Pall Mall.	21.6	1979	5-24-79 9- 6-79	18.89 17.26	168 9.5
03418500	Caney Fork River at Clifty, Tn.	Lat 35°53'28", long 85°13'05", Cumberland County, Hydrologic Unit 05130108, at county road bridge 0.9 mile south of Clifty.	111	1930-49 1979	5-25-79 9- 5-79	22.08 20.68	851 9.0
03418520	Clifty Creek at Mobra, Tn.	Lat 35°53'10", long 85°15'05", White County, Hydrologic Unit 05130108, at county road culvert 0.5 mile north- east of Mobra.	14.8	1979	5-23-79 9- 5-79	5.84 1.18	4.6 .13

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at synoptic coal-hydrology partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis- charge (ft ³ /s)
Cumberland River basin--Continued							
03418925	Bee Creek at Lantana Road at Winesap, Tn.	Lat 35°45'46", long 85°10'09", Bledsoe County, Hydrologic Unit 05130108, 0.4 mile south of Winesap, 1.4 miles north of Bellview, 4.0 miles east of Herbert Domain.	16.9	1979	5-23-79 9- 5-79	20.63	228 .50
03418935	Beaverdam Creek at Lantana Road near Bellview, Tn.	Lat 35°44'07", long 85°11'43", Bledsoe County, Hydrologic Unit 05130108, 1.2 miles southwest of Bellview, 2.8 miles southwest of Winesap, 3.1 miles southeast of Herbert Domain.	17.0	1979	5-23-79 9- 5-79	- 17.05	88 2.2
03418995	Glade Creek near Lonewood, Tn.	Lat 35°45'35", long 85°15'57", Bledsoe County line, Hydro- logic Unit 05130108, 1.2 miles above confluence of Bee Creek, 1.7 miles west of Herbert Domain, and 2.3 miles east of Lonewood.	39.1	1979	5-23-79 9- 5-79	- 21.06	142 7.2
03419200	Cane Creek near Spencer, Tn.	Lat 35°44'36", long 85°23'33", Van Buren County, Hydrologic Unit 05130108, at bridge on State Highway 30, 4.0 miles east of Spencer.	134	1929-30,1951 1953,1958-63 1965-66,1979	5-23-79 9- 5-79	898.08 898.20	8.2 3.6
*03419270	Calfkiller River near Taylors, Tn.	Lat 36°01'53", long 85°20'10", White County, Hydrologic Unit 05130108, at county road bridge 100 ft south of junction with State Highway 84, 0.2 mile south of Putnam- White County line.	37.7	1975-76, 1979	5-23-79 9- 5-79	30.57 27.98	502 21
03420000	Calfkiller River below Sparta, Tn.	Lat 35°54'31", long 85°28'46", White County, Hydrologic Unit 05130108, below City Lake Dam at new State High- way 111 bridge 0.5 mile south of U.S. Highway 70S - State Highway 111 intersection in Sparta.	175	1940-1971, 1979	5-23-79 9- 5-79	9.08 8.65	302 74
03420116	Rocky River at Rocky River Road at Riverview, Tn.	Lat 35°42'04", long 85°34'40", Van Buren County, Hydrologic Unit 05130108, on Rocky River Road 3.0 miles south of Rocky River Road - State Highway 30 intersection.	72.0	1979	5-22-79 9- 5-79	8.43 7.70	126 27
03420156	Collins River at Barkertown, Tn.	Lat 35°23'35", long 85°34'00", Grundy County, Hydrologic Unit 05130107, 100 ft below Jonathan Creek at county road bridge.	22.9	1979	5-23-79 9- 4-79	13.57 10.71	284 12
*03420200	Collins River near Tarlton, Tn.	Lat 35°31'04", long 85°40'27", Grundy County, Hydrologic Unit 05130107, at State Highway 56 bridge 1.9 miles south of Warren-Grundy County line.	174	1929,1952, 1962,1965, 1975, 1978-79	5-24-79 9- 5-79	19.40 16.47	2,870 244
03420230	Scott Creek at Irving College, Tn.	Lat 35°34'17", long 85°42'42", Warren County, Hydrologic Unit 05130107, at State Highway 56 bridge 1.0 mile south of Irving College and 0.6 mile above mouth.	34.1	1979	5-23-79 9- 5-79	18.61 18.32	27 13

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at synoptic coal-hydrology partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis- charge (ft ³ /s)
Cumberland River basin--Continued							
03420260	Hills Creek near Irving College, Tn.	Lat 35°34'06", long 85°40'49", Warren County, Hydrologic Unit 05130107, at county road bridge 1.8 miles above mouth.	55.6	1979	5-24-79 9- 5-79	20.44 15.54	581 35
03420720	Hickory Creek near Viola, Tn.	Lat 35°34'32", long 85°51'02", Warren County, Hydrologic Unit 05130107, at State Highway 108 bridge, 2.9 miles north of Viola.	58.2	1954,1979	5-23-79 9- 5-79	17.85 17.89	44 44
03422850	Falling Water River at State Highway 42 near Cookeville, Tn.	Lat 36°04'54", long 85°30'21", White County, Hydrologic Unit 05130108, at State Highway 42 bridge 3.9 miles south of State Highway 42-I-40 interchange.	38.0	1952,1979	5-23-79 9- 6-79	21.56 21.02	43 18

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at synoptic coal-hydrology partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis- charge (ft ³ /s)
Tennessee River basin							
03532070	Old Town Creek near Red Hill, Tn.	Lat 36°31'45", long 83°44'26" Claiborne County, Hydrologic Unit 06010206, 0.4 mile above Key Branch, 5.5 miles south of Middlesboro, Ky.	6.72	1979	5-22-79 9- 4-79	14.01 13.92	6.0 3.5
03532100	Davis Creek near Speedwell, Tn.	Lat 36°26'36", long 83°54'59" Claiborne County, Hydrologic Unit 06010206, 2.3 miles southwest of Speedwell, 11.7 miles northeast of La Follette.	31.2	1936-37, 1953-55 1979	5-22-79 9- 4-79	14.50 14.43	20 13
03532202	Big Creek at Aspen Street at La Follette, Tn.	Lat 36°23'04", long 84°07'22", Campbell County, Hydrologic Unit 06010205, and at mile 19.5.	24.2	1950-54, 1959-64 1979	5-22-79 9- 5-79	19.82 18.78	69 5.8
03532480	Cove Creek above Cove Lake, near Caryville, Tn.	Lat 36°18'25", long 84°13'35", Campbell County, Hydrologic Unit 06010205, 0.6 mile below Duncan Branch, 0.6 mile northwest of Caryville, 3.0 miles southwest of Jacksboro.	23.8	1967, 1979	5-23-79 9- 4-79	17.51 16.08	106 3.3
03538160	Poplar Creek at Batley Road near Oliver Springs, Tn.	Lat 36°01'57", long 84°18'16", Anderson County, Hydrologic Unit 06010207, 0.5 mile be- low Blue Spring tributary, 0.8 mile above Brushy Fork, 1.1 miles southeast of Oliver Springs, 1.9 miles northwest of Oak Ridge.	30.3	1961-64, 1979	5-24-79 9- 5-79	7.59 5.55	229 22
360858- 084355000	Emory River at Gobey, Tn.	Lat 36°08'58", long 84°35'50", Morgan County, Hydrologic Unit 06010208, 0.1 mile east of Gobey, 0.6 mile above mouth of Cane Branch and 1.4 miles below mouth of Greasy Creek, and at mile 39.6	43.3	1979	5-24-79 9- 6-79	5.72 2.26	630 14
03538398	Rock Creek near Gobey, Tn.	Lat 36°08'02", long 84°37'31", Morgan County, Hydrologic Unit 06010208, 0.2 mile be- low Sculcheon's Creek, 2.5 miles northwest of Wartburg, 1.9 miles southwest of Gobey, 0.5 mile above mouth.	31.2	1952, 1954-55 1979	5-23-79 9- 6-79	14.70 11.73	221 3.0
03539600	Daddys Creek near Hebberts- burg, Tn.	Lat 35°59'53", long 84°49'24", Cumberland County, Hydro- logic Unit 06010208, 2.1 miles southwest of Hebbertsburg, 6.9 miles northeast of Crab Orchard, and at mile 9.1.	139	1965, 1957-68 1979	5-24-79 9- 6-79	7.06 2.71	2,220 12
03539719	White Creek at Twin Bridges, Tn.	Lat 36°10'40", long 84°48'01", Morgan County, Hydrologic Unit 06010208, 0.1 mile below Cook Creek, 12.0 miles northwest of Lancing, 6.8 miles above mouth.	38.4	1979	5-24-79 9- 6-79	5.73 2.70	556 8.6
03539750	Clear Creek near Lancing, Tn.	Lat 36°07'18", long 84°44'46", Morgan County, Hydrologic Unit 06010208, at bridge 0.4 mile below Gordon Branch, 2.3 miles above Little Clear Creek, 5.0 miles west of Lancing, and at mile 4.1.	153	1966-68 1979	5-25-79 9- 6-79	12.5 8.98	1,150 28

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at synoptic coal-hydrology partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis- charge (ft ³ /s)
Tennessee River basin--Continued							
03539831	Island Creek near Catoosa, Tn.	Lat 36°03'10", long 86°40'01", Morgan County, Hydrologic Unit 06010208, 1.0 mile below Panther Branch, 2.7 miles southwest of Lancing, 3.5 miles south- west of Wartburg and 2.4 miles above mouth.	18.4	1979	5-23-79 9- 6-79	8.73 8.30	14 1.5
03539860	Crooked Fork near Wartburg, Tn.	Lat 36°05'05", long 84°33'18", Morgan County, Hydrologic Unit 06010208, 25 feet downstream from Mud Creek, 2.6 miles southeast of Wartburg, and 6.2 miles above mouth.	50.3	1965-68 1979	5-24-79 9- 6-79	4.13 2.04	295 32
03540100	Crab Orchard Creek near Deermont, Tn.	Lat 36°00'40", long 84°36'44", Morgan County, Hydrologic Unit 06010208, at bridge, 0.2 mile above Smith Branch, 1.9 miles southwest of Deermont, and 2.0 miles above mouth.	33.7	1966-68 1979	5-24-79 9- 6-79	3.86 1.83	293 7.8
03541485	Whites Creek at Bakers Bridge near Glen Alice, Tn.	Lat 35°47'50", long 84°48'43", Rhea County, Hydrologic Unit 06010201 at bridge on Opossum Trot Road, 2.1 miles below Sandy Creek, 2.5 miles above Piney Creek, 5.0 miles northeast of Grandview, 10 miles north- west of Spring City, and 11.4 miles above mouth.	33.8	1958 1979	5-25-79 9- 7-79	19.02 20.01	141 3.9
03541487	Piney River near Westel, Tn.	Lat 35°51'14", long 84°44'17", Roane County, Hydrologic Unit 06010201, at bridge on U.S. Highway 70, 3.5 miles southwest of Rockwood and 5.0 miles above mouth.	19.0	1944, 1952-53, 1955-56 1979	5-25-79 9- 6-79	18.65 17.22	108 4.0
03541496	Fall Creek near Ozone, Tn.	Lat 35°50'16", long 84°47'56", Cumberland County, Hydrologic Unit 06010201, at bridge 2.9 miles south of Ozone, 8.0 miles southwest of Rockwood and 2.4 miles above mouth.	21.1	1955-57 1979	5-24-79 9- 6-79	10.24 8.51	214 4.8
03542495	Piney River above Spring City, Tn.	Lat 35°42'54", long 84°52'49", Rhea County, Hydrologic Unit 06010201, 2.0 miles northwest of Spring City, 3.5 miles southwest of Grandview, and 8.9 miles above mouth.	62.3	1958 1979	5-25-79 9- 7-79	2.21 0.03	416 4.5
03566292	Sale Creek near Sale Creek, Tn.	Lat 35°25'35", long 85°05'24", Hamilton County, Hydrologic Unit 06020001, at Coulter- ville Road bridge 0.3 mile southwest of Coulterville Road - U.S. Highway 27 intersection.	57.2	1955-56, 1964 1979	5-25-79 9- 4-79	20.10 -	506 0
03566400	Soddy Creek at Soddy, Tn.	Lat 35°18'05", long 85°09'56", Hamilton County, Hydrologic Unit 06020001, at county road bridge 0.8 mile north of Soddy and 1.2 miles up- stream from U.S. Highway 27 bridge.	49.0	1932, 1955-56 1959-68, 1979	5-23-79 9- 4-79	11.52 10.16	457 5.6

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at synoptic coal-hydrology partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis-charge (ft ³ /s)
Tennessee River basin--Continued							
03566530	North Chickamauga Creek near Daisy, Tn.	Lat 35°13'20", long 85°13'16", Hamilton County, Hydrologic Unit 06020001, between Mile Straight and Daisy at U.S. Highway 27 bridge crossing.	62.6	1925,1932 1944,1952-54 1964,1979	5-22-79 9- 5-79	16.10 15.06	122 8.7
03569245	Suck Creek near Chattanooga, Tn.	Lat 35°07'28", long 85°23'26", Hamilton County, Hydrologic Unit 06020001, at State Highway 27 crossing Suck Creek 1,100 ft above mouth.	22.6	1944,1955 1979	5-22-79 9- 5-79	15.73 15.58	64 18
03570602	Sequatchie River near Pikeville, Tn.	Lat 35°35'48", long 85°11'27", Bledsoe County, Hydrologic Unit 06020004, at bridge 200 ft south of intersection of U.S. Highway 127 and State Highways 28, 30 near Pikeville.	106	1932-33,1944 1952-54,1979	5-22-79 9- 4-79	12.04 11.54	55 31
03570695	Sequatchie River near Mount Airy, Tn.	Lat 35°24'41", long 85°20'47", Sequatchie County, Hydrologic Unit 06020004, at county road bridge 1.9 miles southeast of Mount Airy.	202	1979	5-22-79 9- 4-79	13.02	136 71
*03570800	Little Brush Creek near Dunlap, Tn.	Lat 35°24'15", long 85°23'18", Sequatchie County, Hydrologic Unit 06020004, on left bank at Old State Highway 8 bridge, 0.1 mile downstream from New State Highway 8, 1.5 mile north of Dunlap.	15.4	1958,1959-67, 1970,1979	5-22-79 9- 6-79	- -	2.5 1.3
03570810	Big Brush Creek near Dunlap, Tn.	Lat 35°23'55", long 85°21'50", Sequatchie County, Hydrologic Unit 06020004, on county road, 2.5 miles northeast of Dunlap.	66.1	1944,1952-55, 1959,1965, 1979	5-22-79 9- 6-79	- 18.95	11 18
03570855	Woodcock Creek Southwest of Dunlap, Tn.	Lat 35°19'19", long 85°26'01", Sequatchie County, Hydrologic Unit 06020004, at Old West Valley Road bridge 0.4 mile northeast of Daus and 4.3 miles southwest of Dunlap.	15.3	1953-55, 1979	5-22-79 9- 6-79	- -	4.2 0
03570870	Hicks Creek at Cartwright, Tn.	Lat 35°16'40", long 85°27'14", Sequatchie County, Hydrologic Unit 06020004, at New West Valley Road bridge 0.9 mile northeast of Marion-Sequatchie County line.	17.9	1953-55, 1979	5-23-79 9- 6-79	- 12.97	11 .24
*03571500	Little Sequatchie River at Sequatchie, Tn.	Lat 35°07'47", long 85°35'10", Marion County, Hydrologic Unit 06020004, at State Highway 27 bridge, 0.6 mile northeast of Sequatchie.	116	1925,1929-30, 1944,1951,1953 1954,1965,1979	5-22-79 9- 7-79	25.54 25.27	117 63
03571700	Pryor Cove Branch near Jasper, Tn.	Lat 35°05'25", long 85°37'22", Marion County, Hydrologic Unit 06020004, at State Highway 27 bridge, 50 ft south of State Highway 27-150 junction.	12.9	1955-57, 1979	5-24-79 9- 4-79	- -	0 0

See footnotes at end of the table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at synoptic coal-hydrology partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Date	Gage height (feet)	Dis- charge (ft ³ /s)
Tennessee River basin--Continued							
*03571800	Battle Creek near Monteagle, Tn.	Lat 35°08'03", long 85°46'15", Marion County, Hydrologic Unit 06030001, on left bank at U.S. Highway 41, 64 bridge 9.2 miles south- east of Monteagle.	50.4	1955-75 1977-79	5-22-79 9- 4-79	.79 1.01	62 117
03571827	Kelly Cove Creek at Smithtown, Tn.	Lat 35°04'48", long 85°44'11", Marion County, Hydrologic Unit 06030001, at bridge crossing on U.S. Highway 41- 64 at Smithtown.	4.42	1955,1957-58 1979	5-22-79 9- 4-79	- -	0 0
03571835	Sweden Creek near South Pittsburg, Tn.	Lat 35°03'52", long 85°45'55", Marion County, Hydrologic Unit 06030001, at county road bridge, 0.3 mile below Kelly Cove Creek, 5.0 miles northwest of South Pittsburg.	28.2	1944,1953-55 1979	5-22-79 9- 7-79	13.35 13.14	32 24
03572092	Crow Creek near Anderson, Tn.	Lat 35°59'28", long 85°54'07", Franklin County, Hydrologic Unit 06030001, at State High- way 56 bridge, 0.2 mile above Willis Branch, 0.2 mile north of Tennessee-Alabama state line.	78.4	1979	5-22-79 9- 6-79	15.21 14.85	113 65
03577966	Elk River near Mountain View, Tn.	Lat 35°21'29", long 85°50'10", Grundy County, Hydrologic Unit 06030003, at county road bridge, 4.4 miles north- east of Pelham	25.7	1953,1962 1964,1979	5-22-79 9- 7-79	30.84 31.80	16 59
03577985	Dry Creek near Mountain View, Tn.	Lat 35°19'21", long 85°49'29", Grundy County, Hydrologic Unit 06030003, at county road bridge, 3.7 miles east of Pelham, 0.8 mile north- east of Big Spring.	22.4	1953,1979	5-22-79 9- 4-79	- -	0 0
03578095	Betsy Willis Creek near Pelham, Tn.	Lat 35°19'48", long 85°55'12", Coffee County, Hydrologic Unit 06030003, at U.S. High- way 41 bridge 2.7 miles northwest of Pelham	11.5	1979	5-22-79 9- 7-79	25.90 26.11	2.5 16
03578190	Mud Creek at Alto, Tn.	Lat 35°16'28", long 85°56'14", Franklin County, Hydrologic Unit 06030003, at State Highway 50 bridge, 0.9 mile east of Alto, 4.5 miles west of Pelham.	18.4	1944,1953-54 1962-65,1970 1979	5-22-79 9- 6-79	25.40 25.68	7.6 15
03578290	Beans Creek near Hillsboro, Tn.	Lat 35°22'43", long 85°56'58", Coffee County, Hydrologic Unit 06030003, at U.S. High- way 41 bridge 2.7 miles south of Hillsboro.	14.8	1979	5-22-79 9- 6-79	6.57 7.50	6.6 20
03580110	Boiling Fork near Decherd, Tn.	Lat 35°09'44", long 86°03'37", Franklin County, Hydrologic Unit 06030003, at Goshen Road bridge, 3.4 miles south- east of courthouse in Winchester.	37.7	1979	5-22-79 9- 6-79	33.70 33.85	44 61

* Also crest-stage partial-record station.

Dickson, Tn. (Dickson County), seepage investigation

A series of low-flow discharge measurements was made July 19, 1979, in the vicinity of Dickson, Tn. (Dickson County), to define the losing and gaining reaches of streams draining the area, and to define the quality of water at base flow conditions. The area studied included Nails Creek basin from mile 5.9 (9.5 km), Beaverdam Creek basin from mile 6.9 (11.1 km), Jones Creek basin from mile 18.4 (29.6 km), and Yellow Creek basin from mile 31.8 (51.2 km) in the Cumberland River basin and Piney River basin from mile 19.5 (31.4 km) in the Tennessee River basin. The measurements were made during a period of constant base flow. Tributary flow was considered a contribution and not a gain.

Nails Creek mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	South Harpeth River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
5.9	360024087181100 Blue Spring Branch	Lat 36°00'24", long 87°18'11", Dickson County, at county road, 1.8 miles east of Tidwell, and at mile 0.2.	.68	.41	-	-	22.0	230
5.9	360019087180100 Nails Creek	Lat 36°00'19", long 87°18'01", Dickson County, at county road, 1.9 miles northeast of Iron Hill.	3.26	2.11	-	-	20.0	250
Beaverdam Creek mile								
9.5	360326087204500 Beaverdam Creek	Lat 36°03'26", long 87°20'45", Dickson County, at county road bridge, 0.3 mile south of Colesburg.	.36	.02	-	-	21.0	80
7.2	360234087185600 Beaverdam Creek	Lat 36°02'34", long 87°18'56", Dickson County, beside county road 0.7 mile south of Burns.	1.98	1.75	-	+1.73	17.0	300
7.2	360233087185900 Billy Richardson Branch	Lat 36°02'33", long 87°18'59", Dickson County, 200 feet upstream from mouth, 0.7 mile south of Burns.	.70	0	-	-	-	-
7.0	360225087184600 Beaverdam Creek	Lat 36°02'25", long 87°18'46", Dickson County, at county road bridge above Gum Branch, 1.0 mile south of Burns.	2.76	2.20	-	+1.45	17.0	300
6.9	360223087184700 Gum Branch	Lat 36°02'23", long 87°18'47", Dickson County, 200 feet above Beaverdam Creek, 1.0 mile south of Burns.	1.72	.71	-	-	20.0	275
Jones Creek mile								
26.3	360519087223900 Jones Creek	Lat 36°05'19", long 87°22'39", Dickson County, at State High- way 48, 0.4 mile north of U.S. Highway 70 bypass at Dickson	.69	.10	-	-	18.5	325

CUMBERLAND RIVER BASIN

Dickson, Tn. (Dickson County), seepage investigation--Continued

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Jones Creek mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	South Harpeth River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
26.2	360504087224500 Jones Creek Tributary	Lat 36°05'04", long 87°22'45", Dickson County, at State High- way 48, 0.1 mile north of U.S. Highway 70 bypass at Dickson, and at mile 0.4.	1.07	.23	-	-	19.0	445
26.2	03434583 Jones Creek Tributary	Lat 36°05'06", long 87°22'40", Dickson County, at culvert 0.04 mile east of State Highway 48 at Dickson, and at mile 0.3.	2.29	.60	+ .37	-	19.0	440
25.4	03434585 Jones Creek	Lat 36°05'23", long 87°21'52", Dickson County, at county road, 0.7 mile north of Dickson.	5.05	1.20	-	+ .50	22.0	360
24.2	360531087205300 Jones Creek	Lat 36°05'31", long 87°20'53", Dickson County, at county road, 0.8 mile northeast of Dickson.	5.90	1.68	-	+ .48	22.0	330
23.7	360453087203500 Johnson Branch	Lat 36°04'53", long 87°20'35", Dickson County, at U.S. High- way 70, 0.01 mile west of inter- section with State Highway 96, and 0.2 mile above Spicer Branch, at Dickson.	.84	.24	-	-	19.0	320
23.4	360600087202200 Jones Creek Tributary No. 2	Lat 36°06'00", long 87°20'22", Dickson County, at county road, 2.3 miles northeast of Dickson, and at mile 0.2.	1.14	.04	-	-	24.5	220
21.9	03434590 Jones Creek	Lat 36°06'15", long 87°19'06", Dickson County, at Rock Church Road, 1.6 miles north of U.S. Highway 70, and 2.5 mile northeast of Dickson.	13.3	5.12	-	3.16	22.5	380
19.7	360329087193400 Will Hall Creek	Lat 36°03'29", long 87°19'34", Dickson County, at State High- way 96, 1.0 mile east of Burns, and at mile 5.8.	.19	0	-	-	-	-
19.7	360331087193500 Will Hall Creek Tributary	Lat 36°03'31", long 87°19'35", Dickson County, at State High- way 96, 1.0 mile east of Burns, and 200 feet upstream from mouth.	.19	0	-	-	-	-
19.7	360337087185600 Will Hall Creek	Lat 36°03'37", long 87°18'56", Dickson County, at county road 0.4 mile north of Burns, and at mile 5.2.	.79	.12	+ .12	-	21.0	245
19.7	360332087183500 Will Hall Creek	Lat 36°03'32", long 87°18'35", Dickson County, at Rock Church Road at Burns, and at mile 4.8.	1.24	.02	- .10	-	20.5	320

CUMBERLAND RIVER BASIN

Dickson, Tn. (Dickson County), seepage investigation--Continued

Jones Creek mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	South Harpeth River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
18.6	360640087192300 Willow Branch	Lat 36°06'40", long 87°19'23", Dickson County, at Rock Church Road, 2.5 miles northeast of Dickson, and at mile 1.9	.61	.09	-	-	24.5	290
18.6	360703087193100 Willow Branch Tributary	Lat 36°07'03", long 87°19'31", Dickson County, at Rock Church Road, 2.8 miles northeast of Dickson, and at mile 0.85.	.40	0	-	-	-	-
18.6	360704087183200 Willow Branch	Lat 36°07'04", long 87°18'32", Dickson County, at county road, 3.3 miles northeast of Dickson, and at mile 1.0.	1.83	.19	+1.10	-	24.0	290
18.4	360747087242300 Little Jones Creek	Lat 36°07'47", long 87°24'23", Dickson County, at Ridge Road, 1.9 miles southeast of Hortense, and at mile 7.9.	3.23	.45	-	-	20.5	345
18.4	360750087233300 Little Jones Creek	Lat 36°07'50", long 87°23'33", Dickson County, at Westfield Road, 2.5 miles southeast of Hortense, and 0.1 mile above Martin Branch, and at mile 6.9.	4.30	1.57	+1.12	-	19.0	300
18.4	360700087244200 Martin Branch Tributary	Lat 36°07'00", long 87°24'42", Dickson County, at county road, 1.9 miles northwest of Dickson, and at mile 0.9.	.70	0	-	-	-	-
18.4	360747087223800 Little Jones Creek	Lat 36°07'47", long 87°22'38", Dickson County, at county road, 5.5 miles southeast of Hortense, and at mile 5.8	6.95	2.50	+1.93	-	19.5	270
18.4	360813087225500 Little Jones Creek Tributary No. 1	Lat 36°08'13", long 87°22'55", Dickson County, at Westfield Road, 2.8 miles southeast of Hortense, and at mile 0.6.	.27	.01	-	-	17.0	340
18.4	360756087224200 Little Jones Creek Tributary No. 1	Lat 36°07'56", long 87°22'42", Dickson County, at county road 3.0 miles north of Dickson, and at mile 0.2.	.59	.05	+1.04	-	20.0	330
18.4	360657087230200 Walker Branch	Lat 36°06'57", long 87°23'02", Dickson county, at county road 2.1 miles north of Dickson, and at mile 1.5.	1.68	0	-	-	-	-
18.4	360712087224800 Walker Branch Tributary	Lat 36°07'12", long 87°22'48", Dickson County, at county road 1.8 miles north of Dickson, and at mile 0.04.	.15	0	-	-	-	-

Dickson, Tn. (Dickson County), seepage investigation--Continued

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Jones Creek mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	South Harpeth River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
18.4	360720087224500 Walker Branch	Lat 36°07'20", long 87°22'45", Dickson County, at county road 2.0 miles north of Dickson, and at mile 0.9.	2.05	.59	+ .59	-	18.0	210
18.4	03434593 Little Jones Creek	Lat 36°07'45", long 87°21'34", Dickson County, at State High- way 48 bridge, 4.0 miles north- east of Dickson, and at mile 4.6.	10.9	3.96	+ .82	-	24.0	260
18.4	360638087225300 Sweetwater Branch	Lat 36°06'38", long 87°22'53", Dickson County, at county road 1.1 miles north of Dickson, and at mile 2.1.	.08	0	-	-	-	-
18.4	360716087214200 Sweetwater Branch	Lat 36°07'16", long 87°21'42", Dickson County, at State Highway 48, 2.8 miles north of Dickson, and at mile 0.6.	.90	.13	+ .13	-	28.0	260
18.4	360803087213000 Little Jones Creek Tributary No. 2	Lat 36°08'03", long 87°21'30", Dickson County, at State High- way 48, 3.1 miles south of Charlotte, and at mile 0.4.	1.04	.18	-	-	22.0	275
18.4	360720087202000 Leech Branch	Lat 36°07'20", long 87°20'20", Dickson County, at county road 2.9 miles northeast of Dickson, and at mile 0.7.	.37	.03	-	-	21.5	300
18.4	360739087201400 Leech Branch	Lat 36°07'39", long 87°20'14", Dickson County, at Rock Church Road, 3.3 miles northeast of Dickson, and at mile 0.2.	.55	.23	+ .20	-	28.0	270
18.4	360753087200800 Little Jones Creek	Lat 36°07'53", long 87°20'08", Dickson County, at Rock Church Road, 3.2 miles south of Charlotte, and at mile 3.0.	15.6	5.73	+1.23	-	23.5	300
18.4	360702087193300 Little Jones Creek	Lat 36°07'02", long 87°19'33", Dickson County, at Franklin Road, 3.1 miles southeast of Charlotte, and at mile 2.4.	16.3	4.90	- .83	-	23.0	300
Yellow Creek mile								
33.6	360742087273300 Yellow Creek	Lat 36°07'42", long 87°27'33", Dickson County, 2.0 miles south- west of Hortense.	1.71	0.66	-	-	20.0	180

CUMBERLAND RIVER BASIN

Dickson, Tn. (Dickson County), seepage investigation--Continued

Yellow Creek mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	South Harpeth River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
32.8	360741087260200 Yellow Creek Tributary	Lat 36°07'41", long 87°26'02", Dickson County, at Sylvia Road, 1.4 miles south of Hortense, and at mile 2.3.	.22	0	-	-	-	-
32.8	360717087272600 Yellow Creek Tributary	Lat 36°07'17", long 87°27'26", Dickson County, at county road bridge 1.2 miles east of Walnut Grove, and at mile 0.6.	1.63	.24	+ .24	-	20.0	30
32.3	360656087281500 Yellow Creek	Lat 36°06'56", long 87°28'15", Dickson County, at county road bridge near Adams Cemetery, 0.4 mile east of Walnut Grove.	4.40	.57	-	- .33	21.0	135
31.8	360655087284000 Yellow Creek	Lat 36°06'55", long 87°28'40", Dickson County, at county road bridge 0.1 mile south of Walnut Grove Church.	6.02	1.69	-	+1.12	20.5	175

Dickson, Tn. (Dickson County), seepage investigation--Continued

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East Piney River mile	Stream	Location	Drainage Area (mi ²)	Meas. disch. (ft ³ /s)	Tributary gain or loss	East Piney River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
7.8	360445087240700 East Piney River	Lat 36°04'45", long 87°24'07", Dickson County, at county road 0.1 mile below Dickson Lake, at Dickson.	1.85	.01	-	-	22.0	300
7.2	360428087233800 East Piney River Tributary No. 1	Lat 36°04'28", long 87°23'38", Dickson County, at culvert at street behind water plant, and at mile 0.3	.19	.02	-	-	21.0	470
6.8	360403087235700 East Piney River Tributary No. 2	Lat 36°04'03", long 87°23'57", Dickson County, at Dickson, beside State Highway 48, and at mile 0.05.	.36	0	-	-	-	-
6.8	03602196 East Piney River	Lat 36°04'02", long 87°23'56", Dickson County, at State High- way 48, at Dickson.	2.90	.09	-	+ .06	17.0	340
5.7	360320087221300 Willow Branch	Lat 36°03'20", long 87°22'13", Dickson County, at State High- way 46, at Dickson, and at mile 1.7.	1.11	.27	-	-	19.0	200
5.7	360327087222000 Willow Branch Tributary	Lat 36°03'27", long 87°22'20", Dickson County, at State High- way 46, at Dickson, and at mile 0.1.	.14	0	-	-	-	-
5.7	360311087230500 Willow Branch	Lat 36°03'11", long 87°23'05", Dickson County, at county road bridge 0.9 mile south of Dickson, and at mile 0.8.	1.91	.72	+ .45	-	22.0	260
5.6	03602200 East Piney River	Lat 36°03'08", long 87°23'51", Dickson County, at county road bridge 1.0 mile south of Dickson.	6.21	3.81	-	+3.00	20.0	437
4.8	360235087235200 East Piney River Tributary No. 3	Lat 36°02'35", long 87°23'52", Dickson County, at county road 1.6 miles south of Dickson, and at mile 0.2.	.11	0	-	-	-	-
4.1	360158087240300 East Piney River	Lat 36°01'58", long 87°24'03", Dickson County, at county road bridge 2.3 miles south of Dickson.	7.34	5.44	-	+1.63	19.0	400
3.8	360229087213200 Grab Creek	Lat 36°02'29", long 87°21'32", Dickson County, at State High- way 46, 0.8 mile northwest of Pomona, and at mile 2.9.	.76	.84	-	-	17.0	250
3.8	360224087220100 Grab Creek	Lat 36°02'24", long 87°22'01", Dickson County, at county road bridge 1.6 miles southeast of Dickson, and at mile 2.4.	1.81	1.07	+ .23	-	19.0	255

TENNESSEE RIVER BASIN

Dickson, Tn. (Dickson County), seepage investigation--Continued

East Piney River mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	East Piney River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
3.8	360220087225600 Grab Creek	Lat 36°02'20", long 87°22'56", Dickson County, at Murrell Road bridge, 1.9 miles south of Dickson and at mile 1.4.	2.54	2.10	+1.03	-	19.0	295
3.8	360225087230100 Grab Creek Tributary	Lat 36°02'25", long 87°23'01", Dickson County, at Murrell Road bridge, 1.8 miles south of Dickson, and at mile 0.1.	.24	.07	-	-	16.0	275
3.6	360140087241500 Redden Branch	Lat 36°01'40", long 87°24'15", Dickson County, at county road 2.7 miles south of Dickson, and at mile 0.04.	.76	0	-	-	-	-
3.1	360131087243600 East Piney River	Lat 36°01'31", long 87°24'36", Dickson County, at county road bridge 1.4 miles north of Mt. Sinai.	12.5	8.29	-	+ .68	20.0	365
1.8	360055087243500 Wiley Branch	Lat 36°00'55", long 87°24'35", Dickson County, at county road 0.7 mile north of Mt. Sinai, and at mile 0.8.	1.66	.89	-	-	21.0	275
1.8	360057087244000 Spring Branch	Lat 36°00'57", long 87°24'40", Dickson County, at county road 0.8 mile north of Mt. Sinai, and at mile 0.02.	.88	0	-	-	-	-
0.2	360037087262000 East Piney River	Lat 36°00'37", long 87°26'20", Dickson County, at county road bridge 2.5 miles east of Oak Grove.	17.9	13.3	-	+4.12	21.0	325
West Piney River mile						West Piney River gain or loss		
7.0	03602170 West Piney River	Lat 36°05'20", long 87°28'13", Dickson County, at U.S. High- way 70 culvert, 2.9 miles west of Dickson city limits.	2.16	.21	-	-	19.5	85
5.5	360513087255200 Big Branch	Lat 36°05'13", long 87°25'52", Dickson County, at U.S. High- way 70, 0.7 mile west of Dickson city limits, and at mile 2.3.	.39	0	-	-	-	-
5.5	360515087264500 Big Branch Tributary No. 1	Lat 36°05'15", long 87°26'45", Dickson County, at U.S. High- way 70, 1.5 miles west of Dickson city limits, and at mile 0.4.	.25	0	-	-	-	-

Dickson, Tn. (Dickson County), seepage investigation--Continued

West Piney River mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	West Piney River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
5.5	360517087270900 Big Branch Tributary No. 2	Lat 36°05'17", long 87°27'09", Dickson County, at U.S. High- way 70, 1.9 miles west of Dickson city limits, and at mile 0.4.	.10	0	-	-	-	-
5.5	360450087271900 Big Branch	Lat 36°04'50", long 87°27'19", Dickson County, at county road near England Cemetery, 2.6 miles west of Dickson city limits, and at mile 0.7.	1.64	.32	+ .32	-	18.0	270
5.5	360427087274000 Big Branch	Lat 36°04'27", long 87°27'40", Dickson County, at county road 3.5 miles west of Dickson, and at mile 0.1.	2.02	.78	+ .46	-	17.0	260
5.1	360410087272800 West Piney River Tributary No. 1	Lat 36°04'10", long 87°27'28", Dickson County, at county road 0.7 mile north of Eno, and at mile 0.1.	.16	0	-	-	-	-
4.8	360432087254100 Worley Furnace Branch	Lat 36°04'32", long 87°25'41", Dickson County, at county road 1.5 miles west of Dickson, and at mile 2.1.	.92	0	-	-	-	-
4.8	360420087260000 Worley Furnace Branch	Lat 36°04'20", long 87°26'00", Dickson County, at county road 1.9 miles west of Dickson, and at mile 1.7.	1.62	.11	+ .11	-	17.0	200
4.8	360357087271700 Worley Furnace Branch	Lat 36°03'57", long 87°27'17", Dickson County, at county road 0.4 mile north of Eno, and at mile 0.2.	2.92	1.11	+1.00	-	19.0	215
4.4	360336087272000 West Piney River	Lat 36°03'36", long 87°27'20", Dickson County, at county road bridge at Eno.	8.95	4.14	-	+2.04	20.0	230
4.4	360324087265800 Baker Branch	Lat 36°03'24", long 87°26'58", Dickson County, at county road bridge 0.3 mile southeast of Eno, and at mile 0.4.	1.56	.60	-	-	21.5	130
3.2	360304087275800 Coon Creek	Lat 36°03'04", long 87°27'58", Dickson County, at county road bridge 0.9 mile southwest of Eno.	2.62	2.06	-	-	21.5	220
3.2	360302087280000 Coon Creek Tributary	Lat 36°03'02", long 87°28'00", Dickson County, at county road bridge 1.0 mile southeast of Eno, and at mile 0.04.	1.10	.44	-	-	21.5	185

Dickson, Tn. (Dickson County), seepage investigation--Continued

West Piney River mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	West Piney River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
3.1	360239087274500 West Piney River	Lat 36°02'39", long 87°27'45", Dickson County, at county road bridge near Redden Spring, 1.2 miles south of Eno.	15.8	8.01	-	+ .77	20.0	220
3.1	360254087261600 West Piney River Tributary No. 2	Lat 36°02'54", long 87°26'16", Dickson County, beside county road 3.2 miles southeast of Eno, and at mile 1.5.	.25	0	-	-	-	-
3.1	360247087265500 West Piney River Tributary No. 2	Lat 36°02'47", long 87°26'55", Dickson County, beside county road 1.0 mile south of Eno, and at mile 0.9.	.69	.04	+0.04	-	22.5	65
3.1	360241087273300 West Piney River Tributary No. 2	Lat 36°02'41", long 87°27'33", Dickson County, at county road 1.1 miles south of Eno, and at mile 0.2.	1.05	0	-0.04	-	-	-
3.0	360235087274900 Fielder Branch	Lat 36°02'35", long 87°27'49", Dickson County, at county road bridge 1.3 miles southwest of Eno, and at mile 0.04.	1.27	.44	-	-	21.5	110
2.2	360151087281900 West Piney River Tributary No. 3	Lat 36°01'51", long 87°28'19", Dickson County, 1.7 miles north of Oak Grove at county road, and at mile 0.7.	.92	0	-	-	-	-
1.8	360159087271700 West Piney River	Lat 36°01'59", long 87°27'17", Dickson County, above Bruce Spring, 2.5 miles northeast of Oak Grove.	20.6	16.0	-	+7.55	16.5	200
1.2	03602192 West Piney River	Lat 36°01'40", long 87°27'00", Dickson County, at State High- way 48 bridge, 2.3 miles northeast of Oak Grove.	21.2	19.0	-	+3.00	16.5	210
1.2	360142087263500 Dry Hollow Branch	Lat 36°01'42", long 87°26'35", Dickson County, at State High- way 48 bridge, 2.7 miles north- east of Oak Grove, and at mile 0.4.	1.42	.42	-	-	20.5	228
1.1	360132087270500 West Piney River Tributary No. 4	Lat 36°01'32", long 87°27'05", Dickson County, at State High- way 48 culvert, 2.2 miles northeast of Oak Grove.	.26	0	-	-	-	-
0.9	03602193 Bruce Hollow Branch	Lat 36°01'22", long 87°27'00", Dickson County, below county road bridge 2.1 miles north- east of Oak Grove, and at mile 0.1.	1.95	.93	-	-	15.5	212

Dickson, Tn. (Dickson County), seepage investigation--Continued

Piney River mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	Piney River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
23.6	360058087264600 Piney River Tributary	Lat 36°00'58", long 87°26'46", Dickson County, at county road 2.2 miles northeast of Oak Grove, and at mile 0.4.	.31	0	-	-	-	-
23.5	360036087263800 Piney River	Lat 36°00'36", long 87°26'38", Dickson County, 2.2 miles east of Oak Grove.	44.1	34.0	-	+ .35	19.0	245
23.4	03602210 Gray Hollow Branch	Lat 36°00'31", long 87°26'39", Dickson County, at county road 2.1 miles east of Oak Grove, and at mile 0.05.	.73	0	-	-	-	-
19.5	360052087213100 Turkey Creek	Lat 36°00'52", long 87°21'31", Dickson County, at county road 1.4 miles west of Tidwell, and at mile 6.1.	.99	.40	-	-	24.0	205
19.5	360052087215400 Turkey Creek Tributary No. 1	Lat 36°00'52", long 87°21'54", Dickson County, at county road 1.7 miles west of Tidwell, and at mile 0.04.	.81	0	-	-	-	-
19.5	360042087220700 Turkey Creek Tributary No. 2	Lat 36°00'42", long 87°22'07", Dickson County, at county road 1.9 miles west of Tidwell, and at mile 0.1.	.22	0	-	-	-	-
19.5	360009087222800 Turkey Creek	Lat 36°00'09", long 87°22'28", Dickson County, at county road 1.7 miles east of Mt. Sinai, and at mile 4.7.	4.00	1.48	1.08	-	18.0	170

Fairview, Tn. (Cheatham, Davidson, Dickson, Hickman, Williamson Counties), seepage investigation

A series of low-flow discharge measurements was made July 31, 1979, in the vicinity of Fairview, Tn. (Cheatham, Davidson, Dickson, Hickman, Williamson Counties), to define the losing and gaining reaches of streams draining the area, and to define the quality of water at base flow conditions. The area studied included South Harpeth River basin from mile 5.1 (8.2 km), Brush Creek basin from mile 3.7 (6.0 km), West Fork Brush Creek from mile 1.3 (2.1 km), Turnbull Creek basin from mile 13.1 (21.1 km). The measurements were made during a period of constant base flow. Tributary flow was considered a contribution and not a gain.

South Harpeth River mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	South Harpeth River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
19.3	355501087072000 South Harpeth Creek	Lat 35°55'01", long 87°07'20", Williamson County, at county road ford, 3.5 miles southwest of Fernvale.	2.91	2.90	-	-	20.5	190
18.7	355511087070000 South Harpeth Creek	Lat 35°55'11", long 87°07'00", Williamson County, at county road bridge, 3.2 miles southwest of Fernvale.	3.31	3.48	-	+5.58	21.0	192
17.0	355530087054100 South Harpeth Creek	Lat 35°55'30", long 87°05'41", Williamson County, at county road bridge, 2.2 miles south of Fernvale.	4.68	4.75	-	+1.27	24.0	185
15.9	355547087044600 Arkansas Creek	Lat 35°55'47", long 87°04'46", Williamson County, at county road, 1.7 miles south of Fern- vale, and at mile 0.1.	7.21	4.97	-	-	25.0	215
15.8	355552087044800 South Harpeth Creek	Lat 35°55'52", long 87°04'48", Williamson County, at county road bridge, 1.6 miles south of Fernvale.	18.3	15.2	-	+5.48	24.5	215
14.6	355539087070200 Caney Fork Creek	Lat 35°55'39", long 87°07'02", Williamson County, at county road bridge, 3.0 miles northeast of Craigfield, and at mile 4.4.	.99	.59	-	-	18.0	160
14.6	355608087065900 Caney Fork Creek	Lat 35°56'08", long 87°06'59", Williamson County, at county road bridge, 2.4 miles southwest of Fernvale, and at mile 3.0.	2.80	2.89	+2.30	-	20.5	220
14.6	355619087062700 Caney Fork Creek	Lat 35°56'19", long 87°06'27", Williamson County, at county road bridge, 1.9 miles southwest of Fernvale, and at mile 2.2.	4.32	4.19	+1.30	-	21.0	235
14.6	355651087045200 Caney Fork Creek	Lat 35°56'51", long 87°04'52", Williamson County, at county road bridge, 0.5 mile south of Fernvale, and at mile 0.03.	6.41	2.92	-1.27	-	24.5	360
14.5	355628087034100 Inman Branch Tributary	Lat 35°56'28", long 87°03'41", Williamson County, at county road crossing, 1.35 miles south- east of Fernvale, and at mile 0.3.	.53	.34	-	-	31.0	225

Fairview, Tn. (Cheatham, Davidson, Dickson, Hickman, Williamson Counties), seepage investigation--Continued

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South Harpeth River mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	South Harpeth River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
14.5	355653087043600 Inman Branch	Lat 35°56'53", long 87°04'36", Williamson County, at old State Highway 96 bridge, 0.4 mile south of Fernvale, and at mile 0.3.	1.50	0	-.34	-	-	-
14.1	03433660 South Harpeth River	Lat 35°57'15", long 87°04'43", Williamson County, at old State Highway 96 bridge, at Fernvale.	27.6	22.3	-	+4.18	25.5	240
13.3	355723087061700 Allen Branch	Lat 35°57'23", long 87°06'17", Williamson County, at county road, 2.0 miles south of Fair- view, and at mile 2.0.	.54	.41	-	-	20.0	200
13.3	355741087043500 Allen Branch	Lat 35°57'41", long 87°04'35", Williamson County, at county road ford, 2.7 miles southeast of Fairview, and at mile 0.2.	1.36	1.22	+.81	-	24.0	225
13.3	355821087063800 Hunting Camp Creek	Lat 35°58'21", long 87°06'38", Williamson County, at old State Highway 96 bridge, 0.9 mile southeast of Fairview, and at mile 2.7.	1.27	.46	-	-	23.0	240
13.3	355804087062800 Hunting Camp Creek Tributary	Lat 35°58'04", long 87°06'28", Williamson County, at old State Highway 96 bridge, 1.3 miles southeast of Fairview, and at mile 0.2.	.75	.76	-	-	20.0	240
13.3	355759087071900 Unnamed Tribu- tary to Hunting Camp Creek Tributary	Lat 35°57'59", long 87°07'19", Williamson County, at county road culvert near Chester Ceme- tery, 1.1 miles south of Fairview, and at mile 1.0.	.63	.06	-	-	20.0	190
13.3	355809087054200 Hunting Camp Creek	Lat 35°58'09", long 87°05'42", Williamson County, at county road ford, 2.7 miles south of Fairview, and at mile 1.6.	4.33	2.47	+2.01	-	21.5	200
13.3	355749087044400 Hunting Camp Creek	Lat 35°57'49", long 87°04'44", Williamson County, at county road ford, 0.6 mile north of Fernvale, and at mile 0.4.	5.07	3.71	+1.24	-	24.0	215
11.9	355830087034200 South Harpeth River	Lat 35°58'30", long 87°03'42", Williamson County, at old Harding Pike bridge, 1.8 miles north of Fernvale.	36.2	30.1	-	+2.05	24.0	250
11.6	355819087031400 Bedford Creek	Lat 35°58'19", long 87°03'14", Williamson County, at old county road bridge, 1.9 miles northeast of Fernvale, and at mile 0.5.	3.80	1.64	-	-	26.0	280

CUMBERLAND RIVER BASIN

Fairview, Tn. (Cheatham, Davidson, Dickson, Hickman, Williamson Counties), seepage investigation--Continued

South Harpeth River mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	South Harpeth River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
10.7	355911087031800 South Harpeth River Tributary	Lat 35°59'11", long 87°03'18", Williamson County, at county road, 3.5 miles south of Linton, and at mile 0.2.	1.74	.93	-	-	25.0	205
10.5	355913087025400 South Harpeth River Tributary	Lat 35°59'13", long 87°02'54", Williamson County, at county road, 3.3 miles south of Linton, and at mile 0.2.	.54	.16	-	-	24.5	215
10.2	355932087025600 South Harpeth River	Lat 35°59'32", long 87°02'56", Williamson County, at old Hard- ing Pike bridge, 3.0 miles south of Linton.	44.4	33.9	-	+1.07	24.0	260
10.0	355922087023300 South Harpeth River Tributary	Lat 35°59'22", long 87°02'33", Williamson County, at county road, 3.0 miles south of Linton, and at mile 0.5.	.68	0	-	-	-	-
8.7	360008087014600 East Fork Creek	Lat 36°00'08", long 87°01'46", Davidson County, at old Harding Pike bridge, 1.9 miles south of Linton, and at mile 0.3.	13.0	4.39	-	-	23.5	230
8.5	360032087014300 South Harpeth River	Lat 36°00'32", long 87°01'43", Davidson County, at new State Highway 96 bridge, 1.5 miles south of Linton.	59.6	41.6	-	+3.31	24.0	225
7.4	360106087014400 South Harpeth River Tributary	Lat 36°01'06", long 87°01'44", Davidson County, at State High- way 96 box culvert, 1.0 mile southeast of Linton, and at mile 0.1.	.77	.14	-	-	19.0	310
7.4	03433710 South Harpeth River	Lat 36°01'11", long 87°01'42", Davidson County, at State High- way 100 bridge, 0.5 mile east of Linton.	65.5	46.9	-	+5.16	24.0	200
5.1	360230087023000 South Harpeth River	Lat 36°02'30", long 87°02'30", Davidson County, at county road bridge, near Cheatham County line, 4.8 miles north- west of Linton.	70.8	44.7	-	-2.20	25.0	215

Fairview, Tn. (Cheatham, Davidson, Dickson, Hickman, Williamson Counties), seepage investigation--Continued

Brush Creek mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	South Harpeth River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
9.1	355914087061900 Brush Creek	Lat 35°59'14", long 87°06'19", Williamson County, at State Highway 100, 1.0 mile each of Fairview.	.40	0.11	-	-	19.0	90
6.7	360040087055900 Brush Creek	Lat 36°00'40", long 87°05'59", Williamson County, at Hughes Road ford, 1.0 mile west of Brush Creek.	2.93	2.93	-	+2.82	25.0	190
5.8	360108087052200 Brush Creek	Lat 36°01'08", long 87°05'22", Williamson County, at Brush Creek Road bridge, 0.9 mile north of Brush Creek.	4.61	3.23	-	+3.30	25.0	185
3.7	360239087050200 Brush Creek	Lat 36°02'39", long 87°05'02", Cheatham County, at county road road ford and footbridge, 2.6 miles north of Brush Creek.	9.69	5.29	-	+2.06	23.5	185
West Fork Brush Creek mile								
5.8	360100087093100 West Fork Brush Creek	Lat 36°01'00", long 87°09'31", Williamson County, at State High- way 96, at New Hope.	.85	0.22	-	-	23.0	180
4.1	360155087073700 West Fork Brush Creek	Lat 36°01'55", long 87°07'37", Williamson County, at Bahne Road bridge, 1.4 miles northeast of New Hope.	2.62	1.49	-	+1.27	22.5	215
4.1	360022087072600 West Fork Brush Creek Tributary	Lat 36°00'22", long 87°07'26", Williamson County, at State High- way 96, near fork with Old Cox Pike, at Fairview, and at mile 2.2.	.30	0	-	-	-	-
4.1	360153087073100 West Fork Brush Creek Tributary	Lat 36°01'53", long 87°07'31", Williamson County, at Bahne Road bridge, 1.4 miles east of New Hope, and at mile 0.06.	1.52	.39	+3.39	-	25.0	200
1.3	360005087074700 Flatrock Branch	Lat 36°00'05", long 87°07'47", Williamson County, at Old Cox Pike bridge, at Fairview, and and at mile 4.2.	1.34	.88	-	-	22.0	280
Turnbull Creek mile								
24.7	355602087102300 Big Turnbull Creek	Lat 35°56'02", long 87°10'23", Williamson County, at county road bridge, 1.6 miles north of Craigfield.	2.08	2.17	-	-	25.0	210

Fairview, Tn. (Cheatham, Davidson, Dickson, Hickman, Williamson Counties), seepage investigation--Continued

Turnbull Creek mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	South Harpeth River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
23.7	355625087111400 Big Turnbull Creek	Lat 35°56'25", long 87°11'14", Williamson County, at State Highway 100 bridge, 1.9 miles east of Tidwell.	3.08	2.46	-	+.29	25.0	205
23.3	355544087114200 Big Turnbull Creek Tributary	Lat 35°55'44", long 87°11'42", Williamson County, at county road ford, 1.2 miles north of Craigfield, and at mile 1.3.	1.65	1.18	-	-	26.5	170
23.3	355604087122600 Deadfall Branch Tributary	Lat 35°56'04", long 87°12'26", Hickman County, at State High- way 100, 0.7 mile east of Tidwell, and at mile 0.1.	.27	0	-	-	-	-
23.3	355619087113500 Big Turnbull Creek Tributary	Lat 35°56'19", long 87°11'35", Williamson County, at State Highway 100 bridge, 1.6 miles east of Tidwell, and at mile 0.5.	3.65	2.15	+.97	-	26.5	175
22.3	355714087105200 Overby Branch	Lat 35°57'14", long 87°10'52", Williamson County, at county road ford, 2.6 miles north- east of Tidwell, and at mile 0.4.	1.92	1.39	-	-	24.0	200
21.3	355758087115500 Big Turnbull Creek	Lat 35°57'58", long 87°11'55", Williamson County, at county road bridge, 1.4 miles south- west of Liberty Hill.	11.0	8.44	-	2.44	23.5	220
21.3	355802087114900 Sugar Camp Branch	Lat 35°58'02", long 87°11'49", Williamson County, at county road bridge, 1.2 miles south- west of Liberty Hill, and at mile 0.1.	1.22	.42	-	-	23.0	185
14.1	355842087093200 Little Turnbull Creek	Lat 35°58'42", long 87°09'32", Williamson County, at county road bridge, 1.4 miles east of Liberty Hill, and at mile 4.6.	2.19	1.60	-	-	24.0	200
14.1	355809087095300 Aden Branch	Lat 35°58'09", long 87°09'53", Williamson County, at county road bridge, 1.4 miles south- east of Libery Hill, and at mile 1.1.	1.29	.78	-	-	23.5	200
14.1	355917087102100 Little Turnbull Creek	Lat 35°59'17", long 87°10'21", Williamson County, at county road bridge, 0.8 mile northeast of Liberty Hill, and at mile 3.5.	5.12	3.34	+.96	-	21.5	180
14.1	360022087111500 Little Turnbull Creek	Lat 36°00'22", long 87°11'15", Williamson County, at county road bridge, 1.8 miles southwest of New Hope, and at mile 1.6.	8.40	5.45	+2.11	-	23.5	185

CUMBERLAND RIVER BASIN

Fairview, Tn. (Cheatham, Davidson, Dickson, Hickman, Williamson Counties), seepage investigation--Continued

Turnbull Creek mile	Stream	Location	Drainage Area (mi)	Meas. disch. (ft /s)	Tributary gain or loss	South Harpeth River gain or loss	Water temp. (°C)	Specific conductance (umhos/cm)
14.1	360051087114500 Little Turnbull Creek	Lat 36°00'51", long 87°11'45", Dickson County, at county road bridge, 2.1 miles west of New Hope, and at mile 0.8.	10.1	5.87	+ .42	-	23.0	210
14.1	350052087114600 Raccoon Branch	Lat 36°00'52", long 87°11'46", Dickson County, at county road bridge, 2.1 miles west of New Hope, and at mile 0.03.	1.29	.60	-	-	23.0	235
13.1	03433910 Turnbull Creek	Lat 36°01'55", long 87°12'48", Dickson County, at State High- way 96 bridge, 3.2 miles north- west of New Hope.	66.4	42.5	-	27.2	23.5	245

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03403697 - CLEAR FORK AT HWY 90, AT ANTHRAS, TN.

CUMBERLAND RIVER BASIN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1150	32	470	7.5	18.0	67	--	160	--	--
SEP 04...	1005	12	500	8.1	22.0	71	1.1	180	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	1100	1100	10	--	--	380
SEP 04...	10	20	20	1100	1100	20	24000	20	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	30	350	--	--	--	--	18	1.6	76
SEP 04...	--	380	830	.00	0	<10	27	.90	--

03403710 - TACKETT CREEK AT ANTHRAS, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1400	25	330	7.8	19.0	56	96	--	--
SEP 04...	1350	11	385	8.1	24.0	84	100	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	750	700	50	--	--	250
SEP 04...	10	20	20	520	440	80	21000	20	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	30	220	--	--	--	--	25	1.7	66
SEP 04...	--	170	970	.00	0	80	12	.36	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03403715 - STINKING CREEK NEAR NEWCOMB, TN.

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINIT- Y (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1350	81	128	6.9	17.0	14	--	40	--	--
SEP 05...	0830	10	270	8.2	22.0	34	.3	87	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE- D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	1700	1700	30	--	--	510
SEP 05...	10	10	10	730	680	50	22000	10	650

DATE	MANGA- NESE, SUS- PENDE- D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE- D (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
MAY 23...	40	470	--	--	--	--	32	7.0	63
SEP 05...	100	550	800	.00	0	70	13	.35	--

03403720 - LICK CREEK AT HABERSHAM, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINIT- Y (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1650	38	240	7.6	19.0	38	64	--	--
SEP 05...	1050	5.2	430	8.3	22.0	106	120	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE- D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	3100	3000	60	--	--	430
SEP 05...	20	20	20	620	580	40	25000	20	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
MAY 22...	100	330	--	--	--	--	75	7.8	84
SEP 05...	--	170	1200	.00	0	90	16	.23	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03403740 - HICKORY CREEK AT MORLEY, TN

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECov. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	0830	211	202	6.9	17.5	22	71	--	--
SEP 04...	1555	25	420	7.9	25.5	56	140	0	<10

DATE	TIME	CHRO- MIUM, RECov. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECov. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECov. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECov- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECov- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECov. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECov. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECov- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	--	3200	3100	80	--	--	900
SEP 04...	<10	<10	20	<10	1600	1600	30	9000	20	740

DATE	MANGA- NESE, SUS- PENDE RECov. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECov. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECov. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECov. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SED- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	50	850	--	--	--	--	75	43	93
SEP 04...	150	590	380	.00	0	20	48	3.2	--

03403770 - ELK CREEK AT NEWCOMB, TN.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECov. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	0900	35	220	7.4	17.0	54	52	--	--
SEP 05...	1355	12	275	7.5	23.0	70	69	0	<10

DATE	TIME	CHRO- MIUM, RECov. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECov. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECov. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECov- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECov- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECov. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECov. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECov- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	--	3400	3300	100	--	--	290
SEP 05...	30	<10	20	3800	3800	30	20000	30	440	440

DATE	MANGA- NESE, SUS- PENDE RECov. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECov. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECov. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECov. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	50	240	--	--	--	--	91	8.6
SEP 05...	30	410	740	.00	0	80	100	3.4

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03404150 - JELLICO CREEK AT

KETCHEN, TN.

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1700	11	240	7.1	18.0	14	--	94	--	--
SEP 05...	0930	9.3	240	7.6	21.0	17	.8	90	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	1100	1100	40	--	--	1300
SEP 05...	50	40	30	1000	930	70	93000	10	1600

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
MAY 22...	0	1300	--	--	--	--	19	.58	74
SEP 05...	810	790	1500	.00	0	120	16	.40	--

03407850 - NEW RIVER AT STAINVILLE, TENN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	0900	45	504	7.4	17.5	59	180	--	--
SEP 05...	1400	70	420	8.0	23.5	54	130	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	570	530	40	--	--	140
SEP 05...	20	20	20	770	720	50	53000	20	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
MAY 23...	20	120	--	--	--	--	17	2.1	58
SEP 05...	--	190	890	.00	0	80	9	1.7	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03407873 - REECH FORK AT SHEA, TENN

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1115	30	270	7.6	16.5	42	63	--	--
SEP 05...	1130	17	240	8.0	21.5	48	57	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	1400	1400	20	--	--	50
SEP 05...	20	10	10	220	210	10	4000	10	30

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	30	20	--	--	--	--	29	2.4	80
SEP 05...	0	40	600	.00	0	60	3	.14	--

03407890 - MONTGOMERY FORK AT MONTGOMERY, TENN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
MAY 23...	1200	48	240	6.8	15.0	28	--	90	4900
SEP 04...	1000	2.9	324	7.8	22.0	43	1.1	110	270

DATE	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	4800	60	570	70	500	105	14	93
SEP 04...	250	20	--	--	470	3	.02	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03407920 - BUFFALO CREEK NEAR WINONA, TENN

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINIT- Y (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	0900	1660	65	7.4	14.5	8	17	--	--
SEP 05...	1630	10	172	7.3	22.0	30	42	0	<10

DATE	TIME	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE- D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	--	10000	9900	90	--	--	360
SEP 05...	20	20	20	10	4600	4500	100	15000	<10	--

DATE	TIME	MANGA- NESE, SUS- PENDE- D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE- D (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE- D (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	230	130	--	--	--	--	--	369	1650	94
SEP 05...	--	960	260	.00	0	50	120	3.2	--	--

03407960 - PAINT ROCK CREEK NEAR HUNTSVILLE, TENN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINIT- Y (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1630	175	120	7.2	16.0	18	--	32	--	--
SEP 05...	0800	8.3	250	7.4	21.0	63	4.4	53	2	<10

DATE	TIME	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE- D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	--	24000	24000	60	--	--	730
SEP 05...	20	20	20	10	1700	1700	50	28000	<10	130

DATE	TIME	MANGA- NESE, SUS- PENDE- D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE- D (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE- D (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	440	290	--	--	--	--	--	899	425	98
SEP 05...	40	90	1000	.00	0	50	36	.81	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03408200 - BRIMSTONE CREEK NEAR ROBBINS, TENN

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM REC OV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1630	369	150	7.1	16.5	21	48	--	--
SEP 06...	1430	8.4	255	7.5	23.0	36	78	0	<10

DATE	CHRO- MIUM, REC OV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL REC OV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE REC OV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL REC OV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	18000	18000	40	--	--	860
SEP 06...	20	10	20	3500	3400	80	340000	10	350

DATE	MANGA- NESE, SUS- PENDE REC OV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, REC OV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY REC OV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	530	330	--	--	--	--	704	701	89
SEP 06...	50	300	1300	.00	0	80	97	2.2	--

03408550 - NORTH PRONG CLEAR FORK NEAR GRIMSLEY, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM REC OV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1345	29	38	6.8	16.0	14	5.4	--	--
SEP 04...	1000	4.9	270	7.0	19.5	11	10	0	<10

DATE	CHRO- MIUM, REC OV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL REC OV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE REC OV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL REC OV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	330	220	110	--	--	20
SEP 04...	<10	10	<10	860	510	350	41000	<10	100

DATE	MANGA- NESE, SUS- PENDE REC OV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, REC OV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY REC OV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, REC OV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	0	20	--	--	--	--	9	.71	58
SEP 04...	0	110	200	.00	0	10	15	.20	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03408700 - CLEAR FORK AT GATEWOOD, TN.

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINIT- Y (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1045	129	48	6.5	15.5	5	--	11	--	--
SEP 06...	0930	7.2	155	7.2	21.5	15	7.4	9.3	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	3200	3100	80	--	--	140
SEP 06...	<10	<10	<10	470	320	150	2700	<10	90

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	60	80	--	--	--	--	102	36	93
SEP 06...	0	110	130	.00	0	10	3	.06	--

03408860 - CLEAR FORK NEAR BURRVILLE, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINIT- Y (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1315	236	37	6.9	15.5	7	4.4	--	--
SEP 05...	1520	22	55	7.3	25.5	16	9.6	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	490	400	90	--	--	20
SEP 05...	<10	10	<10	300	170	130	2200	<10	30

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	10	10	--	--	--	--	12	7.6	39
SEP 05...	0	40	160	.00	0	<10	10	.59	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03409350 - BONE CAMP CREEK NEAR BURRVILLE, TN

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1700	46	27	6.8	15.5	7	3.3	--	--
SEP 05...	1240	1.9	47	7.1	21.5	16	5.4	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	460	380	80	--	--	20
SEP 05...	60	<10	<10	480	340	140	3400	<10	30

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	0	20	--	--	--	--	12	1.5	42
SEP 05...	10	20	90	.00	0	10	5	.03	--

03409395 - BLACK WOLF CREEK NEAR

GLENMARY, TN.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1715	19	172	6.9	16.5	12	--	54	--	--
SEP 05...	0915	3.6	155	7.3	20.0	34	3.0	39	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	610	530	80	--	--	400
SEP 05...	10	20	10	1100	890	210	9400	<10	120

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	20	380	--	--	--	--	17	.88	65
SEP 05...	0	120	840	.00	0	60	19	.18	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03409400 - WHITE OAK CREEK AT RUGBY, TN

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY 22...	1045	60	100	7.1	17.0	--	--	--	--	--
JUL 18...	1200	69	55	7.1	21.0	--	--	--	--	--
SEP 04...	1500	11	115	7.4	24.0	43	17	11	3.7	5.1

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)
MAY 22...	--	--	--	16	23	--	--	--	--	--
JUL 18...	--	--	--	14	9.1	--	--	--	42	--
SEP 04...	20	.3	1.7	28	20	3.3	.1	4.0	82	65

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	--	--	560	90	50	40	16	2.6	59
JUL 18...	.06	7.82	500	120	30	30	8	1.5	--
SEP 04...	.11	2.52	550	120	50	30	6	.18	--

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL FM BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
SEP 04...	.56	.010	1	0	0	1	<10	<10	20	10	5	<10

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CYANIDE TOTAL (MG/L AS CN)
SFP 04...	18000	1	170	690	<.5	.00	0	0	1	0	40	.00

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03410210 - S F CUMBERLAND R AT LEATHERWOOD FORD, TN

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1000	1040	160	6.7	18.5	20	50	--	--
SEP 05...	1230	333	182	7.6	25.5	26	43	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	370	340	30	--	--	120
SEP 05...	20	20	<10	1100	1100	50	14000	20	70

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	20	100	--	--	--	--	10	28	47
SEP 05...	0	70	430	.00	0	20	29	26	--

03414340 - EAST FORK OBEY RIVER AT OBEY CITY, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1445	524	90	3.9	13.0	.1	5.0	22	--	--
SEP 06...	1400	4.3	325	3.3	25.0	.9	45	71	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	3500	2600	950	--	--	150
SEP 06...	10	10	<10	740	30	710	22000	<10	710

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	30	120	--	--	--	--	29	41	57
SEP 06...	110	600	70	.00	0	10	<1	--	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03414346 - HURRICANE CREEK AT CAMP GROUND, TN.

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	0945	193	25	7.1	12.0	5	--	3.6	--	--
SEP 06...	0900	1.2	34	7.2	21.0	10	1.0	5.4	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	600	540	60	--	--	50
SEP 06...	<10	<10	<10	260	130	130	3300	<10	20

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	20	30	--	--	--	--	33	17	52
SEP 06...	0	20	140	.00	0	<10	1	.00	--

03414430 - EAST FORK OBEY RIVER NEAR WILDER, TN.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1600	1390	90	4.4	15.0	--	--	31	--	--
SEP 06...	1100	3.6	1150	2.8	22.5	6.4	318	430	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	3400	2900	470	--	--	310
SEP 06...	20	20	20	28000	2000	26000	76000	20	3600

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	60	250	--	--	--	--	45	169	25
SEP 06...	2700	920	180	.00	0	40	3	.03	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03414470 - BUFFALO COVE C NR BOATLAND, TENN.

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1400	134	96	7.4	14.0	34	13	--	--
SEP 05...	1700	--	--	--	--	--	--	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	1200	1100	90	--	--	70
SEP 05...	10	10	<10	--	--	--	11000	10	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	40	30	--	--	--	--	40	14	67
SEP 05...	--	--	520	.00	0	20	--	--	--

03414680 - WEST FORK OBEY RIVER NEAR ALLRED, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1245	430	172	8.2	12.0	78	9.7	--	--
SEP 06...	1220	12	280	8.1	21.0	108	30	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	850	800	50	--	--	50
SEP 06...	40	20	<10	170	120	50	26000	10	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	30	20	--	--	--	--	28	33	80
SEP 06...	--	30	720	.00	0	40	2	.07	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
03415000 - WEST FORK OBEY RIVER NEAR ALPINE, TENN.

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
MAY 24...	1000	802	180	7.7	13.5	--	--	--	--	--
JUN 13...	0830	55	230	7.7	15.5	--	--	--	--	--
JUL 12...	1210	113	212	8.4	17.0	--	--	--	--	--
AUG 15...	0815	22	270	8.1	20.5	--	--	--	--	--
SEP 06...	0830	25	290	7.4	22.0	140	45	44	7.7	3.8

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION PATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)
MAY 24...	--	--	--	80	14	--	--	--	109	--
JUN 13...	--	--	--	93	27	--	--	--	156	--
JUL 12...	--	--	--	87	17	--	--	--	--	--
AUG 15...	--	--	--	110	38	--	--	--	--	--
SEP 06...	7	.1	.9	100	38	4.6	.1	5.4	188	163

DATE	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	.15	236	1600	30	90	40	56	121	70
JUN 13...	.21	23.2	470	0	30	20	7	1.0	76
JUL 12...	--	--	280	30	20	10	6	1.8	--
AUG 15...	--	--	130	10	10	0	4	.25	--
SEP 06...	.26	12.7	130	0	30	20	2	.13	--

DATE	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL MATERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)
SEP 06...	.28	.000	0	0	100	2	<10	<10	40	20	3	<10

DATE	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CYANIDE TOTAL (MG/L AS CN)
SEP 06...	32000	3	30	1100	<.5	.00	0	0	0	0	60	.00

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03415960 - WOLF RIVER AT WOLF RIVER, TN

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1215	243	100	7.6	13.0	42	--	5.8	--	--
SEP 06...	0930	17	150	8.1	16.0	74	1.2	8.0	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	1700	1600	60	--	--	60
SEP 06...	<10	<10	<10	230	210	20	7500	<10	20

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	50	10	--	--	--	--	53	35	77
SEP 06...	10	10	30	.00	0	20	2	.09	--

03415975 - ROTTEN FORK WOLF RIVER NEAR PALL MALL, TN.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1045	168	115	7.7	12.5	50	5.5	--	--
SEP 06...	1130	9.5	185	8.1	20.0	90	9.0	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	1600	1600	50	--	--	40
SEP 06...	<10	<10	<10	160	140	20	4500	<10	20

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	20	20	--	--	--	--	43	20	64
SEP 06...	10	10	620	.00	0	40	<1	--	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03418500 - CANEY FORK AT CLIFTY, TENN.

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 25...	1000	851	30	--	12.0	11	--	4.7	--	--
SEP 05...	1430	9.0	99	7.0	29.0	14	2.3	28	2	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 25...	--	--	--	390	340	50	--	--	70
SEP 05...	<10	20	<10	200	160	40	14000	20	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
MAY 25...	20	50	--	--	--	--	17	39	44
SEP 05...	--	360	890	.00	0	90	<1	--	--

03418520 - CLIFTY CREEK AT MOBRA, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ACIDITY TOTAL HEATED (MG/L AS H)	ACIDITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1420	4.6	460	3.5	16.5	--	--	220	--	--
SEP 05...	1230	.13	675	3.5	24.0	1.6	79	270	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	2500	1100	1400	--	--	--
SEP 05...	10	10	10	1100	100	1000	51000	10	11000

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	--	7900	--	--	--	--	21	.26
SEP 05...	10000	1000	230	.00	0	20	2	.00

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03418925 - BEE CREEK AT LANTANA RD AT WINESAP, TN

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- DIS- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1530	228	40	6.3	17.0	6	6.1	--	--
SEP 05...	1400	.50	60	6.7	21.0	19	3.8	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	3000	2900	100	--	--	180
SEP 05...	<10	<10	<10	1100	620	480	1600	<10	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. & FINER THAN .062 MM
MAY 23...	110	70	--	--	--	--	256	158	39
SEP 05...	--	110	110	.00	0	<10	1	.00	--

03418935 - BEAVERDAM CR AT LANTANA RD NEAR BELLVIEW, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1400	88	57	6.5	17.0	8	--	7.2	--	--
SEP 05...	1300	2.2	68	7.3	20.5	24	2.1	3.2	1	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	1900	1800	100	--	--	230
SEP 05...	<10	10	<10	760	320	440	2500	10	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. & FINER THAN .062 MM
MAY 23...	140	90	--	--	--	--	104	25	78
SEP 05...	--	170	120	.00	0	<10	2	.01	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03418995 - GLADE CREEK NEAR

LONEWOOD, TN.

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1100	142	48	6.5	16.0	12	--	5.2	--	--
SEP 05...	1000	7.2	75	8.0	22.0	21	.4	7.5	1	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	1700	1500	180	--	--	270
SEP 05...	<10	20	<10	370	130	240	8900	<10	--

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	230	40	--	--	--	--	148	57	83
SEP 05...	--	50	100	.00	0	30	<1	--	--

03419200 - CANE C NR SPENCER, TENN.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1100	8.2	72	7.2	16.0	22	--	12	--	--
SEP 05...	1330	3.6	100	7.8	21.0	28	.9	14	1	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	100	90	10	--	--	40
SEP 05...	20	10	<10	100	60	40	29000	10	--

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	0	40	--	--	--	--	3	.07	64
SEP 05...	0	40	1400	.00	0	60	<1	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03419270 - CALFKILLER RIVER NEAR TAYLORS, TN

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1800	502	150	7.8	15.5	68	7.7	--	--
SEP 05...	1715	21	235	7.9	18.0	100	15	1	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	15000	15000	40	--	--	570
SEP 05...	<10	<10	<10	190	150	40	3100	<10	20

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	550	20	--	--	--	--	831 1130	89
SEP 05...	0	20	140	.00	0	<10	2 .11	--

03420000 - CALFKILLER RIVER BELOW SPARTA, TENN.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1620	302	220	8.1	18.0	100	--	10	--	--
SEP 05...	1445	74	252	8.2	22.0	136	1.2	11	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	430	400	30	--	--	60
SEP 05...	20	<10	<10	270	230	40	6200	<10	40

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	30	30	--	--	--	--	21 17	71
SEP 05...	10	30	410	.00	0	20	6 1.2	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03420116 - ROCKY RIVER AT ROCKY R ROAD AT RIVERVIEW, TN

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1330	126	200	7.8	14.0	52	--	42	--	--
SEP 05...	1615	27	265	7.8	20.0	--	1.0	81	7	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	360	350	10	--	--	200
SEP 05...	<10	20	<10	90	80	10	5600	<10	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	70	130	--	--	--	--	12	4.1	78
SEP 05...	--	130	330	.00	0	20	<1	--	--

03420156 - COLLINS RIVER AT BARKERTOWN, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1045	284	68	7.0	16.5	12	--	11	--	--
SEP 04...	1530	12	95	7.1	21.5	18	3.6	17	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	7300	7300	50	--	--	810
SEP 04...	<10	<10	<10	410	270	140	3300	130	60

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	500	310	--	--	--	--	490	376	83
SEP 04...	10	50	250	.00	0	20	6	.19	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03420200 - COLLINS RIVER NEAR TARLTON, TENN

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1430	2870	58	7.1	15.5	14	--	10	--	--
SEP 05...	1030	244	91	7.7	18.0.	28	.9	15	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	780	720	60	--	--	160
SEP 05...	<10	<10	<10	140	110	30	4000	20	20

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	140	20	--	--	--	--	42	325	52
SEP 05...	20	0	230	.00	0	20	1	.66	--

03420230 - SCOTT CREEK AT IRVING COLLEGE, TN.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1450	27	250	8.1	17.0	130	8.8	--	--
SEP 05...	1245	13	290	7.9	19.5	138	8.4	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	500	490	10	--	--	40
SEP 05...	10	<10	<10	130	110	20	5300	20	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	20	20	--	--	--	--	18	1.3	83
SEP 05...	--	20	270	.00	0	20	1	.04	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03420260 - HILLS CREEK NEAR IRVING COLLEGE, TN.

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1030	581	102	7.1	15.0	24	21	--	--
SEP 05...	1515	35	208	7.4	22.0	27	62	0	<10

DATE	TIME	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	--	1600	1600	30	--	--	650
SEP 05...	<10	<10	20	<10	130	90	40	5700	20	--

DATE	TIME	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	190	460	--	--	--	--	--	51	80	64
SEP 05...	--	690	1300	.00	0	50	2	.19	--	--

03420720 - HICKORY CREEK NEAR VIOLA, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1000	44	245	8.1	18.0	100	--	15	--	--
SEP 05...	0850	44	232	7.9	17.5	106	2.4	5.2	0	<10

DATE	TIME	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	--	--	--	430	--	--	100
SEP 05...	40	20	<10	420	360	60	7500	20	70	70

DATE	TIME	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	0	100	--	--	--	--	--	35	4.2	59
SEP 05...	0	70	450	.00	0	30	13	1.5	--	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03422850 - FALLING WATER R AT ST. HWY 42,NR COOKEVILLE, TN

CUMBERLAND RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1700	43	180	7.7	16.0	94	--	4.9	--	--
SEP 06...	1700	18	240	7.8	23.0	116	3.7	7.4	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	1200	1200	20	--	--	90
SEP 06...	20	10	<10	300	240	60	13000	10	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	70	20	--	--	--	--	24	2.8	67
SEP 06...	--	40	330	.00	0	40	8	.39	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03532070 - OLD TOWN CREEK NEAR RED HILL, TN.

TENNESSEE RIVER BASIN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	0900	6.0	165	6.5	15.0	74	--	6.9	--	--
SEP 04...	1430	3.5	258	7.6	21.0	118	5.4	7.4	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	390	360	30	--	--	60
SEP 04...	<10	10	<10	1500	1400	90	8100	80	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	10	50	--	--	--	--	8	.13	79
SEP 04...	--	200	370	.00	0	10	30	.29	--

03532100 - DAVIS CREEK NEAR SPEEDWELL, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1230	20	255	7.8	17.0	122	5.3	--	--
SEP 04...	1630	13	320	8.1	22.0	158	6.7	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	400	390	10	--	--	30
SEP 04...	30	20	<10	370	330	40	20000	20	40

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	0	30	--	--	--	--	6	.32	83
SEP 04...	10	30	770	.00	0	20	5	.18	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03532202 - BIG CREEK AT ASPEN STREET AT LA FOLLETTE, TN

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1630	69	192	7.6	17.5	30	--	67	--	--
SEP 05...	0845	5.8	560	6.2	20.0	16	11	230	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	2100	2100	10	--	--	1200
SEP 05...	90	30	40	4200	4200	40	65000	30	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	0	1200	--	--	--	--	56	11	89
SEP 05...	--	5400	970	.00	0	10	222	3.5	--

03532480 - COVE CREEK ABOVE COVE LAKE, NEAR CARYVILLE, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1830	106	128	6.9	16.0	28	--	24	--	--
SEP 04...	0930	3.2	290	8.0	22.5	72	1.4	46	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	1800	1700	90	--	--	70
SEP 04...	30	10	10	250	190	60	20000	20	30

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	40	30	--	--	--	--	50	14	77
SEP 04...	0	30	680	.00	0	70	796	7.0	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03534000 - COAL CR AT LAKE CITY TENN.

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1630	107	245	7.8	18.0	74	42	--	--
SEP 05...	1145	12	360	8.2	24.0	98	79	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	44000	44000	70	--	--	970
SEP 05...	30	20	30	940	890	50	50000	20	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT DIS- CHARGE, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. & FINER THAN .062 MM
MAY 23...	830	140	--	--	--	--	2170	627
SEP 05...	--	260	1100	.00	0	110	21	.70

03538160 - POPLAR C AT BATLEY RD NR OLIVER SPRINGS, TENN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1245	229	122	7.3	16.5	20	32	--	--
SEP 05...	1700	22	230	8.1	24.5	44	53	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	2700	2600	60	--	--	270
SEP 05...	10	<10	10	510	420	90	20000	<10	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT DIS- CHARGE, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. & FINER THAN .062 MM	
MAY 24...	80	190	--	--	--	--	96	59	64
SEP 05...	--	130	380	.00	0	40	6	.36	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03538398 - ROCK CREEK NEAR GOBEY, TN

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1710	221	42	6.9	17.0	9	6.8	--	--
SEP 06...	1255	3.0	65	6.9	22.0	20	8.7	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	1300	1200	60	--	--	90
SEP 06...	10	<10	<10	680	540	140	12000	<10	60

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	70	20	--	--	--	--	55	33	46
SEP 06...	0	80	220	.00	0	30	10	.08	--

03539600 - DADDYS CR NR HEBBERTSBURG, TENN.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1425	2220	45	6.6	15.0	7	6.7	--	--
SEP 06...	1600	12	95	7.8	25.5	32	5.9	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	1700	1600	90	--	--	180
SEP 06...	10	10	<10	230	140	90	11000	10	30

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	150	30	--	--	--	--	82	492	59
SEP 06...	20	10	200	.00	0	20	5	.16	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03539719 - WHITE CREEK AT TWIN BRIDGES, TN

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1430	556	22	6.1	13.5	5	--	3.7	--	--
SEP 06...	0945	8.6	27	6.9	19.5	8	2.0	5.7	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	950	880	70	--	--	40
SEP 06...	10	10	<10	270	150	120	2600	<10	10

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
MAY 24...	10	30	--	--	--	--	2	3.0	94
SEP 06...	0	20	100	.00	0	10	1	.02	--

03539750 - CLEAR C NR LANCING TENN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 25...	0945	1150	29	6.1	13.5	5	--	4.4	--	--
SEP 06...	1000	28	48	7.0	23.5	12	1.6	8.0	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 25...	--	--	--	520	470	50	--	--	30
SEP 06...	10	<10	<10	260	220	40	5200	<10	30

	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)		SEDI- MENT DIS- CHARGE, SUS- PENDE (MG/L) (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 25...	10	20	--	--	--	--	17	53	63
SEP 06...	20	10	1100	.00	0	20	4	.30	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03539831 - ISLAND CREEK NEAR CATOOSA, TN

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	1500	14	27	6.8	17.5	6	5.7	--	--
SEP 06...	1510	1.5	32	6.8	24.0	6	9.7	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	350	330	20	--	--	20
SEP 06...	<10	10	<10	130	110	20	8500	10	20

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	10	10	--	--	--	--	9	.35	58
SEP 06...	0	30	120	.00	0	20	<1	--	--

03539860 - CROOKED F NR WARTBURG TENN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1140	295	95	6.4	15.0	14	25	--	--
SEP 06...	1520	32	321	7.2	22.0	34	110	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	3400	3300	70	--	--	280
SEP 06...	<10	10	<10	410	360	50	17000	<10	920

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)
MAY 24...	50	230	--	--	--	--	--	--
SEP 06...	260	660	310	.00	0	50	2	.17

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03540100 - CRAB ORCHARD CREEK NEAR DEERMONT, TENN.

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINIT- Y (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1430	293	37	6.4	15.0	6	12	--	--
SEP 06...	1245	7.7	145	4.7	23.5	2	52	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	960	900	60	--	--	260
SEP 06...	20	<10	10	330	210	120	14000	<10	1700

DATE	MANGA- NESE, SUS- PENDE D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE D (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE D (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	20	240	--	--	--	--	40	32	23
SEP 06...	900	800	270	.00	0	50	<1	--	--

03541485 - WHITES CREEK AT BAKERS BRIDGE NEAR GLEN ALICE, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINIT- Y (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 25...	1120	141	26	6.5	12.0	3	--	4.1	--	--
SEP 07...	0830	3.9	54	7.5	22.0	18	1.0	4.4	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE D RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 25...	--	--	--	280	280	0	--	--	20
SEP 07...	<10	<10	<10	170	100	70	5900	<10	20

DATE	MANGA- NESE, SUS- PENDE D RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT DIS- CHARGE, SUS- PENDE D (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 25...	10	10	--	--	--	--	7	2.7
SEP 07...	0	20	190	.00	0	20	2	.02

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03541487 - PINEY CREEK NEAR WESTEL, TN

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 25...	1200	108	28	6.4	12.5	5	5.2	--	--
SEP 06...	1800	4.0	66	7.3	23.0	22	6.7	0	<10

DATE	TIME	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 25...	--	--	--	--	240	220	20	--	--	30
SEP 06...	20	10	10	<10	160	110	50	18000	90	20

DATE	TIME	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 25...	10	10	20	--	--	--	--	8	2.3	34
SEP 06...	10	10	10	380	.00	0	30	2	.02	--

03541496 - FALL CREEK NEAR OZONE, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1640	214	41	7.8	14.5	19	--	6.9	--	--
SEP 06...	0915	4.7	103	7.4	21.5	30	2.6	9.6	0	<10

DATE	TIME	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	--	820	790	30	--	--	60
SEP 06...	10	10	<10	<10	130	110	20	12000	<10	30

DATE	TIME	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	50	10	10	--	--	--	--	49	28	33
SEP 06...	20	10	10	360	.00	0	20	14	.18	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03542495 - PINEY RIVER ABOVE SPRING CITY, TN

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 25...	0900	416	26	6.7	12.5	4	--	4.8	--	--
SEP 07...	0815	4.5	62	7.1	22.5	10	1.6	13	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 25...	--	--	--	560	560	0	--	--	30
SEP 07...	<10	10	<10	160	110	50	6700	30	20

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 25...	20	10	--	--	--	--	20	22	51
SEP 07...	10	10	280	.00	0	10	2	.02	--

03542500 - PINEY R AT SPRING CITY TENN.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 25...	0825	498	30	6.4	13.0	12	--	5.7	--	--
SEP 07...	0810	6.8	78	7.5	21.5	26	1.2	13	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 25...	--	--	--	480	480	0	--	--	70
SEP 07...	<10	<10	<10	120	90	30	5600	<10	20

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 25...	40	30	--	--	--	--	29	39	33
SEP 07...	0	20	300	.00	0	20	<1	--	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03566292 - SALE CREEK NEAR SALE CREEK, TN

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 25...	0900	506	45	6.8	12.5	8	7.7	--	--
SEP 04...	1615	--	--	--	--	--	--	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 25...	--	--	--	700	630	70	--	--	110
SEP 04...	20	20	<10	--	--	--	17000	10	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
MAY 25...	50	60	--	--	--	--	20	27	59
SEP 04...	--	--	1300	.00	0	50	--	--	--

03566400 - SODDY C AT SODDY TENN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 23...	0915	457	34	6.1	16.5	6	9.3	--	--
SEP 04...	1815	5.6	145	5.5	27.0	--	49	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 23...	--	--	--	3500	3500	50	--	--	230
SEP 04...	10	10	10	--	0	60	21000	10	1400

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 23...	130	100	--	--	--	--	163	201
SEP 04...	640	760	380	.00	0	40	--	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03566530 - NORTH CHICKAMAUGA CREEK NEAR DAISY, TN

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1715	122	32	5.0	18.0	3	9.9	--	--
SEP 05...	0750	8.7	54	4.7	23.0	3	16	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	100	80	20	--	--	60
SEP 05...	10	<10	<10	30	30	0	16000	<10	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SED- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	0	70	--	--	--	--	2	.66	40
SEP 05...	--	110	270	.00	0	20	1	.02	--

03569245 - SUCK CREEK NEAR CHATTANOOGA, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1830	64	90	4.5	15.0	0	31	--	--
SEP 05...	0830	18	115	4.6	19.0	1	39	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	440	380	60	--	--	800
SEP 05...	10	20	10	490	450	40	14000	20	1100

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	
MAY 22...	50	750	--	--	--	--	17	3.0	9
SEP 05...	390	710	580	.00	0	50	7	.34	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03570602 - SEQUATCHIE RIVER NEAR PIKEVILLE, TN

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1100	55	208	7.8	16.5	100	--	6.4	--	--
SEP 04...	1400	31	252	7.9	22.0	113	2.9	7.4	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	750	660	90	--	--	90
SEP 04...	50	20	<10	480	440	40	20000	20	80

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	50	40	--	--	--	--	23	3.4	78
SEP 04...	10	70	630	.00	0	20	13	1.1	--

03570695 - SEQUATCHIE RIVER NEAR MT. AIRY, TN.

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1900	136	200	8.1	19.5	89	--	6.5	--	--
SEP 04...	1415	71	230	8.2	22.0	102	1.4	10	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	500	490	10	--	--	50
SEP 04...	<10	10	<10	1400	1400	30	10000	10	40

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	30	20	--	--	--	--	18	6.6	43
SEP 04...	20	20	740	.00	0	20	10	1.9	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03570800 - LITTLE BRUSH CREEK NR DUNLAP, TENN.

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1550	2.5	75	7.2	18.5	16	--	9.6	--	--
SEP 06...	1215	1.3	83	7.7	20.5	24	.7	10	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	150	130	20	--	--	10
SEP 06...	10	<10	<10	80	70	10	12000	10	10

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	0	10	--	--	--	--	4	.03	93
SEP 06...	10	0	430	.00	0	20	<1	--	--

03570810 - BIG BRUSH CREEK NEAR DUNLAP, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1700	11	62	7.3	19.5	12	--	9.2	--	--
SEP 06...	1030	18	57	7.3	21.0	15	1.0	10	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	110	80	30	--	--	10
SEP 06...	<10	<10	<10	240	210	30	8500	10	10

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	0	10	--	--	--	--	1	.03	50
SEP 06...	10	0	390	.00	0	30	4	.19	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03570855 - WOODCOCK CREEK SOUTHWEST OF DUNLAP, TN

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1300	4.2	65	5.6	23.0	2	19	--	--
SEP 06...	1400	--	--	--	--	--	--	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	100	70	30	--	--	200
SEP 06...	<10	10	<10	--	--	--	12000	10	--

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	40	160	--	--	--	--	1	.01	33
SEP 06...	--	--	480	.00	0	30	--	--	--

03570870 - HICKS CREEK AT CARTWRIGHT, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1010	11	75	7.8	21.5	18	--	11	--	--
SEP 06...	1430	.24	150	8.4	29.0	33	.2	35	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	690	650	40	--	--	20
SEP 06...	40	<10	<10	60	60	0	29000	10	10

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	10	10	--	--	--	--	17	.50	78
SEP 06...	10	0	510	.00	0	30	3	.00	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03571500 - L SEQUATCHIE R AT SEQUATCHIE, TENN.

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1330	117	195	7.8	15.0	40	--	31	--	--
SEP 07...	0900	63	136	7.8	18.5	40	1.2	21	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	1600	1600	20	--	--	30
SEP 07...	<10	<10	<10	330	280	50	7300	<10	30

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	20	10	--	--	--	--	34	11	81
SEP 07...	20	10	230	.00	0	20	8	1.4	--

03571700 - PRYOR COVE BRANCH NEAR JASPER, TENN

DATE	TIME	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
SEP 04...	1520	0	<10	<10	<10	<10	7000	10	370	.00	0	20

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03571800 - BATTLE CR NR MONTEAGLE TENN.

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1000	62	122	8.2	14.0	48	--	6.3	--	--
SEP 04...	1200	117	150	8.2	18.0	56	5.6	8.8	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	290	260	30	--	--	20
SEP 04...	<10	20	<10	320	250	70	7100	<10	20

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	10	10	--	--	--	--	7	1.2	54
SEP 04...	20	0	230	.00	0	10	9	2.8	--

03571827 - KELLY COVE CREEK AT SMITHTOWN, TN

DATE	TIME	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
SEP 04...	1245	0	<10	10	<10	<10	11000	20	520	.00	0	20

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03571835 - SWEDEN CREEK NEAR SOUTH PITTSBURG, TN

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1800	32	165	7.6	15.0	80	--	6.5	--	--
SEP 07...	1050	24	180	7.6	15.0	83	3.7	7.2	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	890	860	30	--	--	60
SEP 07...	<10	<10	<10	360	300	60	3500	<10	70

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	20	40	--	--	--	--	26	2.3	88
SEP 07...	20	50	140	.00	0	<10	7	.45	--

03572092 - CROW CREEK NEAR ANDERSON, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1500	113	190	8.1	19.0	94	--	9.4	--	--
SEP 06...	1535	65	201	8.0	21.0	118	1.7	10	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	1000	970	30	--	--	40
SEP 06...	30	<10	10	420	390	30	20000	20	40

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	10	30	--	--	--	--	32	9.8	94
SEP 06...	0	40	560	.00	0	50	41	7.2	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03577966 - ELK RIVER NEAR MT. VIEW, TN

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1300	16	130	7.9	13.0	56	5.0	--	--
SEP 07...	1130	59	109	7.8	17.0	48	3.5	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	260	240	20	--	--	10
SEP 07...	10	<10	<10	170	120	50	15000	<10	20

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	0	10	--	--	--	--	12	.52	81
SEP 07...	20	0	850	.00	0	40	1	.16	--

03577985 - DRY CREEK NEAR MT. VIEW, TN

DATE	TIME	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
SEP 04...	1100	0	<10	<10	20	<10	6200	20	430	.00	0	10

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03578095 - BETSY WILLIS CREEK NEAR PELHAM, TN

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1045	2.5	235	8.1	18.5	108	13	--	--
SEP 07...	1400	16	200	8.0	20.0	82	4.5	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	450	440	10	--	--	70
SEP 07...	<10	<10	<10	450	340	110	2500	<10	40

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	20	50	--	--	--	--	32	.22	81
SEP 07...	10	30	150	.00	0	<10	11	.48	--

03578190 - MUD CREEK NEAR ALTO, TN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	0930	7.6	174	8.2	19.0	76	--	11	--	--
SEP 06...	1135	15	232	8.1	21.0	100	1.5	9.6	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	340	310	30	--	--	30
SEP 06...	10	<10	<10	330	300	30	5800	<10	50

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	0	30	--	--	--	--	16	.33	75
SEP 06...	0	50	460	.00	0	10	9	.36	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

03578290 - BEANS CR AT US HWY 41, NEAR HILLSBORO, TN

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	0915	6.6	240	8.0	16.0	112	--	7.1	--	--
SEP 06...	0930	20	258	7.7	16.0	115	4.3	6.7	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	350	340	10	--	--	50
SEP 06...	10	<10	<10	300	270	30	80000	10	--

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	10	40	--	--	--	--	23	.41	87
SEP 06...	--	80	820	.00	0	20	33	1.8	--

03580110 - BOILING FORK CREEK NEAR DECHERD, TENN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 22...	1140	44	260	8.0	17.0	130	--	14	--	--
SEP 06...	1330	61	320	7.7	17.0	145	5.1	14	0	<10

DATE	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 22...	--	--	--	720	720	0	--	--	40
SEP 06...	20	<10	<10	180	160	20	84000	20	30

DATE	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 22...	20	20	--	--	--	--	22	2.6	91
SEP 06...	10	20	560	.00	0	30	4	.66	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

360858084355000 - EMORY RIVER AT GOBEY, TN(035382968)

TENNESSEE RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	ALKA- LITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)
MAY 24...	1000	630	67	7.2	16.0	12	19	--	--
SEP 06...	1215	14	120	7.0	21.0	46	32	0	<10
DATE		CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
MAY 24...	--	--	--	--	6400	6400	50	--	140
SEP 06...	20	20	20	20	640	510	130	28000	20
DATE		MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
MAY 24...	110	30	--	--	--	--	--	75	128
SEP 06...	0	120	340	.00	0	50	10	.38	--

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

07025400 - NORTH FORK OBION RIVER NEAR MARTIN, TENN (CE)

OBION RIVER BASIN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
AUG 22...	1315	818	53	22.5	1700	3760	94
SEP 25...	1530	333	49	19.0	4310	3880	2

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
SEP 25...	1530	.0	6	.00	.00	.0	.0	0	.00	.0	.00	.0

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN, TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
SEP 25...	.00	.0	.00	.0	.00	.00	.0	.00	.0	.00

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOXA- PHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
SEP 25...	.00	.0	.00	.0	.00	.00	0	0	.00	.00	.00

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

07029100 - N FK FORKED DEER RIVER AT DYERSBURG TENN (CE)

OBION RIVER BASIN--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
AUG 23...	0830	271	70	27.0	282	206	83
SEP 28...	0830	3140	300	19.0	345	2930	82

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
SEP 28...	0830	.0	9	.00	.00	.0	.0	3	.00	.2	.00	.3

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
SEP 28...	.00	.1	.00	.0	.00	.00	.0	.00	.0	.00

DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)
SEP 28...	.00	.0	.00	.0	.00	.00	0	0	.00	.00	.00

WATER-QUALITY ANALYSES AT PARTIAL-RECORD STATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

07026370 - N REELFOOT CR AT HWY 22, NEAR CLAYTON, TN

HATCHIE RIVER BASIN

		DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM					
		AUG 21...	1030	7.4	--	27.0	216	4.3	90					
		SEP 28...	1115	13	360	21.5	323	12	89					
		DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
		SEP 28...	1115	.0	2	.00	.00	.0	.0	1	.00	.1	.00	.0
		DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)		
		SEP 28...	.00	.0	.00	.0	.00	.00	.0	.00	.0	.00	.0	
		DATE	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOXA- PHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	2,4-D, TOTAL (UG/L)	2,4,5-T TOTAL (UG/L)	SILVEX, TOTAL (UG/L)	
		SEP 28...	.00	.0	.00	.0	.00	.00	0	0	.10	.03	.00	

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
CUMBERLAND RIVER BASIN									
03408600 - LONG BRANCH NEAR GRIMSLEY, TENN (LAT 36 15 32 LONG 084 57 40)									
NOV , 1978					MAR , 1979				
01... 1025		.01	65	10.5	15... 1115		2.4	12	6.5
DEC					MAY				
09... 0940		39	35	8.5	29... 1240		1.8	10	14.5
21... 1140		4.9	13	8.0	AUG				
FEB , 1979					04... 1423		1.3	18	19.5
02... 1035		1.7	12	.5					
03408810 - CROOKED CREEK TRIBUTARY NEAR ALLARDT, TENN (LAT 36 23 30 LONG 084 54 43)									
NOV , 1978					APR , 1979				
01... 1214		.50	110	13.0	12... 1000		8.3	66	14.0
DEC					MAY				
22... 1230		.65	85	7.0	29... 1045		.40	75	16.5
JAN , 1979					JUN				
11... 1335		.52	95	2.5	28... 0955		.21	95	17.5
FEB					JUL				
01... 1245		.42	100	1.5	25... 0930		.84	36	21.0
MAR									
14... 1545		.53	110	1.0					
03408815 - CROOKED CREEK NEAR ALLARDT, TENN (LAT 36 22 59 LONG 084 54 50)									
OCT , 1978					MAY , 1979				
16... 1100		.50	120	10.5	10... 1420		4.5	80	18.5
DEC					JUN				
09... 1323		95	70	7.0	28... 1220		2.1	85	20.0
22... 0945		13	60	4.5	JUL				
FEB , 1979					25... 1120		20	100	20.5
02... 1258		6.2	90	1.5					
MAR									
15... 1245		5.1	80	6.5					
03417500 - CUMBERLAND RIVER AT CELINA, TENN. (LAT 36 33 15 LONG 085 30 52)									
SEP , 1979									
20... 1400 17000			195	21.0					
03418070 - ROARING RIVER ABOVE GAINESBORO, TENN (LAT 36 21 04 LONG 085 32 45)									
DEC , 1978					APR , 1979				
14... 0940		302	--	6.0	13... 0945		3300	150	13.0
JAN , 1979					JUN				
10... 1700		749	180	5.0	04... 1920		228	210	20.0
FEB					JUL				
06... 1645		208	190	4.0	17... 1825		69	240	25.0
MAR									
12... 1530		475	205	10.0					
03422500 - CANEY FORK NEAR ROCK ISLAND, TENN. (LAT 35 48 26 LONG 085 37 44)									
DEC , 1978									
15... 1115 3590			--	7.0					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
CUMBERLAND RIVER BASIN--Continued									
03426800 - EAST FORK STONES RIVER AT WOODBURY, TENN. (LAT 35 49 41 LONG 086 04 36)									
OCT , 1978					MAR , 1979				
05...	1220	6.7	300	18.0	14...	1245	95	260	13.0
NOV					APR				
08...	1610	9.1	310	14.0	11...	0845	119	260	13.0
DEC					JUN				
18...	1150	31	315	9.0	12...	1055	34	270	17.0
JAN , 1979					JUL				
11...	1220	79	280	8.0	18...	1120	14	270	22.0
FEB									
13...	1335	113	280	10.0					
03428200 - WEST FORK STONES RIVER AT MURFREESBORO, TENN (LAT 35 54 10 LONG 086 25 48)									
OCT , 1978					MAY , 1979				
05...	1420	15	450	20.0	04...	1230	5020	237	19.0
NOV					JUN				
09...	0835	16	520	12.0	18...	1430	20	440	20.0
DEC					AUG				
18...	1455	257	410	9.0	28...	1420	271	330	25.0
JAN , 1979									
11...	1505	496	360	7.0					
03431517 - CUMMINGS BRANCH AT LICKTON, TENN (LAT 36 18 25 LONG 086 48 00)									
OCT , 1978					APR , 1979				
02...	0945	.02	380	24.0	03...	1145	22	210	13.0
NOV					MAY				
06...	1015	.06	460	12.0	08...	1115	5.1	260	15.5
FEB , 1979					JUN				
05...	1040	2.1	280	6.5	11...	1005	.94	280	15.0
MAR					JUL				
09...	1125	4.8	240	10.5	13...	0955	.94	360	18.5
03431800 - SYCAMORE CREEK NEAR ASHLAND CITY, TENN. (LAT 36 19 12 LONG 087 03 04.01)									
OCT , 1978					FEB , 1979				
04...	1030	24	300	17.0	27...	1800	488	170	7.5
NOV					APR				
02...	0915	20	280	12.0	02...	1450	5220	125	15.5
30...	1130	33	295	12.5	02...	1725	2930	125	15.0
DEC					02...	1945	2170	125	15.0
08...	1000	6060	105	11.0	AUG				
JAN , 1979					10...	0945	26	295	25.5
12...	1330	131	260	3.5					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS
 WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
CUMBERLAND RIVER BASIN--Continued									
03432350 - HARPETH RIVER AT FRANKLIN, TENN (LAT 35 55 14 LONG 086 51 56)									
OCT , 1978					MAR , 1979				
04...	0955	7.6	420	16.0	01...	1500	668	275	10.5
NOV					MAY				
08...	0930	2.6	360	12.5	04...	1000	9770	88	18.5
DEC					JUN				
13...	1250	497	360	8.5	25...	1400	48	340	22.0
03433500 - HARPETH RIVER AT BELLEVUE, TENN.. (LAT 36 03 16 LONG 086 55 42.01)									
OCT , 1978					APR , 1979				
10...	1615	14	395	16.5	13...	1430	8330	210	16.0
31...	1230	20	450	14.0	JUN				
DEC					19...	1000	116	360	25.0
29...	1040	347	395	5.5	AUG				
FEB , 1979					02...	1230	140	340	26.5
05...	1210	446	310	5.0	31...	1130	214	280	24.0
03435000 - CUMBERLAND RIVER BELOW CHEATHAM DAM, TENN. (LAT 36 19 26 LONG 087 13 32)									
DEC , 1978					SEP , 1979				
12...	1130	91900	200	9.5	18...	1500	24600	210	21.0
TENNESSEE RIVER BASIN									
03454790 - TRAIL FORK BIG CREEK AT DEL RIO, TN (LAT 35 54 27 LONG 083 01 26)									
OCT , 1978					NOV , 1978				
03...	1145	8.2	125	15.0	13...	1200	7.7	120	11.0
03454850 - LONG CREEK NEAR DEL RIO, TN (LAT 35 56 53 LONG 083 03 13)									
OCT , 1978					NOV , 1978				
03...	1030	1.2	300	15.0	13...	1055	1.5	270	10.5
03461200 - COSBY CREEK ABOVE COSBY TN (LAT 35 46 58 LONG 083 13 03)									
OCT , 1978					MAR , 1979				
24...	1205	3.1	21	12.0	13...	1107	40	11	7.0
NOV					MAY				
03...	1030	3.4	22	9.0	02...	1445	17	12	12.5
22...	1330	4.1	19	9.0	JUN				
DEC					07...	1455	44	16	14.0
28...	1225	26	16	3.5	17...	1525	14	18	18.0
FEB , 1979					SEP				
08...	1308	16	12	3.5	12...	1500	11	16	17.0
03461266 - GREENBRIER CREEK AT HWY 32 AT COSBY TN (LAT 35 48 11 LONG 083 14 51)									
OCT , 1978					NOV , 1978				
03...	1515	2.5	36	16.0	13...	1515	1.9	35	12.0
03464650 - NOLICHUCKY RIVER NEAR ERWIN, TN (LAT 36 07 24 LONG 082 26 37)									
OCT , 1978					OCT , 1978				
03...	1430	377	65	21.0	19...	1115	308	60	9.5
03464815 - SOUTH INDIAN CREEK NEAR ERWIN, TN (LAT 36 07 38 LONG 082 26 45)									
OCT , 1978					OCT , 1978				
03...	1550	17	100	21.0	19...	1230	17	110	10.0
03465220 - NORTH INDIAN CREEK AT ERWIN, TN (LAT 36 09 02 LONG 082 25 06)									
OCT , 1978					OCT , 1978				
03...	1705	14	135	20.0	19...	1220	14	160	11.0

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03466099 - JOCKEY CREEK AT LIMESTONE, TN (LAT 36 13 31 LONG 082 38 06)									
OCT , 1978					NOV , 1978				
04...	1045	4.6	380	18.0	13...	1445	3.4	--	13.0
03466228 - SINKING CREEK AT AFTON, TN (LAT 36 11 55 LONG 082 44 31)									
NOV , 1978					APR , 1979				
15...	1145	2.7	400	12.5	10...	1305	24	335	14.0
DEC					JUN				
09...	1240	30	300	10.5	25...	1300	7.4	380	19.5
28...	1245	7.7	380	6.0	SEP				
JAN , 1979					18...	1050	5.8	390	18.0
29...	1345	19	355	7.0					
03466361 - RICHLAND CREEK AT GREENEVILLE, TN (LAT 36 08 33 LONG 082 49 27)									
DEC , 1978									
09...	0938	53	160	11.5					
03466695 - LITTLE CHUCKY CREEK BL MCNEW BRANCH NR RADER, TN (LAT 36.09 27 LONG 082 57 34)									
OCT , 1978					NOV , 1978				
03...	1015	1.9	550	17.0	13...	1300	2.3	--	11.0
03466870 - ROARING FORK NEAR GREENEVILLE, TN (LAT 36 13 18 LONG 082 52 05)									
OCT , 1978									
04...	0950	3.1	420	17.5					
03466880 - ROARING FORK NEAR MOSHEIM, TN (LAT 36 14 38 LONG 082 53 37)									
OCT , 1978									
04...	1215	5.3	480	19.0					
03467000 - LICK CREEK AT MOHAWK, TENN. (LAT 36 12 05 LONG 083 02 52.01)									
OCT , 1978									
03...	1030	20	--	16.0					
03467490 - BENT CREEK NEAR SPRINGVALE, TN (LAT 36 11 14 LONG 083 09 53)									
OCT , 1978									
04...	1220	4.6	380	19.0					
03468140 - MUDDY CREEK NEAR CHESTNUT HILL, TN (LAT 35 56 57 LONG 083 20 51)									
OCT , 1978					NOV , 1978				
03...	1330	.03	600	15.5	13...	1350	--	420	11.0
03470330 - TUCKAHOE CREEK AT PETERS MILL, TN (LAT 35 58 02 LONG 083 42 07)									
OCT , 1978									
05...	1005	5.1	340	14.5					
03476515 - BEIDLEMAN CREEK NEAR CAYWOOD FORD, TN (LAT 36 31 28 LONG 082 07 53)									
OCT , 1978									
11...	1520	6.5	--	13.5					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03484000 - WATAUGA RIVER BELOW WILBUR DAM, TENN. (LAT 36 20 39 LONG 082 07 46)									
OCT , 1978					JUN , 1979				
11...	1205	1480	--	10.0	27...	0920	48	67	9.5
DEC					SEP				
27...	1000	1140	80	8.0	19...	1215	3040	67	12.0
APR , 1979									
11...	1330	2650	72	13.0					
03486000 - WATAUGA RIVER AT ELIZABETHTON, TENNESSEE (LAT 36 21 21 LONG 082 13 26)									
OCT , 1978					JAN , 1979				
04...	0945	131	100	14.0	30...	1700	413	68	4.5
NOV					JUN				
15...	1700	138	100	13.5	26...	1500	444	64	21.5
03487550 - REEDY CREEK AT OREBANK, TENN. (LAT 36 33 42 LONG 082 27 36)									
OCT , 1978					APR , 1979				
04...	1315	8.5	375	17.0	12...	0930	60	330	14.0
NOV					MAY				
16...	1105	6.7	400	12.0	16...	1630	23	370	19.0
DEC					JUN				
26...	1600	48	280	6.5	26...	1240	22	380	19.0
JAN , 1979					AUG				
31...	1010	60	350	5.5	09...	0920	15	370	23.0
MAR					SEP				
07...	1030	155	295	9.0	18...	1330	12	390	19.0
23...	1100	46	330	13.0					
03491000 - BIG CREEK NEAR ROGERSVILLE, TENN. (LAT 36 25 34 LONG 082 57 07)									
OCT , 1978					MAY , 1979				
12...	1350	5.7	--	16.0	17...	1030	22	285	17.0
NOV					AUG				
16...	1410	7.8	320	13.5	09...	1245	14	350	24.0
DEC					SEP				
29...	0950	38	270	4.0	20...	1040	8.4	370	18.0
MAR , 1979									
07...	1430	223	225	11.0					
03491300 - BEECH CREEK AT KEPLER, TENN. (LAT 36 24 06 LONG 082 53 09)									
OCT , 1978					APR , 1979				
12...	1230	1.9	--	15.0	12...	1315	61	220	15.0
NOV					MAY				
16...	1515	3.6	250	13.0	17...	1145	13	270	18.0
DEC					JUN				
28...	1350	20	210	1.5	25...	1445	7.7	290	21.0
JAN , 1979					AUG				
31...	1530	43	195	3.0	09...	1340	4.7	280	26.0
MAR					SEP				
07...	1630	138	145	10.5	20...	1150	4.1	290	19.5
03497300 - LITTLE RIVER ABOVE TOWNSEND, TENN. (LAT 35 39 52 LONG 083 42 41)									
OCT , 1978					APR , 1979				
05...	1505	41	21	16.5	30...	1330	214	12	11.5
NOV					JUN				
21...	1100	42	17	10.5	08...	1245	291	18	17.0
DEC					28...	0850	119	19	17.0
27...	1525	267	14	3.5	JUL				
FEB , 1979					19...	1040	233	16	19.0
01...	1122	250	12	.0	AUG				
MAR					17...	1040	102	20	16.5
15...	1200	412	12	6.5					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03498500 - LITTLE RIVER NEAR MARYVILLE, TENN (LAT 35 47 10 LONG 083 53 04)									
OCT , 1978					MAY , 1979				
16...	1530	82	130	13.5	02...	1140	341	95	18.5
NOV					JUN				
22...	1030	82	120	10.0	12...	1000	431	70	18.5
DEC					JUL				
27...	1230	491	80	4.5	19...	1245	404	85	21.5
APR , 1979					AUG				
30...	1550	403	95	14.5	15...	1430	217	130	20.0
03499053 - CULTON CREEK AT ALCOA, TN (LAT 35 46 41 LONG 083 59 46)									
OCT , 1978					NOV , 1978				
04...	1505	4.1	30	18.5	14...	1505	3.5	260	14.5
03518470 - BALD RIVER NEAR TELlico PLAINS, TN (LAT 35 19 20 LONG 084 10 40)									
OCT , 1978					NOV , 1978				
03...	1505	13	15	16.5	14...	1250	11	16	13.0
03518700 - CANE CREEK AT BELLTOWN MILL, TN (LAT 35 25 31 LONG 084 15 16)									
OCT , 1978					NOV , 1978				
03...	1611	1.9	90	19.5	14...	1135	1.7	100	14.5
03520170 - POND CREEK NEAR ADOLPHUS, TN (LAT 35 42 20 LONG 084 27 35)									
OCT , 1978					NOV , 1978				
04...	1250	17	210	18.5	14...	0945	12	270	12.5
03531700 - MULBERRY CREEK AT ALANTHUS HILL, TN (LAT 36 33 18 LONG 083 22 51)									
OCT , 1978					NOV , 1978				
04...	1050	6.7	340	16.0	14...	1300	4.9	310	12.0
03535000 - BULLRUN CREEK NEAR HALLS CROSSROADS, TENN (LAT 36 06 52 LONG 083 59 16)									
OCT , 1978					MAR , 1979				
05...	1000	12	360	15.5	05...	1430	713	200	10.0
NOV					JUN				
27...	1015	48	340	7.5	04...	1200	451	210	17.0
DEC					15...	1442	53	290	20.0
05...	1100	206	205	10.0	AUG				
26...	1145	63	270	4.5	16...	1145	32	325	18.0
JAN , 1979									
30...	1005	137	250	4.5					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03538250 - EAST FORK POPLAR CREEK NEAR OAK RIDGE, TENN. (LAT 35 57 58 LONG 084 21 30)									
OCT , 1978					MAY , 1979				
26...	1130	16	360	16.0	07...	1745	38	350	17.0
NOV					JUN				
30...	1200	50	300	10.0	08...	1100	56	--	18.0
DEC					JUL				
04...	1550	420	160	13.5	09...	1145	35	260	20.0
JAN , 1979					AUG				
04...	1600	77	180	6.5	20...	1545	22	340	22.0
03539800 - OBED RIVER NEAR LANCING, TENN. (LAT 36 04 53 LONG 084 40 15)									
OCT , 1978					AUG , 1979				
24...	1345	4.8	70	17.0	21...	1520	38	59	26.0
03543300 - LITTLE SEWEE CREEK NEAR CENTER POINT, TENN (LAT 35 35 54 LONG 084 42 13)									
OCT , 1978									
04...	1015	11	--	17.5					
03543500 - SEWEE CREEK NEAR DECATUR, TENN. (LAT 35 34 53 LONG 084 44 53)									
OCT , 1978					MAR , 1979				
26...	1600	23	300	13.5	27...	1330	220	180	10.0
NOV					MAY				
28...	1400	36	240	10.5	01...	1230	98	230	14.5
JAN , 1979					JUN				
09...	1430	492	150	4.0	11...	1120	137	225	18.0
FEB					AUG				
12...	1400	158	220	5.0	28...	1230	89	230	21.0
03556500 - HIWASSEE RIVER NEAR MCFARLAND, TENN (LAT 35 10 48 LONG 084 26 36)									
OCT , 1978					JUN , 1979				
26...	1315	1260	36	17.0	05...	1400	3260	--	19.0
03563000 - OCOEE RIVER AT EMF, TENN. (LAT 35 05 48 LONG 084 32 07)									
OCT , 1978					MAY , 1979				
25...	1630	1110	--	18.0	02...	1100	1520	105	15.0
NOV					JUL				
29...	1110	1280	180	12.0	18...	1115	1500	100	20.0
FEB , 1979									
13...	1230	1310	160	5.0					
03565300 - SOUTH CHESTUEE CREEK NEAR BENTON, TENN (LAT 35 10 02 LONG 084 42 59)									
OCT , 1978					MAY , 1979				
26...	0925	3.1	--	13.0	03...	0930	29	240	16.0
NOV					JUN				
29...	1645	5.6	300	8.0	05...	1645	69	--	17.5
JAN , 1979					JUL				
11...	1030	43	210	2.0	19...	0915	14	280	21.5
FEB					AUG				
14...	0930	35	225	5.0	29...	1530	26	170	21.0
MAR									
29...	0930	34	220	12.5					
03566000 - HIWASSEE RIVER AT CHARLESTON, TENN. (LAT 35 17 16 LONG 084 45 07)									
AUG , 1979									
30...	1530	6200	70	23.5					
03566117 - EAST FORK NORTH MOUSE CREEK NEAR NIOTA, TENN (LAT 35 32 54 LONG 084 33 45)									
OCT , 1978									
04...	1130	.29	250	19.0					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03566253 - GREASY CREEK AT HOPEWELL, TN (LAT 35 14 17 LONG 084 53 11)									
OCT , 1978									
03...	1109	.01	350	19.5					
03566420 - WOLFTEVER CREEK NEAR OOLTEWAH, TENN (LAT 35 03 43 LONG 085 03 59)									
OCT , 1978					APR , 1979				
05...	1130	3.3	460	18.5	17...	1015	54	165	14.0
NOV					JUN				
09...	0950	2.9	500	12.0	06...	0945	32	210	19.0
DEC					JUL				
13...	1330	7.6	340	8.0	17...	1700	10	--	24.5
FEB , 1979					AUG				
05...	1645	13	260	8.5	28...	1115	17	245	22.5
MAR									
05...	1100	136	130	10.0					
03579100 - ELK RIVER NEAR ESTILL SPRINGS, TENN. (LAT 35 17 08 LONG 086 06 20)									
OCT , 1978					APR , 1979				
06...	1300	33	--	18.0	18...	1425	609	150	18.0
FEB , 1979					JUN				
15...	1330	955	150	5.0	07...	1645	317	160	23.0
MAR									
07...	1415	1150	160	9.5					
03584500 - ELK RIVER NEAR PROSPECT, TENN. (LAT 35 01 39 LONG 086 56 52)									
OCT , 1978					MAR , 1979				
06...	1300	561	320	17.0	14...	1350	5390	205	10.5
NOV					JUN				
01...	1330	873	190	12.0	11...	1600	6320	220	22.0
JAN , 1979					AUG				
09...	1340	13100	135	6.0	20...	1240	445	255	26.0
03588000 - SHOAL CREEK AT LAWRENCEBURG, TENN. (LAT 35 14 40 LONG 087 21 02)									
OCT , 1978					MAR , 1979				
02...	1355	26	160	16.0	05...	1030	175	105	10.0
NOV					APR				
06...	1130	20	150	12.5	13...	0940	486	80	14.0
DEC					JUN				
18...	1515	37	120	8.5	12...	1130	57	135	17.0
FEB , 1979					JUL				
06...	1035	78	140	7.0	24...	1540	39	140	26.5
03588400 - CHISHOLM CREEK AT WESTPOINT, TENN. (LAT 35 08 04 LONG 087 31 45)									
OCT , 1978					APR , 1979				
02...	1715	23	90	17.0	13...	1430	549	46	14.0
NOV					JUN				
06...	1330	20	85	13.5	12...	1340	48	58	19.5
DEC					JUL				
19...	1030	46	80	8.5	25...	1120	38	80	23.5
FEB , 1979					SEP				
06...	1230	47	70	4.0	14...	0950	687	46	19.0
MAR									
05...	1240	255	30	8.5					
03593098 - ROBINSON CREEK NEAR COUNCE TN (LAT 35 02 54 LONG 088 15 05)									
NOV , 1978									
15...	1120	2.4	42	15.5					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
TENNESSEE RIVER BASIN--Continued									
03598000 - DUCK RIVER NEAR SHELBYVILLE, TENN. (LAT 35 28 49 LONG 086 29 57)									
OCT , 1978					APR , 1979				
06...	0850	182	165	18.0	19...	1340	1290	150	16.5
NOV					JUN				
02...	0910	171	180	12.5	12...	1700	269	220	23.0
JAN , 1979					AUG				
10...	1200	2510	190	5.0	30...	0940	283	165	21.5
FEB									
16...	1050	704	280	9.5					
03599500 - DUCK RIVER AT COLUMBIA, TENN. (LAT 35 37 05 LONG 087 01 56)									
OCT , 1978					MAR , 1979				
02...	0915	319	220	21.0	06...	1115	8920	225	12.5
NOV					JUL				
08...	1400	219	230	15.0	24...	1045	519	190	27.0
03600500 - BIG BIGBY CREEK AT SANDY HOOK, TENN (LAT 35 29 19 LONG 087 13 59)									
OCT , 1978					APR , 1979				
02...	1120	8.3	170	16.0	16...	0900	48	125	13.0
NOV					JUN				
08...	1515	5.3	165	15.5	13...	1500	11	125	26.5
DEC					JUL				
18...	1330	11	180	7.0	24...	1240	8.5	170	24.5
JAN , 1979					SEP				
19...	0950	18	140	6.5	11...	1235	6.1	160	24.0
FEB									
14...	1315	32	150	10.5					
03602500 - PINEY RIVER AT VERNON, TENN. (LAT 35 52 16 LONG 087 30 05)									
OCT , 1978					MAY , 1979				
03...	1450	95	290	16.0	14...	1300	366	175	17.0
NOV					JUN				
07...	1200	86	260	12.5	14...	1030	194	200	19.5
FEB , 1979					JUL				
13...	1115	272	200	6.5	23...	1730	185	220	20.5
APR					AUG				
17...	1100	722	175	13.0	30...	1045	237	240	21.0
03604500 - BUFFALO RIVER NEAR LOBELVILLE, TENN. (LAT 35 48 46 LONG 087 47 51)									
OCT , 1978					MAY , 1979				
26...	1340	377	120	15.0	29...	1150	1080	105	19.0
JAN , 1979					JUL				
29...	1140	1910	85	4.5	27...	1440	938	125	24.0
FEB					AUG				
26...	1220	4760	85	7.5	24...	1130	626	125	23.5
MAR					SEP				
27...	1200	2380	95	10.5	27...	1330	1160	110	19.5
APR									
05...	1300	6390	--	13.0					
27...	1140	1210	105	16.0					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS
WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
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LOOSAHATCHIE RIVER BASIN

07030295 - LOOSAHATCHIE R TR AT NEW ALLEN RD AT MEMPHIS TN (LAT 35 14 17 LONG 089 57 04.01)

OCT , 1978					MAY , 1979				
03...	1015	.02	190	19.5	04...	1035	16	--	18.0
DEC					30...	0930	.14	370	22.0
05...	1100	.65	250	8.2	JUN				
JAN , 1979					26...	1115	.01	240	28.0
04...	0925	.32	300	.0	JUL				
FEB					31...	1220	.02	180	33.0
28...	1145	.87	370	8.5	AUG				
MAR					29...	1315	.22	190	34.0
29...	1015	.32	140	15.0					

WOLF RIVER BASIN

07031680 - FLETCHER CREEK NEAR CORDOVA, TN (LAT 35 11 21 LONG 089 45 42)

JAN , 1979					APR , 1979				
04...	1240	.34	82	.5	17...	0925	.17	--	15.5
29...	1600	.39	--	1.0	MAY				
FEB					01...	0825	.08	85	13.5
27...	1600	1.4	72	8.0	30...	1200	.80	75	20.5
MAR									
29...	1415	.23	--	18.0					

07031683 - FLETCHER CR AT WHITTEN RD AT MEMPHIS TN (LAT 35 11 16 LONG 089 50 09)

NOV , 1978					MAY , 1979				
07...	0915	1.2	125	12.5	29...	1535	16	66	26.0
29...	1250	1.5	90	9.5	JUN				
FEB , 1979					27...	1340	.07	95	34.5
23...	1125	825	42	13.5	AUG				
MAR					02...	1100	.19	110	28.0
29...	1015	2.4	--	15.5	29...	1310	2.0	--	27.5
MAY									
01...	1100	1.2	140	21.0					

07031777 - LICK CREEK AT DICKINSON STREET, AT MEMPHIS, TENN (LAT 35 09 24 LONG 090 00 12)

OCT , 1978					MAR , 1979				
02...	1215	1.7	160	22.0	29...	0850	.78	280	15.5
13...	0945	49	100	19.0	MAY				
NOV					30...	1125	1.9	250	21.5
06...	1105	1.1	140	19.0	JUN				
DEC					27...	0915	2.5	250	22.5
06...	0950	1.8	160	13.0	JUL				
JAN , 1979					30...	1420	1.4	155	28.5
04...	1055	1.4	260	8.5	AUG				
MAR					29...	1410	1.9	160	26.5
01...	0945	2.5	260	11.0					

NONCONNAH CREEK BASIN

07032222 - JOHNS CREEK TRIB AT HOLMES RD, NR MEMPHIS, TN (LAT 35 00 20 LONG 089 52 16.01)

OCT , 1978					APR , 1979				
04...	0955	.26	170	17.0	03...	1500	7.6	90	17.0
31...	1555	.12	275	16.5	MAY				
NOV					31...	1425	1.1	90	21.0
17...	0930	16	85	16.0	JUN				
28...	1005	.32	190	9.0	27...	1245	.30	260	26.0
JAN , 1979					AUG				
03...	1230	2.2	100	1.0	27...	1100	.25	--	20.0
29...	1320	1.3	210	2.0					
FEB									
28...	1120	3.2	115	7.5					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE (DEG C)
NONCONNAH CREEK BASIN--Continued									
07032241 - BLACK BAYOU AT SOUTHERN AVENUE, AT MEMPHIS, TENN (LAT 35 06 55 LONG 089 56 00)									
OCT , 1978					MAY , 1979				
03...	1355	.38	115	20.0	01...	1055	14	100	18.5
NOV					31...	1115	.28	120	21.0
01...	1250	.47	120	19.0	JUN				
28...	1215	.28	120	13.5	27...	1000	.06	140	23.5
DEC					AUG				
27...	1230	.10	150	14.5	01...	1035	.13	125	23.5
MAR , 1979					29...	1045	.06	125	23.5
06...	1305	.07	175	19.0					
28...	1400	.16	115	20.0					
07032248 - CANE CREEK AT EAST PERSON AVENUE AT MEMPHIS TENN (LAT 35 06 02 LONG 090 00 43.01)									
OCT , 1978					MAR , 1979				
03...	0930	3.2	185	20.0	27...	1135	19	150	14.5
13...	1145	47	--	20.0	MAY				
31...	1210	2.8	230	22.0	01...	0910	3.8	200	21.0
NOV					30...	1040	8.1	170	24.0
29...	0955	4.0	225	15.0	JUN				
DEC					25...	1510	3.6	170	28.0
27...	1535	4.3	185	13.0	JUL				
MAR , 1979					31...	1210	3.6	145	30.5
14...	1400	4.4	240	20.0					
15...	0910	5.1	195	15.5					
07032260 - CYPRESS CREEK AT NEELY RD, AT MEMPHIS TN (LAT 35 01 36 LONG 090 03 23.01)									
OCT , 1978					MAY , 1979				
13...	1100	26	100	19.0	01...	1300	.29	340	24.0
30...	1425	.01	210	21.0	29...	1455	.56	180	28.5
DEC					JUL				
26...	1420	.08	290	6.5	31...	1000	.04	240	30.5
MAR , 1979					SEP				
27...	1350	1.5	230	12.0	10...	1415	.02	300	35.0

GROUND-WATER LEVELS

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BRADLEY COUNTY

350503084505000. Local number, Br:E-1.

LOCATION.--Lat 35°05'03", long 84°50'50", Hydrologic Unit 03150101, on Trewhitt Road, 0.5 mi (0.8 km) north of Goodwill Road, Cleveland.
Owner: F. G. Trewhitt.

AQUIFER.--Conasauga shale of middle and late Cambrian age.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 36 in (910 mm), depth 25 ft (8 m), casing information not available.

DATUM.--Land-surface datum is 850 ft (259 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of front shelter panel, 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--February 1950 to November 1955, April 1964 to current year. Analog record February 1950 to November 1955, April 1964 to February 1971, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.38 ft (2.25 m) below land-surface datum, Dec. 19, 1967; lowest recorded, 24.97 ft (7.61 m) below land-surface datum, Dec. 7, 8, 1954; highest water level measured, 8.22 ft (2.51 m) below land-surface datum, Apr. 5, 1977; lowest measured, 23.20 ft (7.07 m) below land-surface datum, Dec. 12, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT. 5	21.57	NOV. 8	22.59	DEC. 12	23.20	JAN. 10	21.76	APR. 17	9.31	JUL. 18	14.40

CANNON COUNTY

354823086104400. Local number, Cn:D-1.

LOCATION.--Lat 35°48'23", long 86°10'44", Hydrologic Unit 05130203, on county road on Cannon County and Rutherford County lines, 1.5 mi (2.4 km) south of Readyville.
Owner: Ray Barker.

AQUIFER.--Lebanon Limestone of middle Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water-table well, diameter, 6 in (150 mm), depth 30 ft (9 m), cased with steel to unknown depth, open end.

DATUM.--Land-surface datum is 715 ft (218 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 1.00 ft (0.30 m) above land-surface datum.

PERIOD OF RECORD.--April 1967 to current year. Analog record April 1967 to February 1971, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.91 ft (0.28 m) below land-surface datum, Mar. 11, 1968; lowest recorded, 19.38 ft (5.91 m) below land-surface datum, Dec. 9, 10, 1968; highest water level measured, 12.14 ft (3.70 m) below land-surface datum, Jan. 8, 1974; lowest measured, 17.80 ft (5.43 m) below land-surface datum, Mar. 6, 1973.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV. 8	16.85	DEC. 18	15.13	JAN. 11	13.72	MAR. 14	14.06

GROUND-WATER LEVELS

CARTER COUNTY

361738082132900. Local number, Ct:H-1.

LOCATION.--Lat 36°17'38", long 82°13'29", Hydrologic Unit 06010103, 3.5 mi (5.6 km) south of Elizabethton, 0.8 mi (1.3 km) north of Gap Creek.
Owner: Gap Creek Community

AQUIFER: Honaker dolomite of middle Cambrian age.

WELL CHARACTERISTICS.--Dug unused water-table well, diameter 24 in (610 mm), depth 31 ft (9 m), casing information not available.

INSTRUMENTATION.--Water level recorder since April 1964.

DATUM.--Altitude of land-surface datum is 1,820 ft (555 m). Measuring point: Top of concrete tile, 2.50 ft (0.76 m) above land-surface datum.

REMARKS.--Highest water level readings may be influenced for short periods by surface seepage. Missing record Jan. 3-5, Feb. 4, 23, Mar. 10-22.

PERIOD OF RECORD.--April 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.23 ft (0.68 m) below land-surface datum, Apr. 4, 1977; lowest 26.01 ft (7.93 m) below land-surface datum Dec. 22, 23, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.38	21.04	20.60	---	14.61	7.89	3.68	10.53	14.78	14.81	14.13	14.97
10	18.90	21.38	13.32	12.95	14.80	9.83	5.04	12.26	14.90	14.88	14.79	14.97
15	19.36	21.72	15.00	14.65	14.05	---	4.89	12.55	14.94	13.93	14.86	15.16
20	19.83	22.04	14.93	14.66	14.62	---	6.91	14.66	13.07	13.47	14.91	15.59
25	20.23	22.21	11.68	9.00	5.25	4.21	9.26	14.12	10.04	6.52	14.94	14.94
EOM	20.68	21.60	14.90	14.35	3.62	8.77	8.45	14.59	13.96	11.67	14.98	13.41

WTR YEAR 1979 MAX 3.48 FEB 26, 1979 MIN 22.22 NOV 24, 1978

CUMBERLAND COUNTY

354922085053500. Local number, Cu:C-1.

LOCATION.--Lat 35°49'22", long 85°05'35", Hydrologic Unit 06010208, 9 mi (14 km) southwest of Crossville, 3.8 mi (6.1 km) south of Lantana, 0.6 mi (1.0 km) south of Vandever Community.
Owner: Hubert Roy.

AQUIFER.--Rockcastle conglomerate of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (150 mm), depth 69 ft (21 m), cased to 46 ft (21 m).

DATUM.--Altitude of land-surface datum is 1,970 ft (600 m). Measuring point: Top of well cap, 1.28 ft (0.39 m) above land-surface datum.

PERIOD OF RECORD.--September 1964 to current year. Analog record September 1964 to September 1975, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 13.15 ft (4.01 m) below land-surface datum, Mar. 17, 1973; lowest recorded, 24.92 ft (7.60 m) below land-surface datum, Nov. 16, 1968; highest water level measured, 13.93 ft (4.25 m) below land-surface datum, Mar. 13, 1978; lowest measured, 23.84 ft (7.27 m) below land-surface datum, Nov. 24, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	22.57	DEC 21	15.52	FEB 2	16.10	APR 12	15.30	JUN 27	20.21
NOV 24	23.84	JAN 12	15.46	MAR 15	15.52	JUN 8	15.53	AUG 1	15.19

GROUND-WATER LEVELS

467

DEKALB COUNTY

355807085511800. Local number, Dk:F-1.

LOCATION.--Lat 35°58'07", long 85°51'18", Hydrologic Unit 05130108, at U.S. Highway 70 and Allens Ferry Road,
0.8 mi (1.3 km) northwest of Smithville.
Owner: Tennessee Department of Highways.

AQUIFER.--Fort Payne Formation of early Mississippian age.

WELL CHARACTERISTICS.--Drilled water-table test well, diameter 6 in (150 mm), depth 186 ft (57 m), cased to 55 ft (17 m), open end.

DATUM.--Land-surface datum is 1,128 ft (344 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter, 1.50 ft (0.46 m) above land-surface datum.

PERIOD OF RECORD.--March 1968 to current year. Analog record March 1968 to December 1973, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 18.32 ft (5.58 m) below land-surface datum, Mar. 24, 1973; lowest recorded 35.18 ft (10.72 m) below land-surface datum, Dec. 17, 1968; highest water level measured, 18.76 ft (5.72 m) below land-surface datum, Feb. 19, 1974; lowest measured, 31.05 ft (9.46 m) below land-surface datum, Nov. 6, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 6	31.05	DEC 13	26.69	JAN 9	23.24	MAR 12	19.82

DICKSON COUNTY

360429087233602. Local number, Di:F-19.

LOCATION.--Lat 36°04'29", long 87°23'36", Hydrologic Unit 06040003, on north side of State Highway 48, 0.4 mi (0.6 km) northeast of State Highway 48 bridge over East Piney River at Dickson.

AQUIFER.--Fort Payne Formation of early Mississippian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 6 in (150 mm), depth 387 ft (118 m), cased to 22 ft (6.7 m), open end.

INSTRUMENTATION.--Water-level recorder since July 1960.

DATUM.--Altitude of land-surface datum is 755 ft (230 m). Measuring point: Top of casing at land-surface datum.

REMARKS.--No record Jan. 9-29.

PERIOD OF RECORD.--July 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.52 ft (2.29 m) below land-surface datum, Mar. 12, 13, 1975; lowest 33.80 ft (10.3 m) below land-surface datum, Sept. 26, 27, 1976, and Sept. 7, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.49	33.50	24.53	23.52	26.15	20.70	20.26	19.92	25.00	32.72	32.62	31.66
10	33.50	33.39	20.42	---	27.46	23.74	22.01	24.46	28.28	32.11	33.00	31.65
15	33.32	---	25.44	---	---	26.08	21.01	27.19	30.45	29.66	32.86	31.62
20	33.56	33.19	28.60	---	---	25.88	24.21	29.59	32.12	31.48	33.06	31.58
25	33.50	---	25.57	---	---	20.29	25.06	22.19	30.44	32.35	32.30	31.56
EOM	33.40	32.71	28.83	24.36	21.27	23.15	27.71	25.05	32.31	32.00	31.67	28.21
WTR YEAR 1979	MAX	9.07	APR 2, 1979			MIN	33.75	OCT 22, 23, 1978				

GROUND-WATER LEVELS

DYER COUNTY

360200089280100. Local number, Dy:H-1.

LOCATION.--Lat 36°02'00", long 89°28'01", Hydrologic Unit 08010206, 4.0 mi (6.4 km) west of Dyersburg on State Highway 20 at Finley.
Owner: U.S. Geological Survey.

AQUIFER.--Fluvial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 4 in (100 mm), depth 70 ft (21 m), cased to 60 ft (18 m), screened 60 to 70 ft (18 to 21 m).

DATUM.--Altitude of land-surface datum is 278 ft (85 m). Measuring point: Top of casing, 1.00 ft (.30 m) above land-surface datum.

PERIOD OF RECORD.--April 1955 to current year. Analog record April 1955 to February 1971, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.69 ft (1.12 m) below land surface datum, Feb. 28, 1962; lowest recorded, 18.93 ft (5.77 m) below land surface datum, Jan. 18-21, 1957; highest water level measured, 4.18 ft (1.27 m) below land-surface datum, Apr. 13, 1979; lowest measured, 16.64 ft (5.07 m) below land-surface datum, Sept. 15, 1977; Nov. 9, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	16.09	DEC 13	12.81	FEB 12	7.82	APR 13	4.18	JUN 21	9.18	AUG 20	13.19
NOV 9	16.64	JAN 11	10.91	MAR 15	5.09	MAY 15	5.76	JUL 26	11.65	SEP 26	13.95

360147089230700. Local number, Dy:H-7.

LOCATION.--Lat 36°01'47", long 89°23'07", Hydrologic Unit 08010204, 500 ft (152 m) east of U.S. Highway 51 and on south side of Illinois Central railroad, at Dyersburg.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 24 to 10 in (610 to 250 mm), depth 656 ft (200 m), cased to 605 ft (184 m), screened 605 to 655 ft (184 to 200 m).

DATUM.--Land-surface datum is 270.07 ft (82.32 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 3.10 ft (0.94 m) above land-surface datum.

PERIOD OF RECORD.--February 1954 to current year. Analog record February 1954 to February 1971, periodic measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.69 ft (0.82 m) above land-surface datum, Mar. 1, 2, Apr. 19, 1962; lowest recorded, 17.1 ft (5.2 m) below land-surface datum, Aug. 10, 1956; highest water level measured, 0.20 ft (0.06 m) above land-surface datum, Mar. 20, 1975, lowest measured, 10.22 ft (3.12 m) below land surface datum, September 1972.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	8.15	DEC 13	7.07	FEB 12	7.24	APR 13	5.83	JUN 22	6.59	AUG 30	6.00
NOV 9	9.70	JAN 12	8.24	MAR 15	7.34	MAY 15	4.65	JUL 25	5.72	SEP 26	5.00

FAYETTE COUNTY

352226089330101. Local number, Fa:R-1.

LOCATION.--Lat 35°22'26", long 89°33'01", Hydrologic Unit 08010209, 80 ft (24 m) south of State Highway 59, 1.2 mi (1.9 km) southeast of U.S. Highway 70, near Braden.
 Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Sand of Wilcox Group of early Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 to 4 in (150 to 100 mm), depth 1,025 ft (312 m), cased to 1,008 ft (307 m), screened 1,008 to 1,025 ft (307 to 312 m).

DATUM.--Land-surface datum is 317.50 ft (96.77 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.70 ft (1.13 m) above land-surface datum.

PERIOD OF RECORD.--August 1949 to current year. Analog record August 1949 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 64.89 ft (19.78 m) below land-surface datum, Aug. 31, 1949; lowest recorded, 76.26 ft (23.24 m) below land-surface datum, Dec. 5, 1970; highest water level measured, 73.61 ft (22.44 m) below land-surface datum, Apr. 28, 1976; lowest measured, 77.49 ft (23.62 m) below land-surface datum, Aug. 31, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 2	77.38	DEC 26	77.12	FEB 28	76.82	APR 30	76.91	JUN 29	77.03	AUG 31	77.49
NOV 30	77.20	JAN 31	76.97	MAR 29	76.91	MAY 31	76.83	AUG 1	77.31	SEP 28	77.47

352226089330102. Local number, Fa:R-2.

LOCATION.--Lat 35°22'26", long 89°33'01", Hydrologic Unit 08010209, 80 ft (24 m) south of State Highway 59, 1.1 mi (1.8 km) southeast of U.S. Highway 70, near Braden.
 Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 to 4 in (150 to 100 mm), depth 365 ft (111 m), cased to 345 ft (105 m), screened 345 to 365 ft (105 to 111 m).

DATUM.--Land-surface datum is 317.20 ft (96.68 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 4.20 ft (1.28 m) above land-surface datum.

PERIOD OF RECORD.--October 1949 to current year. Analog record October 1949 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.-- Highest water level recorded, 37.25 ft (11.35 m) below land-surface datum, Mar. 10, 1952; lowest recorded, 42.12 ft (12.84 m) below land-surface datum, Nov. 30, 1967; highest water level measured, 39.58 ft (12.06 m) below land-surface datum, Apr. 28, 1976; lowest measured, 41.67 ft (12.70 m) below land-surface datum, December 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 2	41.09	DEC 26	40.97	FEB 28	40.30	APR 30	39.96	JUN 29	39.79	AUG 31	40.16
NOV 30	41.06	JAN 31	40.61	MAR 29	40.27	MAY 31	39.74	AUG 1	40.03	SEP 28	40.16

GROUND-WATER LEVELS

HAMILTON COUNTY

351428085003600. Local number, Hm:O-15.

LOCATION.--Lat 35°14'28", long 85°00'36", Hydrologic Unit 06020001, at Smith Road and State Highway 58, near Snow Hill.

Owner: Savannah Valley Utility District.

AQUIFER.--Knox Dolomite of the Cambrian and Ordovician age.

WELL CHARACTERISTICS.--Drilled artesian test well, diameter 10 in (250 mm), depth 262 ft (80 m), cased to 50 ft (15 m), open end.

INSTRUMENTATION.--Water-level recorder since May 1975.

DATUM.--Altitude of land-surface datum is 735 ft (224 m). Measuring point: Top of back shelter panel, 8.00 ft (2.44 m) above land-surface datum.

REMARKS.--Well previously published as "at Savannah Valley". Water level affected intermittently by pumping from municipal supply well 300 ft (91 m) south. No record Oct. 1-4; Aug. 6-28. Negative values indicate water levels above ground level.

PERIOD OF RECORD.--May 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, -4.40 ft (-1.34 m) above land-surface datum, May 31, 1979; lowest, 7.73 ft (2.36 m) below land-surface datum, Aug. 31, Sept. 1, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.14	7.31	6.57	.63	4.82	-1.23	1.28	5.17	-1.11	6.12	5.79	6.41
10	7.20	7.32	4.20	.69	5.26	.46	2.50	5.36	.93	5.98	-	6.64
15	7.19	7.37	6.08	3.52	5.61	2.57	-1.07	5.85	3.40	6.14	-	6.69
20	7.23	7.37	6.57	4.71	6.17	4.57	1.04	5.92	4.86	6.01	-	6.63
25	7.24	7.36	6.28	-1.18	1.39	3.92	3.35	-3.30	5.69	4.37	-	6.58
EOM	7.26	7.33	5.05	2.46	.56	5.04	4.33	1.48	5.78	4.65	6.39	3.69

WTR YEAR 1979 MAX -4.40 MAY 31, 1979 MIN 7.38 NOV 28, 1978

HUMPHREYS COUNTY

360020087573300. Local number, Hs:H-1.

LOCATION.--Lat 36°00'20", long 87°57'33", Hydrologic Unit 06040005, 100 ft (30 m) north of Woodland Drive at New Johnsonville.

Owner: A. M. Powers

AQUIFER.--Camden Chert of early Devonian age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 8 in (200 mm), depth 187 ft (57 m), cased to 72 ft (22 m), open end.

INSTRUMENTATION.--Water-level recorder since February 1962.

DATUM.--Altitude of land-surface datum is 470 ft (143 m). Measuring point: Top of casing, 1.00 ft (0.30 m) above land-surface datum.

REMARKS.--Records good.

PERIOD OF RECORD.--February 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 85.02 ft (25.91 m) below land-surface datum, Mar. 25, 1973; lowest, 90.20 ft (27.49 m) below land-surface datum, Nov. 25, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	87.40	87.46	87.06	86.62	86.57	86.07	85.63	85.46	85.98	86.62	86.70	86.74
10	87.45	87.49	86.77	86.63	86.62	86.14	85.62	85.62	86.17	86.34	86.72	86.85
15	87.46	87.49	86.83	86.72	86.48	86.17	85.33	85.78	86.30	86.32	86.73	86.56
20	87.43	87.42	86.82	86.34	86.50	86.09	85.13	85.90	86.43	86.44	86.78	86.59
25	87.44	87.35	86.83	86.33	86.16	86.02	85.34	85.87	86.36	86.50	86.80	86.36
EOM	87.55	87.30	86.83	86.49	86.14	86.05	85.73	85.99	86.46	86.59	86.69	86.42

WTR YEAR 1979 MAX 85.10 APR 20, 1979 MIN 87.55 OCT 30, 31, 1978

GROUND-WATER LEVELS

471

LAUDERDALE COUNTY

353839089493500. Local number, Ld:F-4.

LOCATION.--Lat 35°38'39", long 89°49'35", Hydrologic Unit 08010208, 1.1 mi (1.8 km) north of State Highway 87, at Fort Pillow State Park.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 to 6 to 3 in (200 to 150 to 80 mm), depth 879 ft (268 m), cased to 869 ft (265 m), screened 869 to 879 ft (265 to 268 m).

INSTRUMENTATION.--Water-level recorder since April 1966.

DATUM.--Land-surface datum is 437.05 ft (133.21 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.80 ft (0.85 m) above land-surface datum.

PERIOD OF RECORD.--April 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 187.76 ft (57.23 m) below land-surface datum, Apr. 7, 1975; lowest, 197.64 ft (60.24 m) below land-surface datum, Sept. 10, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	196.28	196.82	196.18	195.60	194.86	192.61	191.94	194.00	193.76	194.25	194.03	194.44
10	196.47	196.97	195.50	195.01	195.31	190.38	190.85	193.63	193.98	194.22	194.20	194.74
15	196.66	197.05	194.65	194.70	195.40	190.20	190.75	193.77	193.97	194.26	194.43	195.04
20	196.63	197.06	194.49	194.86	195.50	190.99	189.81	194.26	194.08	194.29	194.54	194.86
25	196.62	196.74	195.17	194.76	194.76	192.33	190.36	194.27	194.19	194.26	194.67	194.70
EOM	196.89	196.63	195.62	194.29	193.85	193.31	192.31	194.13	194.05	194.22	194.53	194.45

WTR YEAR 1979 MAX 189.57 MAR 13, 1979 MIN 197.06 NOV 20, 1978

MADISON COUNTY

354223088380200. Local number, Md:N-1.

LOCATION.--Lat 35°42'23", long 88°38'02", Hydrologic Unit 08010205, 90 ft (27 m) south of State Highway 20, about 0.4 mi (0.6 km) east of Claybrook

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--McNairy Sand of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 to 4 in (150 to 100 mm), depth 659 ft (201 m), cased to 639 ft (195 m), screened 639 to 659 ft (195 to 201 m).

DATUM.--Land-surface datum is 562.70 ft (171.51 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.80 ft (0.85 m) above land-surface datum.

PERIOD OF RECORD.--June 1949 to current year. Analog record June 1949 to February 1971, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 124.50 ft (37.95 m) below land-surface datum, Mar. 10, 1952; lowest recorded, 129.13 ft (39.36 m) below land-surface datum, Nov. 15, 1963; highest water level measured, 125.02 ft (38.11 m) below land-surface datum, June 9, 1976; lowest measured, 131.17 ft (39.98 m) below land-surface datum, June 20, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	126.67	DEC 6	126.36	FEB 12	126.00	APR 12	125.58	JUN 20	131.17	AUG 21	125.89
NOV 7	126.70	JAN 10	126.21	FEB 14	125.97	MAY 14	130.73	JUL 24	125.80	SEP 25	125.80

GROUND-WATER LEVELS

PUTNAM COUNTY

360521085432600. Local number Pm:C-1.

LOCATION.--Lat 36°05'21", long 85°43'26", Hydrologic Unit 05130108, at Interstate 40 and State Highway 56, Silver Point.

Owner: Tennessee Department of Highways.

AQUIFER.--Fort Payne Formation of early Mississippian age.

WELL CHARACTERISTICS.--Drilled test water-table well, diameter 6 in (150 mm), depth 175 ft (53 m), cased to 60 ft (18 m), open end.

INSTRUMENTATION.--Water-level recorder since March 1958.

DATUM.--Altitude of land-surface datum is 1,030 ft (314 m). Measuring point: Top of shelter, 1.50 ft (0.46 m) above land-surface datum.

REMARKS.--Missing record Dec. 10-13.

PERIOD OF RECORD.--March 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 48.30 ft (14.72 m) below land-surface datum, May 2, 1974; lowest, 53.48 ft (16.30 m) below land-surface datum, Dec. 23, 1969.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.20	52.59	52.78	52.22	51.19	50.45	49.90	49.19	49.45	50.09	50.52	50.96
10	52.23	52.66	52.71	52.00	51.15	50.23	49.75	49.27	49.60	50.05	50.54	51.05
15	52.32	52.71	52.58	51.94	51.01	50.25	49.50	49.34	49.64	50.20	50.70	51.12
20	52.37	52.76	52.54	51.57	50.94	50.00	49.28	49.31	49.73	50.27	50.77	51.11
25	52.42	52.79	52.54	51.57	50.68	50.10	49.15	49.38	49.86	50.30	50.88	51.20
EOM	52.53	52.80	52.42	51.32	50.59	49.97	49.30	49.51	49.88	50.39	50.88	51.04
WTR YEAR 1979		MAX 49.00		APR 26, 1979		MIN 52.85		NOV 28, 1978				

GROUND-WATER LEVELS

473

SEVIER COUNTY

353841083345500. Local number, Sv:E-1.

LOCATION.--Lat 35°38'41", long 83°34'55", Hydrologic Unit 06010201, 3.8 mi (6.1 km) southwest of Great Smoky Mountains National Park Headquarters, near Gatlinburg.
Owner: National Park Service.

AQUIFER.--Elkmont Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well in phyllite, sandstone, diameter 6 1/4 in (160 mm), depth (corrected) 160 ft (49 m), cased to 54 ft (16 m).

INSTRUMENTATION.--Water-level recorder since March 1970.

DATUM.--Altitude of land-surface datum is 2,400 ft (730 m). Measuring point: Floor of recorder shelter 2.00 ft (0.61 m) above land-surface datum.

PERIOD OF RECORD.--March 1970 to April 1979 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.59 ft (5.36 m) below land-surface datum, Mar. 4, 1979;
lowest, 27.75 ft (8.46 m) below land surface datum Oct. 28, 29, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, OCTOBER 1978 TO APRIL 1979
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.81	27.19	26.12	23.80	23.25	18.86	21.62					
10	26.89	27.22	24.09	23.73	23.68	21.04	21.79					
15	26.97	27.30	24.67	24.04	23.87	21.55	20.36					
20	27.00	27.33	24.86	24.20	23.36	22.15	21.52					
25	27.09	27.35	24.68	21.18	23.15	22.43	22.36					
EOM	27.17	27.39	24.50	22.46	21.65	22.78	22.80					

WTR YR 1979 MAX 17.59 MAR 4, 1979 MIN 27.43 NOV 27, 28, 29, 1978

353922083345600. Local number, Sv:E-2.

LOCATION.--Lat 35°39'22", long 83°34'56", Hydrologic Unit 06010201, 3.3 mi (5.3 km) southwest of Great Smoky Mountains National Park Headquarters, near Gatlinburg.
Owner: National Park Service.

AQUIFER.--Elkmont Sandstone.

WELL CHARACTERISTICS.--Drilled unused water-table well in phyllite, sandstone, diameter 6 1/4 in (160 mm);
depth 220 ft (67 m), cased to 27 ft (8 m).

INSTRUMENTATION.--Water level recorder since May 1979.

DATUM.--Altitude of land-surface datum is 2,150 ft (655 m). Measuring point: Floor of recorder shelter 1.50 ft (0.46 m) above land surface datum.

PERIOD OF RECORD.--May to September 1979.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.52 ft (2.29 m) below land surface datum, July 21, 1979;
lowest, 9.43 ft (2.87 m) below land surface datum, Aug. 20-22, Sept. 13, 14, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, MAY TO SEPTEMBER 1979
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5								9.19	8.76	9.24	9.27	9.37
10								9.28	9.19	8.87	9.36	9.37
15								9.33	9.24	8.65	9.37	9.38
20								9.41	9.34	8.97	9.43	9.43
25								8.71	9.16	8.71	9.30	9.16
EOM								8.76	9.36	9.07	9.28	9.01

WTR YR 1979 MAX 7.52 JUL 21, 1979 MIN 9.43 AUG 20-22, SEP 13, 14, 1979

GROUND-WATER LEVELS

SHELBY COUNTY

350514089553700. Local number, Sh:K-75.

LOCATION.--Lat 35°05'14", long 89°55'37", Hydrologic Unit 08010211, at Willowview Ave. and Getwell Road, Memphis.
Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Fluvial sand and gravel of Pleistocene age and possibly sand of Eocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in (150 mm), depth 91 ft (28 m), cased to 81 ft (25 m), screened 81 to 91 ft (25 to 28 m).

INSTRUMENTATION.--Water-level recorder since August 1948.

DATUM.--Altitude of land-surface datum is 260 ft (79 m). Measuring point: Top of casing, 1.20 ft (0.37 m) above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--August 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.28 ft (6.49 m) below land-surface datum, Apr. 2, 1950; lowest, 49.62 ft (15.12 m) below land-surface datum, Aug. 9, 1972.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	47.25	47.29	47.51	47.67	47.60	47.38	46.99	46.31	45.49	45.56	45.28	45.42
10	47.18	47.38	47.67	47.71	47.60	47.39	46.84	46.17	45.59	45.40	45.29	45.45
15	47.29	47.42	47.44	47.92	47.54	47.40	46.86	46.13	45.58	45.50	45.39	45.43
20	47.22	47.43	47.53	47.16	47.36	47.01	46.57	45.88	45.67	45.40	45.33	45.19
25	47.19	47.42	47.59	47.76	47.43	47.11	46.38	45.91	45.59	45.45	45.48	45.27
EOM	47.32	47.45	47.57	47.67	47.17	47.09	46.42	45.79	45.55	45.31	45.45	45.17
WTR YEAR	1979	MAX 44.98	SEP 21, 1979	MIN 47.92	JAN 14, 15, 1979							

351435090005200. Local number, Sh:O-1.

LOCATION.--Lat 35°14'35", long 90°00'52", Hydrologic Unit 08010209, west side of O.K. Robertson Road 0.4 mi (0.6 km) north of U.S. Highway 51, Memphis.
Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (150 mm), depth 434 ft (132 m), cased to 424 ft (129 m), screened 424 to 434 ft (129 to 132 m).

INSTRUMENTATION.--Water-level recorder since September 1940.

DATUM.--Land-surface datum is 228.70 ft (69.71 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 4.30 ft (1.31 m) above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--September 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.65 ft (3.86 m) below land-surface datum, Sept. 3, 1940; lowest, 58.54 (17.84 m) below land-surface datum, Aug 14, Sept. 8, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	55.77	55.50	53.17	52.67	52.53	50.43	47.39	46.38	47.90	50.61	52.14	52.40
10	55.79	55.27	52.83	52.61	53.05	49.11	46.46	47.09	48.47	50.73	52.48	52.56
15	55.65	54.97	52.53	---	53.36	47.93	45.93	46.72	48.98	51.37	52.89	52.93
20	55.27	53.98	51.71	---	53.69	47.58	45.14	47.07	49.28	51.89	52.89	52.81
25	55.15	53.98	52.26	---	52.50	47.66	44.93	47.56	50.35	52.00	52.44	52.54
EOM	55.64	53.68	52.44	52.51	52.47	47.83	45.86	47.75	50.26	52.04	52.56	52.17
WTR YEAR	1979	MAX 44.78	APR 23, 24, 1979	MIN 55.84	OCT 8, 9, 1978							

GROUND-WATER LEVELS

475

SHELBY COUNTY--Continued

350923090023500. Local number, Sh:O-124.

LOCATION.--Lat 35°09'23", long 90°02'35", Hydrologic Unit 08010100, at Fifth Street and Sycamore Avenue, Memphis.
 Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Unused work shaft to tunnel connected to an unknown number of drilled artesian wells, diameter of shaft 30 in (760 mm), depth 98 ft (30 m), cased to 80 ft (24 m).

INSTRUMENTATION.--Water-level recorder since September 1938.

DATUM.--Land-surface datum is 229.70 ft (70.01 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.40 ft (0.12 m) above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--May 1927 to 1933, 1936 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.09 ft (5.82 m) below land-surface datum, Apr. 1, 1933;
 lowest, 73.4 ft (22.4 m) below land-surface datum, July 30 to Aug. 1, 1954.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	69.64	69.74	68.63	65.83	64.61	63.28	60.32	60.54	61.57	65.25	66.45	67.23
10	69.55	69.40	67.79	66.11	65.89	61.92	59.98	60.95	62.68	64.99	68.44	67.10
15	69.55	69.41	66.88	66.55	66.31	61.47	59.47	61.44	63.25	65.45	69.20	67.65
20	69.44	69.67	66.52	66.91	66.77	61.34	59.84	62.07	64.12	65.49	69.32	67.32
25	69.81	69.30	66.52	66.67	66.28	62.10	59.58	61.21	64.96	65.52	---	66.48
EOM	69.84	68.81	66.04	65.10	65.23	62.07	59.99	60.66	64.78	65.52	68.98	65.70
WTR YEAR	1979	MAX	58.31	APR 2, 1979	MIN	69.91	OCT 26, 27, 1978					

351320089535800. Local number, Sh:P-1.

LOCATION.--Lat 35°13'20", long 89°53'58", Hydrologic Unit 08010210, at Scheibler Road, 0.2 mi (0.3 km) east of Yale Road, Memphis.
 Owner: Memphis Light, Gas and Water Division, City of Memphis

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (150 mm), depth 344 ft (105 m), cased to 334 ft (102 m), screened 334 to 344 ft (102 to 105 m).

INSTRUMENTATION.--Water-level recorder since July 1941.

DATUM.--Land-surface datum is 299.80 ft (91.38 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--September 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 63.33 ft (19.30 m) below land-surface datum, Sept. 27, 1940;
 lowest, 116.86 ft (35.62 m) below land-surface datum, Aug. 11-15, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
 LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	115.48	113.94	112.87	112.83	113.87	---	111.41	---	110.32	113.40	113.45	113.45
10	115.30	114.02	112.89	113.46	113.84	---	111.50	---	110.85	113.17	113.81	113.56
15	115.12	113.93	113.16	113.63	113.88	---	111.14	---	111.44	113.21	114.01	113.62
20	114.76	113.72	112.84	113.72	113.97	---	110.95	---	112.04	113.67	113.93	113.56
25	114.48	113.43	113.01	113.73	113.51	---	110.42	---	112.71	113.73	113.41	113.19
EOM	114.39	113.22	112.78	113.85	---	111.70	110.38	110.72	112.90	113.52	113.40	113.06
WTR YEAR	1979	MAX	110.23	APR 1, 1979	MIN	115.52	OCT 6, 1978					

GROUND-WATER LEVELS
SHELBY COUNTY--Continued

350735089593300. Local number, Sh:P-76.

LOCATION.--Lat 35°07'35", long 89°59'33", Hydrologic Unit 08010210, at Central Avenue and Tanglewood Street, Memphis.

Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled artesian unused well, diameter 12 in (300 mm), depth 488 ft (149 m), cased to 428 ft (130 m), screened 428 to 488 ft (130 to 149 m).

INSTRUMENTATION.--Water-level recorder since October 1932.

DATUM.--Land surface datum is 286.70 ft (87.39 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.30 ft (0.40 m) above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--October 1928 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.65 ft (17.88 m) below land-surface datum, Apr. 3, 1933; lowest, 144.77 ft (44.13 m) below land-surface datum, July 20-25, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	139.29	---	134.12	134.39	135.83	133.41	131.39	131.71	131.18	135.29	133.59	135.40
10	138.96	---	134.97	135.12	136.09	133.05	130.84	131.81	133.43	134.77	134.62	135.90
15	139.01	---	135.48	135.93	135.67	132.65	130.63	131.35	134.57	134.84	134.56	135.86
20	138.20	---	134.67	136.30	135.07	131.57	131.48	132.07	135.20	135.33	134.32	134.97
25	137.59	---	134.87	135.95	134.41	131.25	130.92	132.62	135.22	135.03	135.81	---
EOM	136.75	134.37	133.67	135.97	133.87	131.47	131.01	131.85	135.38	134.21	136.51	134.22
WTR YEAR	1979	MAX	130.18	APR 16, 1979	MIN	139.51	OCT 1, 1978					

350900089482300. Local number, Sh:Q-1.

LOCATION.--Lat 35°09'00", long 89°48'23", Hydrologic Unit 08010210, south of Macon Road, 0.6 mi (1.0 km) west of Germantown Road, near Memphis.

Owner: Memphis Light, Gas and Water Division, City of Memphis.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 6 in (150 mm), depth 384 ft (117 m), cased to 375 ft (114 m), screened 375 to 384 ft (114 to 117 m).

INSTRUMENTATION.--Water-level recorder since October 1940.

DATUM.--Land-surface datum is 330.40 ft (100.71 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.40 ft (0.73 m), above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--October 1940 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 74.08 ft (22.58 m) below land-surface datum, Dec. 27, 1940; lowest 102.66 ft (31.29 m) below land-surface datum, Nov. 8, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	102.51	102.53	102.26	102.34	102.36	102.22	101.91	101.59	101.43	102.07	102.10	102.03
10	102.56	102.59	102.54	102.32	102.41	102.21	101.71	101.55	101.57	102.02	102.10	102.15
15	102.64	102.55	102.32	102.48	102.13	102.37	101.83	101.70	101.63	102.07	102.12	102.29
20	102.48	102.61	102.05	101.95	102.32	101.96	101.76	101.45	101.73	102.10	102.11	102.11
25	102.44	102.45	102.28	102.34	102.11	102.00	101.52	101.61	101.96	102.09	102.12	102.23
EOM	102.61	102.40	102.20	102.40	102.15	101.94	101.74	101.53	101.85	102.06	102.15	102.17
WTR YEAR	1979	MAX	101.39	JUN 7, 1979	MIN	102.66	NOV 8, 1978.					

GROUND-WATER LEVELS

477

SHELBY COUNTY--Continued

352112089571200. Local number, Sh:U-1.

LOCATION.--Lat 35°21'12", long 89°57'12", Hydrologic Unit 08010209, 3 mi (4.8 km) west of Millington at Shelby Road and Shake Rag Road, Sloanville.
 Owner: T. D. Ervin

AQUIFER.--Sand of Wilcox Group of early Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 24 to 16 in (610 to 410 mm), depth 1,558 ft (475 m), cased to 1,497 ft (456 m), screened 1,497 to 1,558 ft (456 to 475 m).

DATUM.--Land-surface datum is 264.20 ft (80.53 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.60 ft (0.18 m) above land-surface datum.

REMARKS.--Water levels affected by pumpage at Memphis.

PERIOD OF RECORD.--August 1946 to current year. Analog record March 1948 to January 1971, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 33.20 ft (10.12 m) below land-surface datum, Apr. 21, 1947; lowest, 61.87 ft (18.86 m) below land-surface datum, Sept. 27, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 2	60.87	DEC 26	59.89	FEB 28	60.34	APR 30	60.05	JUN 28	61.65	AUG 30	61.73
NOV 30	60.54	JAN 31	59.99	MAR 28	60.00	MAY 30	61.03	JUL 31	61.60	SEP 27	61.87

352112089571300. Local number, Sh:U-2.

LOCATION.--Lat 35°21'12", long 89°57'13", Hydrologic Unit 08010209, 3 mi (4.8 km) west of Millington at Shelby Road and Shake Rag Road, Sloanville.
 Owner: T. D. Ervin.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 18 to 12 in (460 to 300 mm), depth 440 ft (134 m), cased to 360 ft (110 m), screened 360 to 440 ft (110 to 134 m).

DATUM.--Land-surface datum is 268.76 ft (81.92 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.60 ft (0.49 m) above land-surface datum.

REMARKS.--Water levels affected by pumpage for Memphis municipal water supply.

PERIOD OF RECORD.--June 1953 to current year. Analog record June 1953 to December 1970, periodic tape measurements or monthly maximum-minimum recorder thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.59 (12.07 m) below land-surface datum, June 29, 1953; lowest recorded, 59.12 ft (18.02 m) below land-surface datum during period August through September 1977, from maximum-minimum recorder.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 2	57.55	DEC 26	55.80	FEB 28	55.56	APR 30	51.58	JUN 28	53.49	AUG 30	54.92
NOV 30	56.81	JAN 31	55.77	MAR 28	53.16	MAY 30	52.51	JUL 31	54.54	SEP 27	54.97

GROUND-WATER LEVELS

WILLIAMSON COUNTY

355505086541100. Local number, Wm:M-1.

LOCATION.--Lat 35°55'05", long 86°54'11", Hydrologic Unit 05130204, on Horton Lane, 0.8 mi (1.3 km) west of Carter's Creek Road, near Franklin.

Owner: Tennessee Division of Geology and U.S. Geological Survey.

AQUIFER.--Knox Dolomite of late Cambrian and early Ordovician age.

WELL CHARACTERISTICS.--Drilled artesian test well, diameter 6 in (150 mm), depth 1,160 ft (354 m), cased to 473 ft (144 m), open end.

DATUM.--Land-surface datum is 712 ft (217 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 2.80 ft (0.85 m) above land-surface datum.

REMARKS.--Period of record low resulted from water-level measurements on the well during a 72 hour aquifer test.

PERIOD OF RECORD.--January 1950 to current year. Water-level recorder December 1951 to February 1971, periodic tape measurements thereafter.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 84.21 ft (25.67 m) below land-surface datum, Mar. 10, 1952; lowest recorded 87.11 ft (26.55 m) below land-surface datum, Sept. 10, 1970; highest water level measured, 85.43 ft (26.04 m) below land-surface datum, Feb. 19, 1974; lowest measured, 114.81 ft (34.99 m) below land-surface datum, Jan. 31, 1950.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 13	88.31	APR 16	88.17

355749086533300. Local number, Wm:M-8.

LOCATION.--Lat 35°57'49", long 86°53'33", Hydrologic Unit 05130204, 3.9 mi (6.3 km) north of Franklin.
Owner: City of Franklin.

AQUIFER.--Carters Limestone of middle Ordovician age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 10 in (250 mm) to 54 ft (16.5 m), 9 in (230 mm) to 170 ft (51.8 m), 6 in (150 mm) to 192 ft (58.5 m) below land surface, cased to 54 ft (16.5 m), open end.

INSTRUMENTATION.--Water-level recorder since August 1976.

DATUM.--Altitude of land-surface datum is 630 ft (192 m). Measuring point: Top of casing, 1.5 ft (0.46 m) above land-surface datum.

REMARKS.--Period of record low resulted from water levels being affected by 48 hour aquifer test run on a nearby well. Missing record Oct. 5 to Dec. 17, Jan. 3 to Feb. 13, Apr. 7-15, May 5 to June 10, and Sept. 24-30.

PERIOD OF RECORD.--August 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.66 ft (4.77 m) below land-surface datum, May 4, 1979; lowest, 42.71 ft (13.02 m) below land-surface datum, Dec. 10, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5			---		---	30.39	25.82			34.16	34.33	34.41
10			---		---	31.82				34.21	34.41	34.47
15					32.93	32.53			33.87	34.27	34.46	24.26
20			32.22		33.11	32.84	31.68		34.04	34.31	34.49	26.07
25			32.14		30.99	30.75	32.69		33.84	34.30	34.51	---
EOM			32.59		28.64	32.45	33.23		34.03	34.26	34.39	---

WTR YEAR 1979 MAX 15.66 MAY 4, 1979 MIN 34.73 OCT 3, 1978.

QUALITY OF GROUND WATER

479

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

LINCOLN COUNTY

350036086420101 - LI:G-11, TAFT, TN. (L-19)

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	TURBIDITY (NTU)	HARDNESS (MG/L AS CaCO3)	HARDNESS, NONCARBONATE (MG/L AS CaCO3)	CALCIUM DISSOLVED (MG/L AS Ca)
SEP 07...	1500	77	6.5	15.0	5	40	33	7	11

DATE	MAGNESIUM, DISSOLVED (MG/L AS Mg)	SODIUM, DISSOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CaCO3)	SULFATE DISSOLVED (MG/L AS SO4)
SEP 07...	1.3	.9	6	.1	.1	31	0	25	3.8

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	PHOSPHORUS, TOTAL (MG/L AS P)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, DISSOLVED (UG/L AS MN)
SEP 07...	1.2	.0	8.1	40	42	.05	.020	1	90

SHELBY COUNTY

350144090073301 - SH:H-7 SEWANEE ROAD MEMPHIS TN

DATE	TIME	SPECIFIC CONDUCTANCE (MICRO-MHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM COBALT UNITS)	TURBIDITY (NTU)	HARDNESS (MG/L AS CaCO3)	CALCIUM DISSOLVED (MG/L AS Ca)	MAGNESIUM, DISSOLVED (MG/L AS Mg)	SODIUM, DISSOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
SFP 17...	1015	220	6.0	17.5	3	2.0	94	21	10	8.4	16	.4

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)
SFP 17...	1.1	1.7	2.3	.1	15	124	.17	.03	.01	.000	1	100

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS Cd)	COPPER, TOTAL RECOVERABLE (UG/L AS Cu)	IRON, TOTAL RECOVERABLE (UG/L AS Fe)	IRON, DISSOLVED (UG/L AS Fe)	LEAD, TOTAL RECOVERABLE (UG/L AS Pb)	MANGANESE, TOTAL RECOVERABLE (UG/L AS Mn)	MANGANESE, DISSOLVED (UG/L AS Mn)	MERCURY TOTAL RECOVERABLE (UG/L AS Hg)	SELENIUM, TOTAL (UG/L AS Se)	SILVER, TOTAL RECOVERABLE (UG/L AS Ag)	ZINC, TOTAL RECOVERABLE (UG/L AS Zn)	CARBON, ORGANIC TOTAL (MG/L AS C)
SFP 17...	0	2	990	890	2	20	20	<.5	0	0	10	.5

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

SHELBY COUNTY--Continued

350230089512301 - SH:L-37 RIDGEWAY STREET MEMPHIS TN

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM CORAL T UNITS)	TURBIDITY (NTU)	HARDNESS (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
SEP 17...	1500	95	5.6	18.0	5	.00	25	6.2	2.2	8.9	43	.8
DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)
SEP 17...	.5	.9	4.7	.0	13	60	.08	.18	.00	.000	1	100
DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
SEP 17...	0	23	60	40	3	0	2	<.5	0	0	0	4.5

350438090013601 - SH:J-127 ALCY ROAD MEMPHIS TN

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE, WATER (DEG C)	COLOR (PLATINUM CORAL T UNITS)	TURBIDITY (NTU)	HARDNESS (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
SEP 17...	0915	135	5.9	17.5	3	2.0	46	11	4.5	9.4	30	.6
DATE	POTASSIUM, DIS-SOLVED (MG/L AS K)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLORIDE, DIS-SOLVED (MG/L AS CL)	FLUORIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)
SEP 17...	.8	.2	3.1	.1	12	75	.10	.02	.00	.010	1	0
DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
SEP 17...	0	4	940	850	1	10	30	<.5	0	0	0	.3

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

SHELBY COUNTY--Continued.

350540090061700 - SH:J-84 CARGILL, INC., MEMPHIS, TENN

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)
SEP 18...	1130	415	149	6.4	18.0	1	1.0	95	.13	.06	.00

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
SFP 18...	.000	100	0	6	460	10	0	0	0	.5

350711089560202 - SH:K-94

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	HARD- NESS (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
SFP 17...	1400	130	5.8	18.0	5	1.0	32	7.5	3.2	11	42	.8

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA)
SFP 17...	.6	6.7	6.0	.0	17	76	.10	.01	.01	.000	1	0

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
SFP 17...	0	4	1900	1000	1	20	30	<.5	0	0	40	.0

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

SHELBY COUNTY--Continued

350935090013701 - SH:0-182

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM CORALT UNITS)	TUR- BID- ITY (NTU)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
SEP 17...	1100	170	6.2	18.0	5	3.0	62	14	6.6	8.8	23	.5

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)
SEP 17...	.7	.5	2.0	.1	13	86	.12	.05	.00	.000	1	100

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
SEP 17...	0	54	1000	870	4	10	20	<.5	0	0	10	.5

351109089512901 - SH:0-40

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM CORALT UNITS)	TUR- BID- ITY (NTU)	HARD- NESS (MG/L AS CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
SEP 17...	1215	120	5.9	17.5	5	1.0	39	9.1	3.9	7.5	29	.5

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)
SEP 17...	.8	4.4	3.9	.1	11	68	.09	.01	.00	.010	1	100

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
SEP 17...	0	5	960	930	2	10	20	<.5	0	0	70	3.2

QUALITY OF GROUND WATER

483

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

SHELBY COUNTY--Continued

352004089525301 - SH:11-27

DATE	TIME	DEPTH OF WELL TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)
SEP 18...	1015	349	345	6.5	18.0	5	4.0	175	.24	.05	.00

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
SEP 18...	.000	200	0	1	1500	100	0	0	40	1.7

SEVIER COUNTY

354415083265401 - SV:F-1 GATI INBUPG, TENN. (GAT-26)

DATE	TIME	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
DEC 02...	0900	60	60	14.0	20	66	18	0	4.2	1.9	4.6

DATE	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
DEC 02...	35	.5	.3	29	0	24	.2	.5	.1	25	48

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
DEC 02...	51	.07	.22	.00	.110	1	0	1	2	190	30

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
DEC 02...	14	0	0	<.5	0	0	140	1.3	.00	0	.00

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

JEFFERSON COUNTY

360154084240001 - JF:F-7 (D-7) DANDRIDGE, TENNESSEE

DATE	TIME	DEPTH OF WELL, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS- NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)
NOV 21...	0800	400	510	7.3	16.0	10	<1	<1	<1	310	33	69

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
NOV 21...	34	1.0	1	.0	1.7	340	0	280	6.9	2.5	8.7

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 21...	286	292	.39	1.1	.00	.000	1	200	1	0	60	10

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)
NOV 21...	9	0	0	.6	0	0	0	1.2	.00	0	.00

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons



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