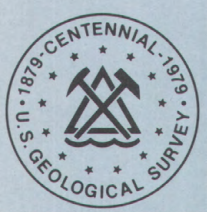
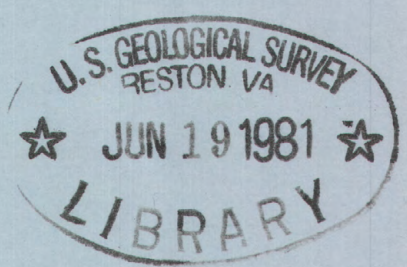


Water Resources Data for Tennessee



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TN-78-1

WATER YEAR 1978

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 1978

1977

OCTOBER

S	M	T	W	T	F	S
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1978

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SEPTEMBER

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Water Resources Data for Tennessee

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT TN-78-1

WATER YEAR 1978

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

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
1979

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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16. Abstract (Limit: 200 words)

Water resources data for the 1978 water year for Tennessee consist of records of stage, discharge, and water quality of streams and springs; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of wells. This report contains discharge records for 112 gaging stations; stage only records for one lake gaging station; elevation and contents for 27 lakes and reservoirs; water quality for 69 stations and 20 wells; and water levels for 27 observation wells. Also included are 118 crest-stage partial-record stations, and 64 low-flow partial-record stations. Additional water data were collected at various stream and spring sites not involved in the systematic data-collection program and are published as miscellaneous measurements and analyses. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Tennessee.

17. Document Analysis a. Descriptors

*Tennessee, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediment analyses, Water temperatures, Sampling sites, Water levels, Water analyses.

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

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Department of Commerce

CONTENTS

ILLUSTRATIONS

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

NOTICE

During water year 1978, revisions were made in the terminology used to define 143 of the water-quality parameter codes that have been used by the Geological Survey in its publication of water-quality data and in its WATSTORE data system. These revisions were made to achieve consistency in terminology and to conform to a joint USGS-EPA agreement on terminology. They do not represent a change in the way the codes have been used in the past or in the association of specific code numbers with identified analytical procedures.

Use of the new terminology began with data for the 1978 water year, and therefore, it first appears in this publication. Definitions on which the terminology is based are included in the "Definitions" section of this report, and a table showing both old and new terminology is attached as an appendix to the report.

WATER RESOURCES DATA FOR TENNESSEE, 1978

INTRODUCTION

Water resources data for the 1978 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 112 gaging stations; stage only at one gaging station; stage and contents at 27 lakes and reservoirs; water quality at 69 stations, 47 of these at gaging stations; and 20 wells; and water levels at 27 observation wells. Also included are data for 118 crest-stage partial-record stations, and 64 low-flow 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 a 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 78-1." 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, B. R. Allison, 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, Eddie Shaw, 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.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, Nashville District, in collecting records for 18 gaging stations and five water-quality stations, by the Tennessee Valley Authority for 42 gaging stations, 15 thermograph stations, and water-quality analyses at 38 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 many 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, Charles W. Boning, and later Braxtel L. Neely, chief, Memphis Subdistrict, and Charles R. Burchett, chief, Nashville Field Headquarters.

HYDROLOGIC CONDITIONS

Streamflow during the 1978 water year was generally above normal throughout Tennessee. Annual runoff at three index gaging stations ranged from 117 to 129 percent of median for the 48-year period of record. Runoff for the water year and for a base period 1941-70 for the index stations is shown on figure 2.

The 1978 water year began with unusually excessive flow conditions, within the upper 25 percent of record for the long-term base period 1941-70, except for the western section of the State. October rainfall was 175 percent of the 30-year average over most of the State. Severe flooding occurred in northeast Tennessee October 2, causing extensive property damage in Sullivan, Johnson, and Carter Counties along Reedy, Doe, Roan and Corn Creeks. One death was reported as a result of the storm.

Flooding again occurred in the extreme northeastern part of the State November 5-6 along Nolichucky and Doe Rivers, and peak discharges on those streams exceeded a 100-year flood. Elsewhere in the State, as a result of high carryover flow from a wet October and high runoff resulting from the storms in November, monthly mean discharges remained in the above-normal range for the third consecutive month.

December streamflow generally decreased over the State but most streams remained in the above-normal range. Runoff was slightly above normal at most stations January through April. Three periods of heavy rainfall during May brought runoff of most streams across the State to between two and ten inches above normal. From April to September, most streams sustained normal seasonal flows.

Contents of principal reservoirs were above normal monthly averages by 125 to 135 percent October through January. Contents were 80 to 95 percent of normal monthly averages February through May, and about average in June. For the remainder of the year, contents were about 90 percent of normal.

Figures 3 and 4 show ground-water hydrographs for four representative observation wells across the State. The range of lowest water levels along with the average of these lowest monthly values, for the period of record is shown for each well. The 1978 water year monthly lows are plotted on these graphs for comparison purposes. Variable monthly levels during the year strongly reflect climatic conditions.

Ground-water levels were lower than normal in the western part of the State. The Memphis index well reached a new low each month during the year and an all-time low in September. One Fayette County well declined to an all-time low for the 30-year period of record. Levels in the Dickson County index well, located on the western Highland Rim, were better sustained with normal to above normal levels. Seasonal declines in the summer and fall months are normal.

Heavy ground-water pumpage in Memphis and surrounding areas in Shelby County has created a cone of depression that affects ground-water levels at the network observation wells located in Shelby County. Both water table levels and artesian head in confined aquifers, which are the supply sources for the Memphis minicipal water system, are recorded by observation wells. Fluctuations in artesian head and water table levels vary throughout the area based on pumping rates, location of pumping centers, the artesian aquifer tapped, and location within the cone of depression.

Records for observation wells in Shelby County are published in this report. The fluctuations throughout the water year, as well as the minimums for the year and period of record are noted.

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-enterrococcus 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.

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/m^3 (grams per cubic meter), and periphyton and benthic organisms in g/m^2 (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: See bed 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.

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 aritficial 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 (FT^3/s, ft^3/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 µm 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 ni 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 (µg/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 (UG/L, µg/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 emersed 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 µm 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 µm 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 hierarchial 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	Hexageria
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.

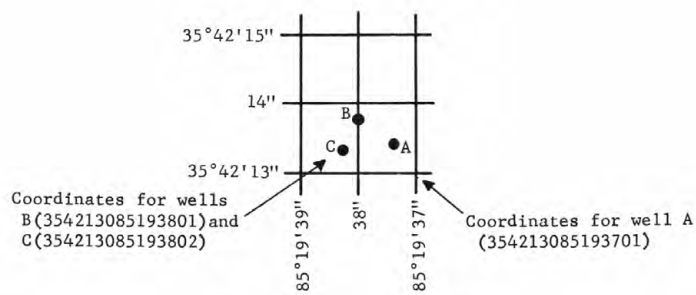

Figure 1.--System for numbering wells (latitude and longitude)

SPECIAL NETWORKS AND PROGRAMS

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 ft^3/s; to tenths between 1.0 and 10 ft^3/s; to whole number between 10 and 1,000 ft^3/s; and 3 significant figures above 1,000 ft^3/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.

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.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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. Prices are effective October 1978 but are subject to change.

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. $1.60.

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. $0.85

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. $1.90.

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. $1.75.

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. $1.00.

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. $0.35.

3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. $0.40.

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. $1.00.

3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages. $0.35.

3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6, 1968, 13 pages. $1.00.

3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages. $1.40.

3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. $1.25.

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. $1.20.

3-A12. *Fluorometric procedures for dye tracing*, by J. F. Wilson Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. $0.35. Not currently available.

3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. $0.70.

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. $2.50.

3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. $2.50.

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. $2.50.

3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages. $2.10.

4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4 Chapter A1. 1968. 39 pages. $1.60.

4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. $1.20

4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972, 18 pages. $0.65.

4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. $0.75.

4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages. $0.65.

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. $1.10.

5-A1. *Methods for collection and analysis of water samples for dissolved minerals and gases*, by Eugene Brown, M. W. Skougstad, and M. J. Fishman: USGS--TWRI Book 5, Chapter A1. 1970. 160 pages. $2.40.

5-A2. *Determination of minor elments in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages. $0.80.

5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages. $0.90.

5-A4.* *Methods for collection and analysis of aquatic biological and microbiological samples*, edited by P.E. Greeson, T.A. Ehlke, G.A. Irwin, B.W. Lium, and K.V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages. $20.00.

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. $16.00.

5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages. $2.10.

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. $2.30.

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. $0.70.

8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages. $1.10.

*These publications are available ONLY from Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. They are in looseleaf format and are subscription items. Additional supplements will be issued to subscribers at no extra cost. Checks should be made payable to Superintendent of Documents. Requester should emphasize to Superintendent of Documents that this is a subscription item.

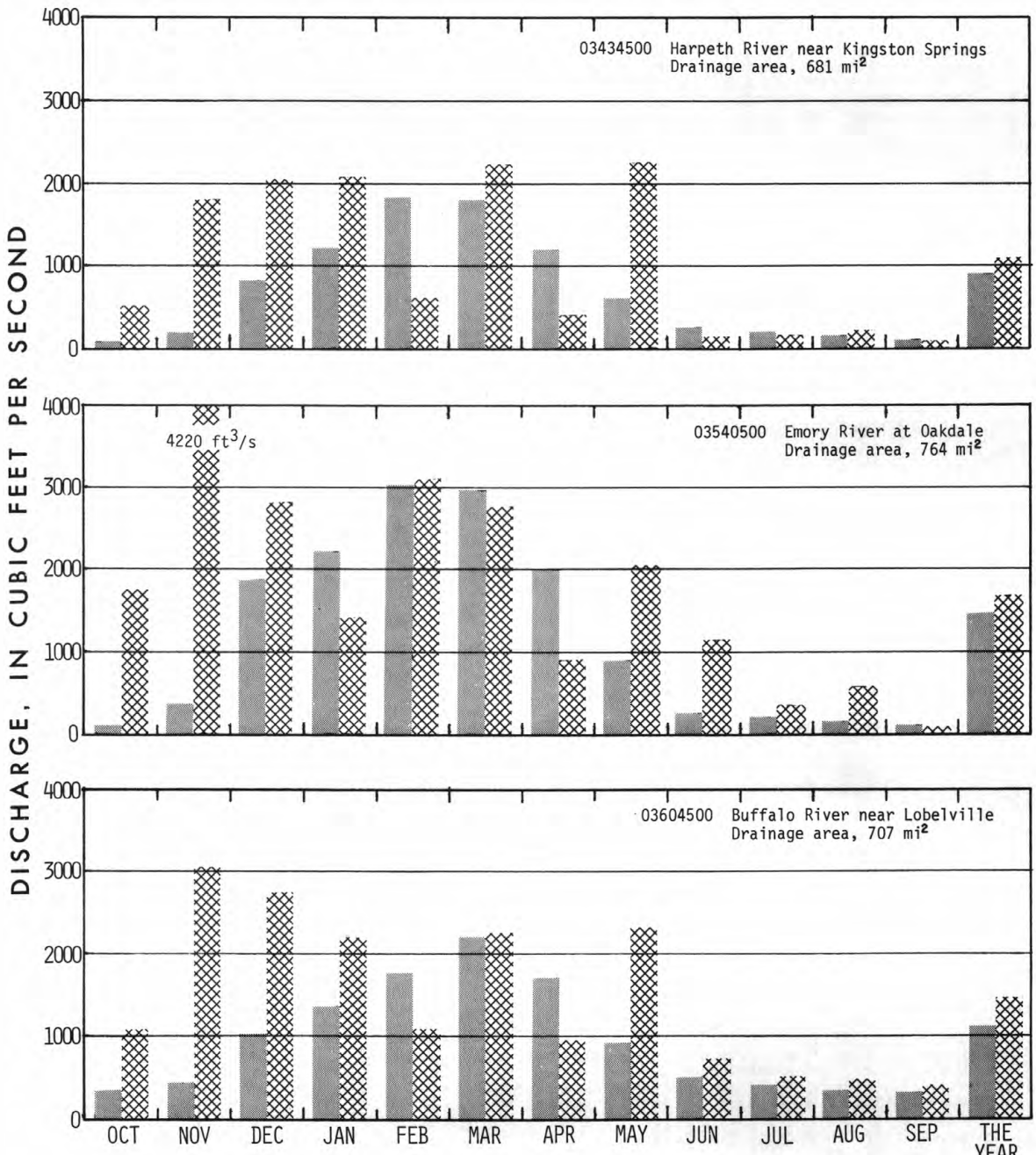

Figure 2.-- Runoff during 1978 water year compared with median runoff for period 1941-70 for three representative gaging stations.

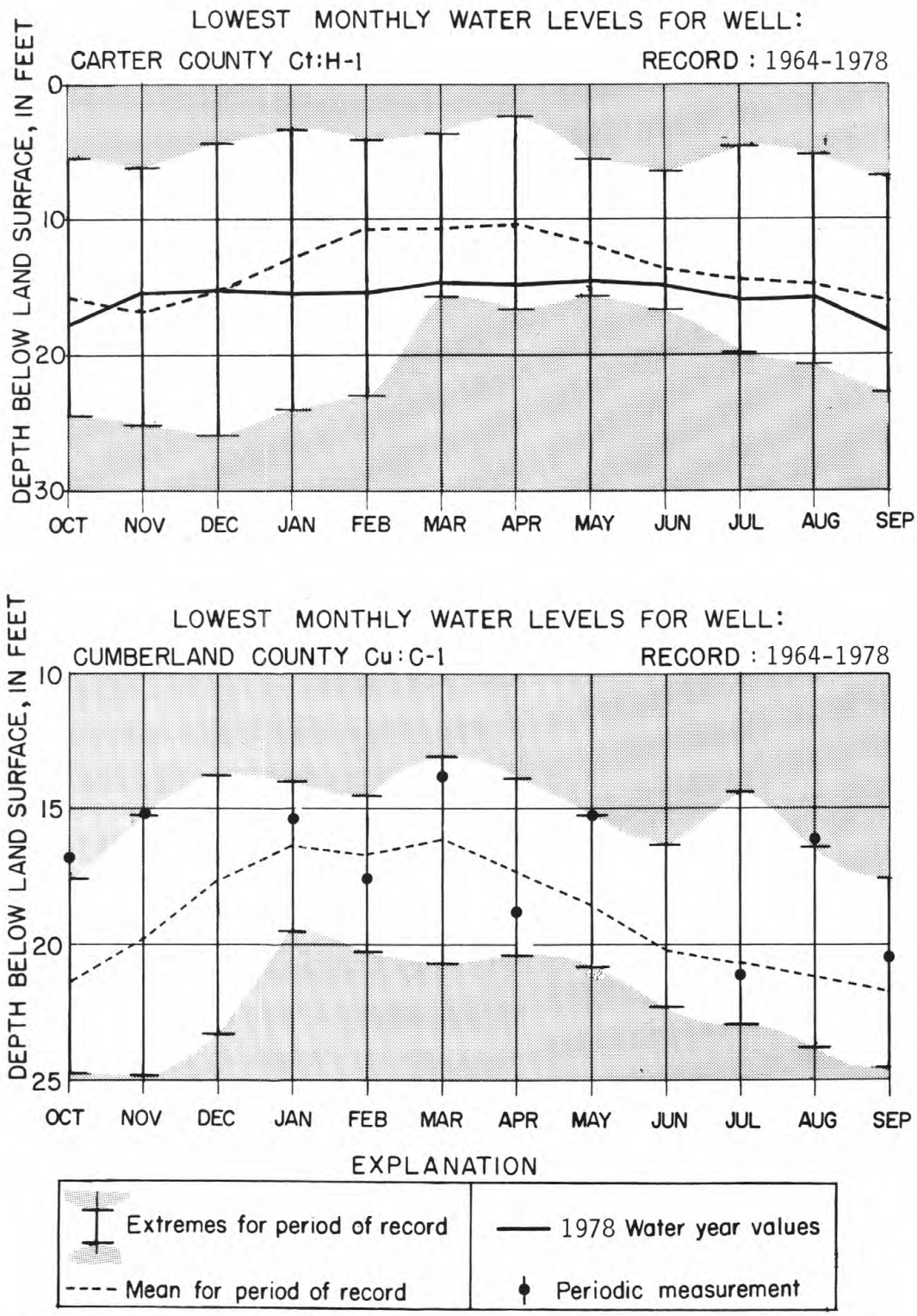

Figure 3.--Lowest monthly ground-water levels for the 1978 water year compared to the maximum, minimum, and average lowest monthly water levels for the previous years of record.

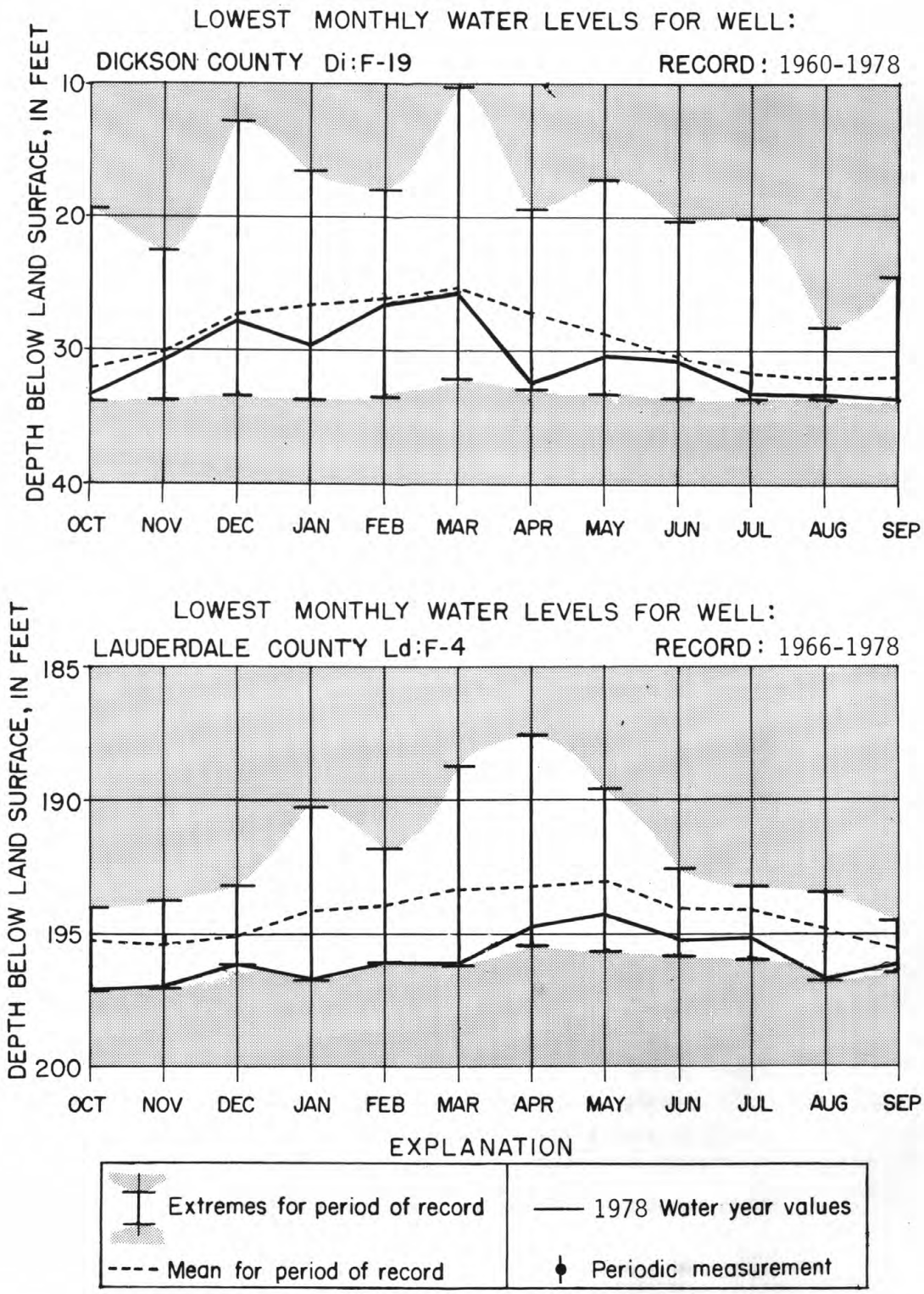

Figure 4.--Lowest monthly ground-water levels for the 1978 water year compared to the maximum, minimum, and average lowest monthly water levels for the previous years of record.

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 mi^2 (11.19 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1975 to August 1978 (discontinued).

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 1,460 ft (445 m), from topographic map.

REMARKS.--Records fair prior to October 1977 and poor thereafter.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharges:

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. 12, 1975	0055	1230	34.8	4.24	1.292	Apr. 4, 1977	Unknown	2750	77.9	5.68	1.731
Mar. 29, 1976	Unknown	280	7.93	2.39	0.728	Nov. 22, 1977	1810	300	8.50	2.46	0.750

Minimum discharge, 0.73 ft^3/s (0.021 m^3/s) Sept. 3, 4, 5, 6, 1975, gage height, 0.59 ft (0.180 m).

DISCHARGE, IN CUBIC FEET PER SECOND, JANUARY TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	2.7	3.0	10	6.1	2.1	2.8	1.6	.90
2				---	26	1.9	8.0	4.7	1.6	3.7	1.5	.85
3				---	16	1.7	11	4.3	1.8	2.7	1.5	.79
4				---	39	1.8	9.7	4.0	1.8	14	1.5	.79
5				---	28	1.6	8.0	3.4	3.0	12	2.1	.76
6				---	19	8.4	7.0	4.1	2.2	5.7	1.8	1.2
7				---	12	24	6.4	4.1	1.8	4.2	1.5	.94
8				---	6.5	9.6	5.9	5.4	1.7	10	1.5	.86
9				---	4.2	9.0	5.4	5.1	2.3	6.1	1.5	.80
10				---	3.1	19	5.1	3.5	2.5	4.1	8.4	.80
11				---	5.9	41	4.5	3.1	3.0	3.3	1.9	.82
12				11	35	155	4.1	3.0	5.0	2.8	1.5	1.0
13				8.7	17	171	3.8	2.8	35	5.5	1.3	.92
14				8.1	8.0	61	5.8	2.5	24	2.8	1.3	.80
15				8.2	3.9	37	9.3	33	21	3.7	2.5	.80
16				6.5	5.2	34	5.7	19	23	2.6	2.4	.80
17				2.1	19	34	5.3	25	12	2.3	2.3	4.6
18				5.6	8.8	34	5.0	11	7.5	2.1	5.0	11
19				42	4.9	34	28	7.5	5.5	2.1	8.0	1.4
20				29	3.4	25	22	4.7	4.0	2.1	3.0	1.2
21				13	2.6	13	14	3.7	2.5	2.2	2.6	1.0
22				6.2	2.6	24	10	3.5	2.3	2.0	2.3	8.1
23				4.1	24	21	8.8	2.3	2.0	2.0	2.0	18
24				3.4	17	71	7.7	1.9	1.8	5.0	1.7	6.0
25				52	7.3	35	14	1.5	12	2.3	1.5	3.0
26				15	4.4	21	9.4	2.0	6.6	1.9	1.4	2.0
27				7.4	3.2	13	8.1	1.9	7.0	1.8	1.3	1.5
28				4.4	2.7	11	7.3	1.8	7.4	1.7	1.2	1.2
29				3.5	---	92	6.5	6.0	4.6	1.6	1.1	1.0
30				2.4	---	26	6.1	3.0	3.3	1.7	1.0	.90
31				2.1	---	15	---	2.3	---	1.8	.95	---
TOTAL				---	331.4	1048.0	261.9	186.2	210.3	118.6	69.15	74.73
MEAN				---	11.8	33.8	8.73	6.01	7.01	3.83	2.23	2.49
MAX				---	39	171	28	33	35	14	8.4	18
MIN				---	2.6	1.6	3.8	1.5	1.6	1.6	.95	.76
CFSM				---	2.73	7.82	2.02	1.39	1.62	.89	.52	.58
IN.				---	2.85	9.02	2.25	1.60	1.81	1.02	.60	.64

03407804 INDIAN FORK ABOVE BRAYTOWN, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	3.6	44	56	24	6.4	39	7.1	7.7	5.0	3.2	2.0
2	2.5	3.2	29	38	17	5.9	26	4.6	18	3.2	2.4	2.0
3	2.2	2.8	19	55	17	5.5	16	3.8	20	20	2.2	1.7
4	1.9	2.6	14	41	17	5.0	10	3.5	11	27	2.0	1.7
5	1.8	2.3	12	30	21	8.8	7.7	3.2	7.1	17	1.9	1.6
6	1.9	2.1	13	18	35	7.7	7.1	2.9	5.5	11	5.5	1.5
7	2.0	11	15	22	27	6.6	6.0	7.7	4.2	7.1	2.7	1.5
8	13	8.0	12	19	22	7.1	5.5	3.5	3.8	4.6	2.0	1.4
9	8.8	10	16	17	17	31	5.0	3.2	3.2	4.5	1.8	5.5
10	6.2	9.4	13	15	11	28	4.6	2.9	2.9	3.2	1.7	3.2
11	4.5	8.7	12	22	8.0	17	5.5	7.1	2.7	2.7	1.6	1.7
12	3.5	220	11	28	5.8	13	4.6	3.5	2.4	6.0	1.5	1.5
13	2.8	62	11	40	5.4	9.4	4.2	3.8	2.2	3.5	1.5	1.4
14	2.2	36	11	48	5.0	7.0	3.8	10	2.0	2.4	1.4	1.4
15	1.8	25	17	36	4.6	6.3	3.5	72	2.0	9.2	8.4	1.5
16	2.5	20	26	28	4.6	11	3.4	32	2.0	4.6	2.2	1.4
17	46	16	20	19	4.6	7.5	3.2	20	2.0	3.2	1.8	1.4
18	29	14	13	16	44	6.7	3.0	21	1.8	2.4	1.7	1.3
19	9.0	15	11	14	39	5.9	2.9	14	13	2.2	1.5	1.3
20	6.2	16	10	12	23	7.4	2.8	10	11	3.5	1.4	1.7
21	5.0	17	9.1	11	22	64	7.7	7.1	4.6	5.0	1.4	1.6
22	4.1	14	7.8	10	26	31	5.0	5.5	3.2	4.8	1.3	1.3
23	3.5	12	8.0	9.4	17	17	3.5	5.4	2.4	3.5	1.3	1.3
24	3.1	8.0	8.5	9.0	12	11	3.2	4.2	2.2	2.4	1.3	1.3
25	2.8	7.0	27	28	10	20	7.8	3.5	5.5	2.2	1.2	1.3
26	6.8	8.0	56	78	8.8	17	4.6	3.2	3.5	2.0	1.5	3.5
27	5.8	8.9	37	54	7.8	22	4.0	2.9	2.4	1.9	2.7	14
28	5.0	8.0	25	36	7.0	17	3.5	27	2.2	1.8	6.0	3.5
29	5.4	7.1	18	27	6.7	102	3.3	50	7.7	15	2.2	6.0
30	4.5	27	32	20	---	151	3.2	23	15	6.5	1.7	5.9
31	4.0	---	73	16	---	100	---	11	---	4.2	1.5	---
TOTAL	199.4	604.7	630.4	872.4	469.3	755.2	209.6	378.6	173.2	191.6	70.5	76.4
MEAN	6.43	20.2	20.3	28.1	16.2	24.4	6.99	12.2	5.77	6.18	2.27	2.55
MAX	46	220	73	78	44	151	39	72	20	27	8.4	14
MIN	1.6	2.1	7.8	9.0	4.6	5.0	2.8	2.9	1.8	1.8	1.2	1.3
CFSM	1.49	4.68	4.70	6.51	3.75	5.65	1.62	2.82	1.34	1.43	.53	.59
IN.	1.72	5.21	5.43	7.51	4.04	6.50	1.80	3.26	1.49	1.65	.61	.66

WTR YR 1976 TOTAL 4631.3 MEAN 12.7 MAX 220 MIN 1.2 CFSM 2.94 IN 39.87

03407804 INDIAN FORK ABOVE BRAYTOWN, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	26	7.7	12	---	12	21	6.0	---	5.5	1.3	---
2	2.4	13	7.1	8.0	---	7.7	27	4.6	---	4.2	1.2	---
3	2.0	9.2	5.0	7.0	---	7.5	53	14	---	2.4	1.1	---
4	1.8	6.6	4.9	9.2	---	28	719	10	---	2.0	1.1	---
5	1.7	4.9	4.2	14	---	23	1800	31	---	1.8	1.1	---
6	3.8	3.8	23	14	---	14	200	10	6.0	1.7	1.1	---
7	6.0	3.1	59	16	---	9.2	50	---	1.0	1.5	1.2	---
8	3.2	2.9	32	12	---	7.1	20	---	.80	1.5	1.4	---
9	21	2.9	20	16	---	5.5	15	---	.88	1.4	1.5	---
10	6.0	2.8	12	29	---	4.6	10	---	.73	1.4	2.2	---
11	3.8	3.2	10	---	---	3.8	8.0	---	.73	1.4	1.3	---
12	2.9	2.9	29	---	---	61	6.5	---	1.3	1.3	1.1	---
13	2.4	2.4	23	---	---	46	4.0	---	.97	1.3	1.4	---
14	2.2	2.7	17	---	---	23	2.4	---	5.0	1.2	3.2	---
15	2.0	2.9	15	---	---	13	2.4	---	1.4	1.2	1.8	---
16	2.0	2.7	11	---	---	7.7	2.4	---	7.1	1.1	1.4	---
17	2.0	2.4	8.4	---	---	6.5	2.4	---	2.7	1.1	2.2	15
18	1.8	2.4	7.1	---	---	6.0	2.2	---	2.2	1.1	1.7	11
19	1.8	2.4	6.5	---	---	5.5	2.2	---	27	1.0	1.3	8.4
20	6.5	2.4	11	---	---	7.7	2.0	---	14	1.0	---	6.5
21	2.9	2.0	7.7	---	---	4.6	1.8	---	5.5	1.0	---	5.5
22	2.4	1.8	5.0	---	2.4	8.4	3.2	---	6.0	1.4	---	4.6
23	2.0	2.0	6.5	---	6.0	6.5	33	---	6.0	1.1	---	4.2
24	18	2.0	6.0	---	43	5.5	31	---	5.5	1.0	---	4.2
25	130	2.0	8.4	---	21	5.0	13	---	38	7.1	---	6.5
26	45	3.5	16	---	15	4.6	7.1	---	39	2.4	---	43
27	28	4.2	13	---	29	4.2	5.0	---	21	1.4	---	31
28	23	13	12	---	20	4.2	5.0	---	7.1	1.3	---	12
29	21	17	11	---	---	4.6	16	---	4.2	1.3	---	4.6
30	28	9.2	16	---	---	58	7.1	---	2.9	1.3	---	2.9
31	32	---	18	---	---	39	---	---	---	1.2	---	---
TOTAL	411.1	158.3	432.5	---	---	443.4	3071.7	---	---	55.6	---	---
MEAN	13.3	5.28	14.0	---	---	14.3	102	---	---	1.79	---	---
MAX	130	26	59	---	---	61	1800	---	---	7.1	---	---
MIN	1.7	1.8	4.2	---	---	3.8	1.8	---	---	1.0	---	---
CFSM	3.08	1.22	3.24	---	---	3.31	23.6	---	---	.41	---	---
IN.	3.54	1.36	3.72	---	---	3.82	26.44	---	---	.48	---	---

CAL YR 1976 TOTAL 4198.7 MEAN 11.5 MAX 151 MIN 1.2 CFSM 2.66 IN 36.15

NOTE.--No gage-height record Jan. 11 to Feb. 21, May 7 to June 5, Aug. 20 to Sept. 16.

03407804 INDIAN FORK ABOVE BRAYTOWN. TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1977 TO AUGUST 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
1	5.5	---	26	9.0	---	---	---	9.2	4.2	4.2	5.0
2	5.0	---	14	7.1	---	---	---	7.1	4.6	4.6	3.8
3	4.2	---	9.6	6.5	---	---	---	6.5	4.6	6.5	4.6
4	3.5	---	43	6.0	---	---	---	35	3.8	4.6	13
5	3.2	---	39	6.5	---	---	---	27	3.5	4.2	---
6	2.9	---	18	13	---	---	---	15	3.5	4.0	---
7	---	---	9.0	12	---	---	---	17	16	3.9	---
8	---	---	7.1	75	---	---	---	67	59	3.8	---
9	---	---	7.7	44	---	---	---	50	39	4.6	---
10	---	---	5.1	17	---	---	---	31	23	4.2	---
11	---	5.9	4.5	13	---	---	---	20	16	3.8	---
12	---	5.2	4.2	12	---	---	4.2	28	17	3.8	---
13	---	4.2	4.2	12	---	---	3.8	75	15	3.5	---
14	---	---	5.4	11	---	---	3.8	62	10	3.5	---
15	---	---	4.1	9.2	---	---	3.5	44	9.2	25	---
16	---	---	3.6	---	---	---	3.5	33	8.4	35	---
17	---	---	3.7	---	---	---	3.5	26	7.7	8.4	---
18	---	13	6.4	---	---	---	32	17	7.1	5.5	---
19	---	9.0	4.9	---	---	---	23	13	6.5	5.0	---
20	---	7.2	4.5	---	---	---	14	11	6.4	6.0	---
21	---	32	4.0	---	---	---	11	9.2	6.0	5.0	---
22	---	108	3.3	---	---	---	8.4	7.7	6.0	4.2	---
23	---	40	2.9	---	---	---	7.1	8.4	5.9	3.8	---
24	---	16	24	---	---	---	6.5	9.2	5.5	3.8	---
25	---	8.9	42	---	---	---	12	8.4	5.0	8.4	---
26	---	5.9	23	---	---	---	28	6.5	6.0	5.0	---
27	---	6.8	14	---	---	---	27	6.0	5.0	5.5	---
28	---	14	10	---	---	---	17	5.5	4.9	5.0	---
29	---	123	8.4	---	---	---	13	5.0	4.6	4.2	---
30	---	37	9.2	---	---	---	14	4.8	4.6	3.8	---
31	---	---	9.2	---	---	---	---	4.6	---	13	---
TOTAL	---	---	374.0	---	---	---	---	669.1	318.0	205.8	---
MEAN	---	---	12.1	---	---	---	---	21.6	10.6	6.64	---
MAX	---	---	43	---	---	---	---	75	59	35	---
MIN	---	---	2.9	---	---	---	---	4.6	3.5	3.5	---
CFSM	---	---	2.80	---	---	---	---	5.00	2.45	1.54	---
IN.	---	---	3.22	---	---	---	---	5.76	2.74	1.77	---

NOTE.--No gage-height record Oct. 7 to Nov. 10, Jan. 16 to Apr. 11.

03407804 INDIAN FORK ABOVE BRAYTOWN, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1975 to August 1978 (discontinued).

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L 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)
OCT											
07...	1345	2.9	7.3	15.0	23	300	260	79	72	28	28
NOV											
06...	1735	71	7.0	16.0	14	120	67	29	29	11	11
21...	1655	50	7.2	12.0	83	110	85	25	27	11	11
DEC											
08...	1510	7.1	6.9	4.5	12	180	150	46	43	17	17
JAN											
04...	--	3.5	7.0	--	19	250	--	60	60	24	24
28...	--	1.1	6.8	--	9	140	--	31	32	14	14
FEB											
24...	--	1.4	6.6	3.5	31	210	--	60	44	24	24
APR											
08...	--	1.0	7.6	18.5	36	250	--	56	53	27	27
29...	--	5.9	7.5	14.5	17	180	--	43	42	17	18
MAY											
19...	--	4.5	--	18.0	22	230	--	56	55	21	21
JUN											
17...	--	--	7.7	22.5	95	270	--	71	59	27	29
29...	--	1.0	7.6	25.0	46	350	--	81	81	35	35
JUL											
15...	--	159	--	20.0	900	--	--	--	--	18	18
28...	--	1.1	7.5	24.0	36	330	--	75	73	33	34
AUG											
12...	--	--	7.4	20.5	230	170	--	35	38	18	18
25...	--	1.1	7.3	25.5	35	350	--	80	79	35	36
SEP											
10...	--	.45	6.6	19.0	17	420	--	107	96	41	43
27...	--	1.0	7.0	21.0	12	420	--	105	96	43	43

DATE	BICAR-BONATE (MG/L AS HCO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (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)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)
OCT											
07...	49	40	270	.5	--	--	--	--	--	6	5
NOV											
06...	65	53	110	9.2	--	--	--	--	--	4	2
21...	30	25	110	1.9	--	--	--	--	--	8	2
DEC											
08...	32	26	190	.3	--	--	--	--	--	7	6
JAN											
04...	--	29	255	.2	38	--	0	--	1	7	6
28...	--	20	110	.5	20	2400	0	0	2	5	4
FEB											
24...	--	23	275	3.2	20	1900	0	0	1	7	6
APR											
08...	--	27	270	.7	26	--	0	0	0	6	4
29...	--	25	190	--	6	--	--	0	1	4	3
MAY											
19...	--	29	195	--	22	--	0	0	1	4	3
JUN											
17...	--	28	300	--	140	--	0	0	0	6	3
29...	--	30	405	--	31	700	0	--	--	4	3
JUL											
15...	--	29	165	--	888	--	--	--	1	9	7
28...	--	24	150	--	54	980	0	0	1	12	8
AUG											
12...	--	41	165	--	470	--	0	5	29	18	3
25...	--	27	445	--	14	840	1	0	0	12	8
SEP											
10...	--	13	195	--	14	1410	0	0	1	22	17
27...	--	12	250	--	8	280	0	0	0	20	19

03407804 INDIAN FORK ABOVE BRAYTOWN, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT											
07...	1	--	6200	100	--	--	800	740	20	12	10
NOV											
06...	2	2	1800	100	--	--	340	290	11	7	10
21...	5	3	4500	100	--	--	440	340	28	8	20
DEC											
08...	1	1	3400	300	--	--	570	560	19	16	30
JAN											
04...	--	--	800	780	0	--	470	500	23	17	24
28...	1	1	2140	620	--	--	300	300	16	13	21
FEB											
24...	1	2	8800	1560	--	--	540	500	7	5	--
APR											
08...	1	2	--	--	--	--	700	640	6	4	--
29...	3	2	5300	--	--	--	420	370	5	3	--
MAY											
19...	4	1	6700	--	--	--	520	470	4	3	--
JUN											
17...	4	2	13500	--	--	--	790	700	7	4	--
29...	0	0	11700	70	--	--	1600	960	7	5	--
JUL											
15...	14	13	29400	3800	1	1	750	680	49	11	50
28...	2	2	9800	90	0	0	1220	1130	12	13	--
AUG											
12...	13	5	14500	730	1	0	570	360	36	6	--
25...	6	2	10200	730	0	0	1080	1010	13	10	--
SEP											
10...	6	6	24900	130	0	0	1840	1570	28	25	30
27...	0	1	4900	190	0	0	1840	1800	24	26	--

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 mi^2 (3.57 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1975 to March 1977 (discontinued).

GAGE.--Water-stage recorder and 160-degree V-notch weir. Altitude of gage is 1,440 ft (439 m), from topographic map.

REMARKS.--Records fair prior to October 1976 and poor thereafter.

EXTREMES FOR CURRENT PERIOD.--December 1975 to September 1976: Maximum discharge during period, 170 ft^3/s (4.81 m^3/s) July 5, gage height, 5.19 ft (1.582 m); minimum, 0.01 ft^3/s (0.0003 m^3/s) Aug. 18, gage height, 3.20 ft (0.975 m).

October 1976 to March 1977: Maximum discharge during period, 185 ft^3/s (5.24 m^3/s) Mar. 12, gage height, 5.28 ft (1.609 m); minimum, 0.01 ft^3/s (0.0003 m^3/s) Mar. 11, gage height, 3.20 ft (0.975 m).

DISCHARGE, IN CUBIC FEET PER SECOND, DECEMBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	9.7	4.8	1.8	6.7	1.3	2.2	3.0	.79	.85
2			3.7	5.4	3.7	1.7	4.6	.70	4.6	4.0	.65	.90
3			3.1	9.1	3.3	1.6	3.5	.53	4.4	4.7	.50	.65
4			2.6	5.3	3.3	1.6	2.7	.48	2.5	2.0	.38	.43
5			2.1	4.6	3.5	2.4	2.3	.47	1.8	17	.32	.50
6			2.2	3.5	4.5	2.0	2.0	.43	1.4	11	1.2	.38
7			2.9	2.9	3.3	1.7	1.7	.94	1.2	6.1	.49	.32
8			2.4	2.6	3.1	2.0	1.3	.67	1.0	4.8	.38	.28
9			2.9	2.3	2.7	8.2	1.1	.60	.86	5.8	.32	1.0
10			2.4	2.0	2.7	5.8	1.1	.53	.74	2.4	.28	1.2
11			2.2	5.1	2.7	4.1	1.2	1.5	.67	1.5	.24	2.0
12			2.0	4.5	2.1	3.7	1.1	.85	.60	2.1	.20	1.6
13			1.7	11	1.8	2.9	1.0	.85	.55	1.7	.20	1.2
14			1.6	8.8	1.7	2.4	.94	2.1	.53	.94	.17	1.0
15			3.1	6.1	1.6	2.4	.77	27	.47	1.3	2.9	1.2
16			4.8	4.8	1.6	2.6	.77	9.6	.46	1.1	.49	.94
17			3.5	3.5	1.5	2.1	.69	7.0	.47	.77	.20	.77
18			2.7	3.3	16	1.8	.69	8.9	.42	.62	.09	.69
19			2.6	3.2	9.9	1.8	.69	7.0	4.9	.55	.07	.62
20			2.4	2.4	6.3	2.0	.69	5.3	10	.69	.07	.70
21			1.8	2.1	6.6	16	1.3	3.7	6.0	2.7	.06	.77
22			1.7	1.8	6.3	6.4	1.0	2.7	4.3	2.9	.06	.62
23			1.7	1.8	5.0	4.1	.69	2.7	3.7	1.5	.05	.62
24			1.6	2.0	4.3	3.1	.62	2.6	3.4	.94	.05	.55
25			8.9	5.5	3.4	2.6	1.0	2.2	4.8	.77	.05	.49
26			14	23	3.1	4.3	.77	1.9	4.1	.62	.08	.40
27			5.9	10	2.9	4.8	.62	1.6	3.2	.55	.69	.30
28			3.8	7.2	2.4	3.9	.43	12	2.9	.49	1.1	.20
29			3.0	5.3	2.2	23	.43	16	3.4	3.4	.90	.70
30			4.0	4.3	---	24	.43	5.1	3.3	2.0	.60	.75
31			14	3.5	---	10	---	3.0	---	1.5	.30	---
TOTAL			---	166.6	116.3	156.8	42.83	130.25	78.87	89.44	13.88	22.63
MEAN			---	5.37	4.01	5.06	1.43	4.20	2.63	2.89	.45	.75
MAX			---	23	16	24	6.7	27	10	17	2.9	2.0
MIN			---	1.8	1.5	1.6	.43	.43	.42	.49	.05	.20
CFSM			---	3.89	2.91	3.67	1.04	3.04	1.91	2.09	.33	.54
IN.			---	4.49	3.13	4.22	1.15	3.51	2.12	2.41	.37	.61

CUMBERLAND RIVER BASIN

03407874 GREEN BRANCH NEAR HEMBREE, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1976 TO MARCH 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	2.0	5.5	.93	1.0						
2	---	---	1.4	5.5	.93	.84						
3	---	---	1.2	4.5	.79	1.1						
4	---	---	1.1	2.6	.67	3.3						
5	---	---	.98	3.4	.59	.70						
6	---	---	7.5	2.8	.74	.37						
7	---	---	15	3.4	.48	.19						
8	---	.76	6.4	3.2	.48	.08						
9	---	.79	4.1	4.7	.48	.06						
10	---	.76	3.0	---	.48	.03						
11	---	.78	2.6	---	.55	.84						
12	---	.70	6.1	---	4.7	41						
13	---	.57	4.5	2.5	3.0	38						
14	---	.63	3.7	6.6	1.9	23						
15	---	.80	3.7	5.4	1.7	20						
16	---	.65	3.1	3.9	1.4	18						
17	---	.60	2.7	6.1	1.6	17						
18	---	.57	2.4	5.8	1.4	16						
19	---	.53	2.1	5.8	1.3	16						
20	---	.51	2.9	5.1	1.1	18						
21	---	.50	2.6	2.9	.94	16						
22	---	.46	2.6	.90	.96	17						
23	---	.43	2.2	.83	1.7	16						
24	---	.45	1.6	.85	17	16						
25	---	.45	4.8	.85	4.6	16						
26	---	.86	6.6	.85	3.0	16						
27	---	.97	4.3	.88	3.7	15						
28	---	2.9	4.0	.90	1.6	16						
29	---	3.3	3.2	.93	---	16						
30	---	2.4	3.3	1.1	---	31						
31	---	---	5.7	.93	---	23						
TOTAL	---	---	117.38	---	58.72	413.51						
MEAN	---	---	3.79	---	2.10	13.3						
MAX	---	---	15	---	17	41						
MIN	---	---	.98	---	.48	.03						
CFSM	---	---	2.75	---	1.52	9.64						
IN.	---	---	3.16	---	1.58	11.14						

NOTE.--No gage-height record Oct. 1 to Nov. 7, Jan. 10-12.

03407874 GREEN BRANCH NEAR HEMBREE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1975 to September 1978 (discontinued).

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L 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)
OCT											
07...	1130	.89	7.1	14.0	0	150	110	20	17	25	25
NOV											
06...	1500	23	6.9	17.0	38	100	73	22	23	11	11
21...	1400	5.4	7.2	12.5	325	110	84	22	25	12	12
DEC											
08...	1230	2.7	6.9	4.0	3	150	120	31	33	15	15
JAN											
04...	--	--	6.7	1.0	1	180	--	35	36	20	20
28...	--	--	6.9	--	12	130	--	25	26	16	15
FEB											
24...	--	--	6.8	3.0	--	150	--	30	31	18	18
MAR											
17...	--	--	--	4.0	5	130	--	27	27	15	14
APR											
08...	--	--	7.6	18.0	4	170	--	35	34	19	20
29...	--	--	7.4	13.0	--	120	--	25	25	13	13
MAY											
19...	--	--	7.6	16.5	35	140	--	30	30	15	16
JUN											
17...	--	--	7.4	21.0	1	170	--	29	29	22	22
29...	--	--	7.4	22.0	--	180	--	30	30	24	24
JUL											
15...	--	--	--	19.0	700	120	--	--	23	14	14
28...	--	--	7.4	22.5	--	170	--	30	29	23	23
AUG											
12...	--	--	6.6	20.5	1000	--	--	--	--	9.3	10
25...	--	--	6.8	23.5	--	170	--	29	29	23	23
SEP											
10...	--	--	6.9	19.0	2	180	--	30	29	24	24
27...	--	--	7.1	21.0	--	180	--	30	30	25	25

03407874 GREEN BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	BICARBONATE (MG/L AS HCO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)
OCT											
07...	48	39	180	.2	--	--	--	--	--	1	1
NOV											
06...	33	27	85	1.3	--	--	--	--	--	2	1
21...	32	26	100	.5	--	--	--	--	--	70	2
DEC											
08...	36	30	95	.2	--	--	--	--	--	1	1
JAN											
04...	--	26	155	.0	30	--	--	--	0	1	1
28...	--	26	105	.3	36	1000	--	0	4	2	1
FEB											
24...	--	22	160	2.8	2	--	--	0	0	0	1
MAR											
17...	--	31	90	1.0	14	--	--	0	1	1	1
APR											
08...	--	33	150	.9	16	1500	0	0	1	1	0
29...	--	31	85	--	24	--	--	0	1	0	1
MAY											
19...	--	31	115	--	80	1500	0	0	4	2	1
JUN											
17...	--	36	155	--	10	--	--	0	0	1	1
29...	--	32	180	--	5	--	0	0	--	1	1
JUL											
15...	--	15	110	--	1940	--	0	1	140	--	--
28...	--	28	150	--	4	280	0	3	0	--	--
AUG											
12...	--	13	180	--	6360	--	1	2	98	--	1
25...	--	30	168	--	6	280	0	0	0	0	0
SEP											
10...	--	29	100	--	2	--	--	0	0	0	1
27...	--	26	160	--	2	--	0	0	0	1	0

DATE	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)	ZINC, DISSOLVED (UG/L AS ZN)
OCT											
07...	--	7	200	100	1	--	250	250	--	7	--
NOV											
06...	2	3	2000	100	--	--	180	150	4	1	--
21...	12	4	11000	100	3	--	660	300	30	4	10
DEC											
08...	--	3	400	100	--	--	220	210	--	--	--
JAN											
04...	--	4	400	130	--	--	70	60	--	--	18
28...	9	3	1140	77	--	--	70	70	3	3	35
FEB											
24...	3	2	180	90	--	--	40	60	2	2	--
MAR											
17...	1	3	750	--	--	--	60	50	3	2	21
APR											
08...	13	2	490	--	--	--	140	130	1	2	18
29...	5	1	580	90	--	--	120	120	1	1	18
MAY											
19...	11	3	2900	--	0	--	190	170	5	2	--
JUN											
17...	2	1	400	70	--	--	200	190	1	2	--
29...	0	3	220	160	--	--	280	260	2	2	--
JUL											
15...	26	1	44800	1500	20	0	1100	930	--	16	20
28...	3	2	160	90	--	--	180	200	1	1	--
AUG											
12...	94	4	64800	450	100	--	2500	260	--	3	--
25...	1	1	140	--	--	--	200	220	1	0	--
SEP											
10...	1	3	110	--	--	--	380	370	1	1	--
27...	0	1	900	77	--	--	420	410	1	3	--

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 mi^2 (1.74 km^2).

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.

REMARKS.--Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharges:

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. 12, 1975	Unknown	Unknown		Unknown		Apr. 4, 1977	Unknown	630	17.8	7.40	2.256
Mar. 29, 1975	1605	113	3.20	3.71	1.131	Oct. 9, 1977	0240	151	4.28	2.81	0.856
Mar. 29, 1976	1950	94	2.66	3.72	1.134						

Minimum discharge, 0.02 ft^3/s (0.001 m^3/s) Sept. 8, 9, 10, 11, 1978, gage height, 0.99 ft (0.302 m)

DISCHARGE, IN CUBIC FEET PER SECOND, FEBRUARY TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					1.5	2.0	6.1	.95	.46	.70	.12	.06
2					12	1.6	4.3	.91	.35	.91	.10	.06
3					10	1.2	2.4	.90	.40	.33	.10	.06
4					18	1.1	2.0	.95	.39	3.2	.10	.05
5					14	1.1	1.7	.79	.66	1.5	.25	.05
6					11	7.5	1.5	.76	.48	.85	.20	.11
7					7.4	22	1.4	.76	.40	.64	.14	.09
8					5.0	8.5	1.2	.88	.37	1.5	.14	.07
9					3.2	7.0	1.2	.91	.51	1.2	.16	.07
10					2.2	17	1.1	.73	.55	1.5	.61	.06
11					2.1	38	1.1	.67	.66	.53	.25	.08
12					14	---	.94	.64	1.1	.42	.14	.11
13					8.2	---	.84	.58	7.7	.76	.12	.14
14					6.7	50	1.3	.46	5.3	.40	.10	.13
15					3.4	30	2.0	7.3	4.6	.61	.79	.15
16					4.8	28	1.3	4.2	5.1	.42	.35	.19
17					17	20	1.2	5.5	2.6	.33	.61	.53
18					6.8	15	1.1	2.4	1.6	.28	.91	.98
19					3.0	10	6.7	1.6	1.2	.26	.61	.20
20					2.5	8.0	5.8	1.0	.88	.26	.28	.15
21					2.0	5.5	3.6	.81	.55	.23	.20	.12
22					1.8	9.4	2.1	.77	.51	.19	.16	.82
23					4.3	8.6	1.6	.51	.44	.17	.15	15
24					17	38	1.4	.42	.40	.17	.14	7.4
25					8.2	14	2.6	.33	2.6	.16	.12	1.9
26					4.7	7.4	2.3	.44	1.4	.15	.11	1.3
27					2.9	4.3	1.9	.42	1.3	.13	.10	1.1
28					2.2	2.8	1.6	.40	1.0	.12	.09	.95
29					---	64	1.4	1.3	.85	.11	.08	.85
30					---	25	1.2	.66	.73	.15	.07	.79
31					---	9.9	---	.51	---	.17	.07	---
TOTAL					195.9	---	64.88	39.46	45.09	18.35	7.37	33.57
MEAN					7.00	---	2.16	1.27	1.50	.59	.24	1.12
MAX					18	---	6.7	7.3	7.7	3.2	.91	15
MIN					1.5	---	.84	.33	.35	.11	.07	.05
CFSM					10.4	---	3.22	1.90	2.24	.88	.36	1.67
IN.					10.86	---	3.60	2.19	2.50	1.02	.41	1.86

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.85	.53	4.6	8.2	4.0	.85	7.8	.56	.88	.40	2.0	.50
2	.84	.51	3.0	4.4	3.5	.77	5.0	.33	1.9	.13	1.0	.24
3	.73	.46	1.8	6.4	2.5	.72	3.0	.26	2.0	1.6	.90	.12
4	.70	.44	1.4	4.4	1.3	.69	2.0	.22	.91	2.4	.80	.13
5	.67	.40	1.1	3.1	1.4	1.1	1.5	.20	.73	9.0	.75	.11
6	.66	.37	1.1	2.0	2.3	.99	1.0	.19	.48	5.2	1.2	.08
7	.67	2.1	1.4	2.5	2.0	.93	.90	.42	.35	3.1	.91	.06
8	1.9	1.5	1.2	2.1	1.8	1.2	.80	.25	.26	2.3	.82	.05
9	1.3	1.3	1.4	1.7	1.5	7.7	.70	.19	.22	4.3	.79	.35
10	.98	1.7	1.3	1.6	1.3	5.2	.60	.18	.19	2.3	.76	.28
11	.91	1.5	1.2	3.4	1.2	3.1	.56	.44	.15	.88	.73	.10
12	.80	28	1.1	3.4	.98	2.3	.46	.23	.12	1.8	.72	.07
13	.75	7.9	1.0	7.9	.88	1.7	.42	.22	.10	1.3	.70	.06
14	.70	3.9	.96	7.9	.80	1.3	.40	.56	.09	1.2	.70	.05
15	.67	3.0	1.6	4.4	.73	1.2	.35	14	.07	1.1	1.1	.07
16	.76	2.4	2.5	3.0	.72	1.3	.32	3.9	.06	1.0	.90	.06
17	16	2.1	1.9	2.0	.72	1.1	.30	2.4	.06	.95	.47	.05
18	5.8	2.0	1.5	1.9	16	.96	.28	3.4	.05	.88	.23	.04
19	2.4	1.9	1.2	1.8	8.2	.91	.26	2.5	1.4	.82	.23	.04
20	1.2	2.7	1.2	1.4	4.0	1.0	.25	1.5	4.5	.79	.23	.23
21	.88	2.7	1.1	1.3	3.4	14	.42	.88	1.3	1.4	.23	.10
22	.73	2.2	.98	1.2	3.2	4.6	.31	.76	.95	1.6	.23	.06
23	.58	1.8	.91	1.1	2.2	2.9	.23	.61	.70	1.2	.23	.04
24	.48	1.1	.86	1.2	1.8	2.2	.22	.51	.58	.91	.23	.04
25	.49	.99	6.3	2.6	1.5	3.3	.30	.42	1.1	.82	.23	.04
26	1.0	.88	13	25	1.3	3.0	.23	.35	.73	.88	.40	.07
27	.88	1.2	4.8	10	1.1	3.4	.20	.30	.53	.95	.50	.75
28	.76	.92	3.0	5.4	1.0	2.9	.14	5.0	.46	1.0	.90	.21
29	.79	.87	1.9	4.1	.92	27	.16	9.9	.46	2.0	.80	.71
30	.67	3.0	2.2	3.5	---	29	.18	2.7	.56	2.6	.60	.77
31	.61	---	11	3.5	---	8.6	---	1.3	---	2.5	.30	---
TOTAL	47.16	80.37	78.51	132.4	72.25	135.92	29.29	54.68	21.89	57.31	20.59	5.48
MEAN	1.52	2.68	2.53	4.27	2.49	4.38	.98	1.76	.73	1.85	.66	.18
MAX	16	28	13	25	16	29	7.8	14	4.5	9.0	2.0	.77
MIN	.48	.37	.86	1.1	.72	.69	.14	.18	.05	.13	.23	.04
CFSM	2.27	4.00	3.78	6.37	3.72	6.54	1.46	2.63	1.09	2.76	.99	.27
IN.	2.61	4.46	4.35	7.34	4.01	7.54	1.62	3.03	1.21	3.18	1.14	.30

WTR YR 1976 TOTAL 735.85 MEAN 2.01 MAX 29 MIN .04 CFSM 3.00 IN 40.80

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	1.6	.92	.20	.50	1.7	3.3	1.2	.31	.31	.14	.76
2	.19	1.2	.72	.20	.50	1.3	4.6	.92	.31	.25	.12	.23
3	.14	.92	.66	.30	.40	1.2	12	1.3	.29	.23	.09	.22
4	.11	.72	.61	.30	.40	4.6	100	.78	.27	.21	.08	.19
5	.10	.56	.56	.30	.37	2.9	10	.72	.27	.21	.10	.16
6	.38	.51	5.7	.50	.61	2.0	5.0	.61	.85	.19	.10	1.5
7	.62	.47	13	.40	.72	1.5	2.0	.56	.10	.19	.10	4.0
8	.29	.40	4.1	.40	.85	1.2	1.0	.56	.08	.16	2.0	1.5
9	2.2	.40	2.3	1.0	.78	1.0	.90	.47	.08	.10	1.5	1.2
10	.54	.30	1.7	.90	.34	.85	.80	.40	.06	.10	1.3	1.0
11	.32	.30	1.4	.80	.37	.72	.70	.37	.06	.10	1.0	.80
12	.22	.20	2.6	.80	2.3	14	.60	.34	.31	.10	.80	.70
13	.20	.20	2.2	.70	2.3	9.2	.60	.31	.85	.10	1.0	1.0
14	.20	.30	2.0	1.5	1.7	2.2	.61	.29	1.2	.10	.90	2.5
15	.20	.40	2.0	1.5	1.5	1.5	.51	.29	.34	.06	.80	3.5
16	.20	.40	1.5	1.4	1.2	1.0	.47	.27	.40	.05	.70	6.0
17	.20	.30	1.0	1.4	.90	.92	.43	.25	.27	.05	.60	3.5
18	.20	.30	.80	1.4	.56	.92	.43	.27	.21	.05	.40	2.3
19	.22	.20	.70	1.3	.51	.78	.40	.25	1.1	.05	.20	1.7
20	.56	.20	.80	1.2	.47	.92	.37	.25	1.0	.05	.10	1.1
21	.31	.20	.70	1.0	.40	.85	.37	.25	.34	.05	.10	1.0
22	.27	.20	.60	.90	.43	1.0	.43	.23	.30	.08	.05	.85
23	.25	.10	.50	.80	.66	.66	1.6	.31	.30	.07	.06	.72
24	.61	.10	.40	.70	11	.56	1.9	.27	.20	.05	1.3	.61
25	18	.10	.50	.70	3.1	.51	1.1	.12	17	1.1	.17	2.3
26	5.4	.34	.40	.80	1.9	.47	.85	.12	10	.29	.11	6.0
27	2.0	.51	.40	.80	3.5	.43	.72	.10	2.0	.22	.08	7.3
28	1.2	.43	.30	.70	2.3	.47	.72	.10	1.0	.18	.07	3.5
29	.66	.85	.30	.70	---	.43	2.9	1.0	.50	.23	.06	2.0
30	2.6	1.0	.30	.60	---	5.7	1.6	.56	.32	.19	.06	1.4
31	3.3	---	.30	.60	---	5.7	---	.40	---	.16	.06	---
TOTAL	42.02	13.71	49.97	24.80	40.57	67.19	156.91	13.87	40.32	5.28	14.15	59.54
MEAN	1.36	.46	1.61	.80	1.45	2.17	5.23	.45	1.34	.17	.46	1.98
MAX	18	1.6	13	1.5	11	14	100	1.3	17	1.1	2.0	7.3
MIN	.10	.10	.30	.20	.34	.43	.37	.10	.06	.05	.05	.16
CFSM	2.03	.69	2.40	1.19	2.16	3.24	7.81	.67	2.00	.25	.69	2.96
IN.	2.33	.76	2.77	1.37	2.25	3.72	8.70	.77	2.24	.29	.78	3.30

CAL YR 1976 TOTAL 635.51 MEAN 1.74 MAX 29 MIN .04 CFSM 2.60 IN 35.23
WTR YR 1977 TOTAL 528.33 MEAN 1.45 MAX 100 MIN .05 CFSM 2.16 IN 29.29

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

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	1.6	.92	6.4	.85	.62	1.2	1.4	.92	.21	.09	.27	.27
2	1.4	.78	3.7	.66	.47	1.3	1.3	.78	.21	.10	.23	.27
3	1.2	.72	2.6	.56	.37	3.3	1.1	.72	.23	.21	.21	.27
4	1.0	.78	5.4	.56	.31	2.3	1.0	1.9	.21	.12	.31	.25
5	.85	.72	7.3	.56	.27	2.0	.92	1.6	.21	.10	.72	.23
6	.72	13	4.1	1.2	.23	1.7	.82	1.2	.21	.10	.61	.10
7	.66	5.4	2.5	1.1	.86	1.7	.78	1.1	.34	.09	.40	.04
8	5.7	3.1	1.9	22	.23	3.9	.41	2.8	1.4	.09	.34	.04
9	33	2.2	2.2	11	.19	4.4	.31	2.6	.43	.08	.34	.02
10	3.7	1.7	1.4	8.5	.61	11	.29	1.4	.31	.12	.96	.02
11	2.0	1.3	1.3	8.5	.61	4.4	.37	1.3	.25	.09	.96	.07
12	1.3	1.1	1.2	8.5	.55	3.3	1.5	1.4	.25	.06	1.6	.04
13	.92	.92	1.2	7.8	.70	2.5	1.4	3.9	.23	.05	6.2	.04
14	.85	.85	1.3	8.2	1.4	14	1.4	3.7	.19	.05	2.4	.04
15	.78	.72	.92	8.5	1.3	4.6	1.4	1.9	.19	.56	1.9	.04
16	.85	1.0	.85	8.5	1.4	3.9	1.4	.72	.19	1.5	1.4	.04
17	.66	7.3	.92	12	1.5	4.1	1.4	.51	.19	.27	.40	.04
18	.61	2.9	1.9	4.1	1.5	3.7	3.5	.40	.16	.21	.28	.04
19	.56	2.0	1.5	2.9	1.4	3.3	1.9	.34	.14	.16	.23	.04
20	.51	1.5	1.4	2.2	1.7	2.9	1.3	.31	.14	.14	.16	.04
21	.47	3.5	1.2	1.6	1.3	3.5	1.1	.29	.14	.14	.16	.04
22	.47	22	.92	1.4	1.4	3.5	.92	.27	.12	.12	.10	.04
23	.47	11	.85	1.3	1.2	3.3	.85	.27	.12	.12	.09	.04
24	.47	4.1	8.5	12	1.1	3.1	.85	.29	.10	.12	.29	.04
25	6.7	2.6	11	43	1.2	5.7	.92	.27	.10	.19	.29	.04
26	7.3	1.7	3.7	15	1.2	6.4	2.6	.25	.10	.16	3.1	.04
27	3.3	2.8	2.2	3.5	2.0	3.3	2.3	.25	.09	.12	.29	.06
28	2.0	6.4	1.4	2.9	1.2	2.5	1.5	.24	.09	.12	.27	.07
29	1.6	33	1.1	1.5	---	2.2	1.2	.23	.09	.10	.25	.07
30	1.3	8.5	1.1	1.4	---	1.9	1.1	.23	.09	.10	.37	.07
31	1.1	---	1.0	.70	---	1.6	---	.22	---	.37	.29	---
TOTAL	84.05	144.51	82.96	202.49	26.82	116.5	37.24	32.31	6.73	5.85	25.42	2.45
MEAN	2.71	4.82	2.68	6.53	.96	3.76	1.24	1.04	.22	.19	.82	.082
MAX	33	33	11	43	2.0	14	3.5	3.9	1.4	1.5	6.2	.27
MIN	.47	.72	.85	.56	.19	1.2	.29	.22	.09	.05	.09	.02
CFSM	4.05	7.19	4.00	9.75	1.43	5.61	1.85	1.55	.33	.28	1.22	.12
IN.	4.66	8.01	4.60	11.23	1.49	6.46	2.06	1.79	.37	.32	1.41	.14

CAL YR 1977 TOTAL 734.15 MEAN 2.01 MAX 100 MIN .05 CFSM 3.00 IN 40.70
WTR YR 1978 TOTAL 767.33 MEAN 2.10 MAX 43 MIN .02 CFSM 3.13 IN 42.54

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L 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)
OCT											
07...	1210	.43	6.8	14.0	3	58	41	11	11	7.7	7.3
NOV											
06...	1540	11	6.7	16.5	150	39	28	5.4	7.2	5.4	5.0
21...	1450	2.6	6.8	12.5	130	66	55	10	12	8.5	8.3
DEC											
08...	1310	1.2	6.7	4.0	9	52	40	10	10	6.6	6.5
JAN											
04...	--	.37	6.1	1.0	7	53	--	9.9	10	6.7	6.7
28...	--	2.0	6.9	--	8	46	--	8.4	8.9	5.8	5.8
APR											
08...	--	.73	7.4	16.0	5	54	--	9.8	10	5.9	7.1
29...	--	1.1	7.4	12.5	6	41	--	7.5	7.4	5.2	5.4
JUN											
17...	--	.92	7.1	19.5	8	53	--	9.0	9.8	7.0	6.9
29...	--	.67	7.2	22.5	1	56	--	9.9	10	7.3	7.3
JUL											
15...	--	12	--	19.0	--	--	--	--	--	8.0	8.3
28...	--	.50	7.5	22.0	2	66	--	11	12	8.3	8.6
AUG											
12...	--	3.3	6.8	21.5	270	--	--	--	--	10	11
25...	--	.79	6.6	22.0	2	60	--	10	10	7.7	7.8
SEP											
10...	--	.12	6.8	20.0	2	67	--	12	12	8.8	8.5
27...	--	.19	7.2	19.5	3	68	--	12	12	8.5	8.6

DATE	BICAR-BONATE (MG/L AS HCO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (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)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)
OCT											
07...	21	17	42	.1	--	--	--	--	--	--	--
NOV											
06...	14	11	38	.9	--	--	<1	--	--	6	--
21...	14	11	55	.2	--	--	--	--	--	7	1
DEC											
08...	15	12	43	.2	--	--	--	--	--	--	--
JAN											
04...	--	15	46	.1	42	--	2	--	--	--	--
28...	--	11	37	.3	18	--	1	0	4	1	--
APR											
08...	--	13	40	1.1	16	--	--	--	2	--	--
29...	--	12	30	--	24	--	--	0	1	--	--
JUN											
17...	--	19	39	--	52	--	--	0	0	--	--
29...	--	21	42	--	9	--	0	0	0	0	0
JUL											
15...	--	6	17	--	1600	--	0	0	--	--	3
28...	--	20	48	--	3	700	--	0	0	0	0
AUG											
12...	--	10	59	--	414	--	0	1	37	12	1
25...	--	18	42	--	2	420	0	0	0	--	--
SEP											
10...	--	23	47	--	8	--	0	0	0	--	--
27...	--	24	53	--	4	700	0	0	0	--	--

03407875 BILLS BRANCH NEAR HEMBREE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT											
07...	--	--	200	100	--	--	70	60	--	--	10
NOV											
06...	5	1	5000	100	1	--	400	230	12	3	10
21...	5	6	5100	100	1	--	340	220	17	4	10
DEC											
08...	1	3	500	100	--	--	60	50	2	2	2
JAN											
04...	2	2	570	--	0	0	50	50	1	2	--
28...	1	1	630	--	0	--	50	60	2	2	--
APR											
08...	1	3	540	--	--	0	20	10	0	1	--
29...	2	3	540	--	0	--	20	--	0	0	--
JUN											
17...	0	1	560	--	--	--	50	60	0	0	--
29...	2	2	360	--	0	0	60	60	0	0	--
JUL											
15...	24	10	33200	920	--	0	1280	840	68	19	50
28...	0	1	220	--	0	0	70	90	2	1	--
AUG											
12...	14	4	--	290	2	0	440	200	36	5	--
25...	1	1	230	--	0	0	60	60	--	--	--
SEP											
10...	2	3	180	--	0	0	220	220	2	1	--
27...	4	1	230	50	0	0	80	80	1	--	--

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 mi^2 (44.5 km^2).

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

EXTREMES FOR CURRENT PERIOD.--November 1976 to September 1977: Maximum discharge during period, 8,800 ft^3/s (249 m^3/s) Apr. 4, gage height, 14.6 ft (4.45 m), from floodmarks; **minimum, 1.1 ft^3/s** (0.03 m^3/s) July 20, 21.

Water year 1978: Maximum discharge, 3,940 ft^3/s (112 m^3/s) Jan. 10, gage height, 9.83 ft (2.996 m); minimum, 0.46 ft^3/s (0.01 m^3/s) Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, NOVEMBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	17	51	9.1	56	50	33	7.8	13	5.4	11
2		---	10	56	8.6	51	38	23	6.5	9.1	2.5	4.2
3		---	10	45	11	50	360	24	5.4	5.6	1.8	2.6
4		16	10	41	11	132	2000	22	4.8	4.6	1.6	2.3
5		13	9.5	42	6.4	107	495	19	4.2	4.0	1.5	1.8
6		9.1	30	47	8.6	82	112	12	3.5	3.5	1.6	9.4
7		10	129	56	7.1	58	68	11	8.4	3.0	1.5	44
8		5.5	80	45	6.1	38	50	10	13	2.6	27	22
9		8.2	51	77	5.5	28	40	6.6	7.8	2.3	18	8.1
10		10	50	109	4.9	23	30	5.7	6.2	3.5	7.2	5.0
11		3.7	44	75	5.8	19	27	5.8	5.6	4.4	5.9	3.8
12		3.7	76	66	22	309	22	5.6	5.4	2.7	2.9	2.9
13		4.6	56	56	41	312	18	5.3	7.2	2.3	5.9	2.9
14		7.5	45	79	27	140	15	4.9	18	1.9	39	14
15		9.1	60	77	18	138	10	4.5	6.4	1.7	25	30
16		6.1	50	48	11	77	8.8	3.8	7.3	1.5	12	80
17		5.2	33	60	21	66	7.9	4.0	5.0	1.4	16	45
18		5.5	23	77	21	68	7.2	4.2	3.9	1.2	14	22
19		7.1	24	69	15	42	6.8	4.6	29	1.2	6.9	14
20		5.8	33	65	10	56	6.6	5.4	24	1.1	5.0	9.1
21		3.9	17	36	8.6	49	5.1	5.1	7.8	1.2	3.6	6.6
22		2.7	30	18	13	51	6.6	5.3	29	1.6	2.9	5.0
23		2.9	28	22	21	45	53	5.3	36	1.9	2.5	4.2
24		4.9	21	21	168	44	80	5.1	36	1.3	22	3.5
25		5.2	51	17	104	50	40	3.9	271	36	9.1	31
26		7.5	88	17	77	37	27	4.0	149	19	5.2	109
27		13	71	17	90	38	21	4.1	68	5.2	4.0	132
28		10	67	13	76	45	19	4.5	29	3.2	3.0	80
29		20	35	13	---	40	67	17	17	3.6	2.5	35
30		20	50	12	---	45	44	10	11	3.0	2.2	23
31		---	51	10	---	106	---	6.6	---	2.3	1.9	---
TOTAL		---	1349.5	1437	827.7	2402	3735.0	285.3	833.2	148.9	259.6	763.4
MEAN		---	43.5	46.4	29.6	77.5	125	9.20	27.8	4.80	8.37	25.4
MAX		---	129	109	168	312	2000	33	271	36	39	132
MIN		---	9.5	10	4.9	19	5.1	3.8	3.5	1.1	1.5	1.8
CFSM		---	2.53	2.70	1.72	4.51	7.27	.54	1.62	.28	.49	1.48
IN.		---	2.92	3.11	1.79	5.19	8.08	.62	1.80	.32	.56	1.65

03407876 SMOKY CREEK AT HEMBREE, TN--Continued

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	17	12	124	44	22	23	35	41	1.5	.60	4.5	3.1
2	14	9.8	97	34	17	24	27	27	1.0	.89	1.5	2.7
3	10	7.9	199	26	13	152	22	22	1.2	11	1.0	2.1
4	8.1	8.4	227	24	11	89	19	78	.69	1.9	8.4	1.9
5	6.7	10	231	25	9.8	89	17	73	.38	1.2	24	1.7
6	5.9	240	150	52	8.4	40	15	54	.27	1.1	19	1.7
7	5.9	129	99	51	31	38	13	44	12	1.1	17	1.7
8	101	88	83	449	12	107	12	107	214	1.1	145	1.4
9	816	61	81	222	9.0	114	11	114	94	3.6	40	1.2
10	97	52	57	663	8.0	305	10	67	31	9.3	32	1.1
11	44	34	49	67	7.6	147	16	46	14	3.6	25	3.6
12	26	25	47	52	7.2	104	12	51	11	2.2	35	1.9
13	15	18	45	42	60	73	9.8	310	17	1.7	190	1.4
14	10	15	54	30	36	374	8.4	256	4.2	1.5	75	1.4
15	7.0	12	40	22	24	162	7.5	181	2.9	58	40	1.5
16	12	64	29	19	24	102	7.5	125	2.4	92	25	1.4
17	6.2	187	30	189	26	68	7.0	86	1.9	21	18	1.1
18	4.2	84	62	150	26	54	104	57	1.5	8.8	13	1.0
19	3.1	56	54	100	23	42	84	36	1.2	5.2	9.4	.78
20	2.1	38	51	75	21	35	57	23	1.2	4.8	7.8	.69
21	1.5	207	41	52	18	48	44	17	1.1	4.8	6.6	.60
22	1.1	659	32	40	17	56	30	12	1.1	2.4	5.4	.60
23	.89	205	28	36	15	48	23	12	1.1	1.9	4.0	.69
24	.69	106	122	181	14	41	20	12	1.0	1.5	2.4	.60
25	70	72	245	853	20	78	31	12	.78	13	1.9	.69
26	154	46	125	538	22	222	163	7.5	.69	4.8	3.9	.52
27	75	127	88	122	18	132	134	4.8	.69	2.2	2.2	.50
28	47	785	64	64	21	91	83	3.6	.69	1.7	1.9	.48
29	31	285	54	42	---	67	58	2.9	.69	1.1	1.5	.48
30	22	181	51	42	---	52	54	2.2	.69	.89	8.4	.46
31	16	---	49	22	---	42	---	1.9	---	.59	5.5	---
TOTAL	1630.38	3824.1	2708	4328	541.0	3019	1134.2	1885.9	421.87	265.47	774.3	38.99
MEAN	52.6	127	87.4	140	19.3	97.4	37.8	60.8	14.1	8.56	25.0	1.30
MAX	816	785	245	853	60	374	163	310	214	92	190	3.6
MIN	.69	7.9	28	19	7.2	23	7.0	1.9	.27	.59	1.0	.46
CFSM	3.06	7.38	5.08	8.14	1.12	5.66	2.20	3.54	.82	.50	1.45	.08
IN.	3.53	8.27	5.86	9.36	1.17	6.53	2.45	4.08	.91	.57	1.67	.08

CAL YR 1977 TOTAL 18854.58 MEAN 51.7 MAX 2000 MIN .69 CFSM 3.01 IN 40.78
WTR YR 1978 TOTAL 20571.21 MEAN 56.4 MAX 853 MIN .27 CFSM 3.28 IN 44.49

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) northwest of Hembree, 4.3 mi (6.9 km) southwest of Montgomery, and at mile 0.8 (1.3 km).

DRAINAGE AREA.--2.19 mi^2 (5.67 km^2).

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.

EXTREMES FOR PERIOD OF RECORD.--December 1975 to September 1976: Maximum discharge during period, 222 ft^3/s (6.29 m^3/s) Mar. 29, gage height, 3.85 ft (1.173 m); minimum, 0.01 ft^3/s (0.0003 m^3/s) Aug. 24, 25, gage height, 1.71 ft (0.521 m).

Water year 1977: Maximum discharge, 254 ft^3/s (7.19 m^3/s) Apr. 4, gage height, 3.96 ft (1.207 m); minimum, 0.01 ft^3/s (0.0003 m^3/s) Aug. 5-8, gage height, 1.60 ft (0.488 m).

Water year 1978: Maximum discharge, 137 ft^3/s (3.88 m^3/s) Oct. 9, gage height, 3.48 ft (1.061 m); minimum, 0.03 ft^3/s (0.001 m^3/s) Sept. 27-30, gage height, 1.71 ft (0.521 m).

DISCHARGE, IN CUBIC FEET PER SECOND, DECEMBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	26	3.0	2.1	17	.73	3.5	2.0	.29	.09
2			5.2	13	2.5	1.8	10	.73	5.9	1.3	.20	.14
3			3.7	14	2.1	1.7	6.2	.59	8.6	4.8	.18	.09
4			2.4	13	1.9	1.7	4.8	.52	6.2	16	.16	.09
5			1.6	8.6	1.7	2.0	3.7	.46	4.2	19	.15	.12
6			1.3	6.6	1.6	2.1	3.1	.40	2.6	13	.50	.09
7			1.5	5.8	1.5	2.0	2.4	.73	1.7	5.4	.51	.07
8			1.4	6.6	1.4	2.1	2.0	.66	1.3	3.1	.25	.07
9			2.1	6.2	1.3	14	1.8	.52	1.1	3.1	.18	.46
10			2.7	5.9	1.2	12	1.4	.59	.91	2.0	.12	1.0
11			2.6	4.6	2.0	8.0	1.3	1.8	.73	1.3	.09	.25
12			1.9	4.4	1.8	5.9	1.2	1.2	.59	1.8	.05	.14
13			1.4	63	1.6	5.6	1.1	.91	.52	1.4	.05	.12
14			1.1	12	1.5	3.3	1.0	1.0	.46	1.0	.04	.09
15			1.5	8.7	1.3	2.7	.91	30	.40	.95	.03	.07
16			6.5	6.9	1.1	2.6	.82	12	.40	.82	.03	.07
17			6.0	5.6	1.0	2.0	.73	6.2	.52	.71	.03	.07
18			3.7	5.1	18	1.7	.73	9.0	.34	.56	.03	.07
19			3.2	4.2	20	1.7	.73	9.3	1.7	.44	.02	.05
20			3.9	2.7	8.0	1.7	.66	5.6	28	.27	.02	.14
21			2.6	2.1	6.5	8.3	.73	3.7	19	.12	.02	.18
22			2.1	1.8	7.7	8.0	1.1	2.4	14	1.8	.02	.12
23			2.1	2.1	5.9	5.9	.66	1.7	5.9	1.5	.02	.07
24			2.0	1.8	4.6	4.8	.59	1.3	3.7	.67	.01	.07
25			12	2.8	4.2	4.8	.59	1.1	5.1	.39	.01	.05
26			39	46	4.0	4.6	.59	.82	8.3	.26	.02	.05
27			17	26	3.3	5.1	.52	.66	6.2	.14	.03	.05
28			11	11	2.7	5.1	.46	3.3	4.4	.20	.52	.59
29			8.5	7.4	2.3	66	.40	22	3.3	.26	.25	.46
30			7.6	5.4	---	59	.40	9.0	2.6	.42	.12	.73
31			29	3.7	---	23	---	4.8	---	.44	.07	---
TOTAL			---	333.0	115.7	271.3	67.62	133.72	142.17	85.15	4.02	5.66
MEAN			---	10.7	3.99	8.75	2.25	4.31	4.74	2.75	.13	.19
MAX			---	63	20	66	17	30	28	19	.52	1.0
MIN			---	1.8	1.0	1.7	.40	.40	.34	.12	.01	.05
CFSM			---	4.89	1.82	4.00	1.03	1.97	2.16	1.26	.06	.09
IN.			---	5.65	1.96	4.61	1.15	2.27	2.41	1.45	.07	.10

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.91	4.1	1.4	3.1	.48	7.7	4.2	4.7	.29	.80	.03	.30
2	.51	2.9	1.6	3.1	.44	6.3	6.0	3.6	.21	.59	.02	.29
3	.38	2.0	2.0	3.0	1.1	5.3	24	3.0	.15	.35	.02	.28
4	.27	1.6	2.0	2.5	1.0	11	102	2.6	.11	.25	.02	.27
5	.25	1.2	1.7	2.7	.98	12	33	1.9	.09	.19	.01	1.1
6	1.2	.95	7.3	3.3	.96	8.3	13	1.8	.15	.18	.01	3.0
7	.74	.83	32	4.7	.95	6.5	7.3	1.4	.14	.15	.01	1.8
8	.47	.73	13	4.7	.93	5.4	5.2	1.3	.10	.13	.01	.21
9	2.9	.66	6.4	4.7	.91	4.5	4.2	1.1	.07	.11	.07	.18
10	1.5	.65	4.8	11	.89	4.0	3.4	.88	.06	.08	.07	.12
11	.98	.55	3.9	12	.87	2.8	2.8	.73	.04	.07	.11	.05
12	.63	.52	6.8	8.5	2.8	20	2.4	.66	.03	.14	.29	.02
13	.48	.60	7.9	5.3	4.4	27	2.1	.53	.07	.20	.29	.25
14	.40	.96	6.0	4.6	4.1	10	1.9	.45	.75	.10	.25	.34
15	.36	1.2	5.1	5.2	4.1	6.3	1.6	.40	.20	.07	.23	.59
16	.34	.88	4.5	4.2	3.7	4.9	1.5	.34	.12	.06	.22	.52
17	.34	.74	4.2	3.4	3.7	4.0	1.3	.30	.12	.04	.21	1.2
18	.34	.64	3.5	4.1	2.7	4.1	1.2	.25	.10	.04	.21	.73
19	.32	.56	3.1	3.7	3.0	3.5	1.1	.24	.28	.03	.20	.46
20	.52	.50	3.3	3.4	2.7	4.5	1.0	.23	.25	.02	.17	.30
21	.57	.45	3.5	1.9	2.3	4.7	.99	.21	.21	.02	.13	.18
22	.43	.41	3.5	.96	2.2	5.3	.91	.18	.61	.02	.09	.12
23	.37	.38	3.1	1.2	2.3	4.7	10	.39	1.4	.02	.07	.07
24	.35	.34	2.7	1.1	31	4.2	17	.64	2.6	.04	.08	.04
25	22	.34	2.5	.89	14	3.7	7.6	.32	7.7	.85	.09	.09
26	11	.37	3.3	.89	8.3	3.1	4.7	.22	7.8	.41	.09	5.1
27	4.1	.52	3.4	.92	10	2.7	3.4	.21	2.9	.16	.08	2.9
28	2.3	.68	3.5	.68	10	2.4	2.6	.21	1.5	.08	.05	3.1
29	1.6	1.4	3.4	.68	---	2.2	8.5	1.4	.79	.05	.04	2.7
30	2.0	1.4	3.2	.66	---	3.6	6.6	.95	.52	.05	.03	2.1
31	5.4	---	3.1	.53	---	4.2	---	.42	---	.04	.02	---
TOTAL	63.96	29.06	155.7	107.61	120.81	198.9	281.50	31.56	29.36	5.34	3.22	28.41
MEAN	2.06	.97	5.02	3.47	4.31	6.42	9.38	1.02	.98	.17	.10	.95
MAX	22	4.1	32	12	31	27	102	4.7	7.8	.85	.29	5.1
MIN	.25	.34	1.4	.53	.44	2.2	.91	.18	.03	.02	.01	.02
CFSM	.94	.44	2.29	1.58	1.97	2.93	4.28	.47	.45	.08	.05	.43
IN.	1.09	.49	2.64	1.83	2.05	3.38	4.78	.54	.50	.09	.05	.48

CAL YR 1976 TOTAL 1407.06 MEAN 3.84 MAX 66 MIN .01 CFSM 1.75 IN 23.89
WTR YR 1977 TOTAL 1055.43 MEAN 2.89 MAX 102 MIN .01 CFSM 1.32 IN 17.92

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN--Continued

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	1.3	2.4	12	2.7	2.1	3.4	3.6	5.3	.40	.05	.59	.25
2	1.0	1.9	7.7	1.9	1.6	3.9	3.0	4.6	.34	.40	.59	.21
3	.73	1.9	5.9	1.4	1.2	5.4	2.4	4.0	.34	1.0	.59	.18
4	1.4	1.9	8.6	1.3	1.0	6.2	2.2	8.4	.34	.18	.59	.14
5	1.1	2.1	16	1.3	.92	5.7	2.1	8.8	.30	.12	.59	.12
6	.56	46	11	3.4	.72	4.6	1.9	6.0	.25	.07	.59	.12
7	.14	32	8.3	2.3	1.8	4.2	1.8	4.6	.73	.07	.59	.09
8	.14	22	7.7	16	1.8	5.6	1.6	5.9	18	.07	5.9	.07
9	38	15	7.1	20	1.9	7.3	1.5	7.0	12	.21	1.9	.05
10	7.4	12	6.8	19	2.0	19	1.4	5.6	5.1	.18	2.6	.05
11	4.2	9.3	6.5	19	2.0	12	1.4	4.3	2.6	.07	2.7	.14
12	2.6	8.6	5.9	17	1.8	7.8	1.4	4.1	1.9	.05	4.4	.28
13	1.8	7.7	5.6	3.1	2.3	5.8	1.3	26	1.6	.05	9.3	.23
14	1.6	7.1	5.4	4.8	3.3	29	1.1	19	.91	.05	2.4	.23
15	1.4	6.5	4.5	4.8	3.1	15	1.0	15	.66	1.8	1.6	.25
16	1.7	6.2	1.6	4.4	3.3	7.0	.97	10	.52	2.1	.91	.23
17	1.3	14	1.7	10	3.2	5.6	.84	6.8	.46	.59	1.3	.21
18	1.2	14	4.5	14	3.1	4.3	5.7	4.2	.30	.46	.91	.19
19	1.0	12	3.6	11	3.1	3.9	6.0	3.1	.25	.40	.73	.17
20	.91	11	3.3	9.0	3.0	3.4	4.4	2.3	.25	.40	.52	.04
21	.82	16	2.5	7.7	2.8	3.4	3.7	1.7	.21	.40	.52	.04
22	.73	51	1.8	6.1	2.7	3.7	3.1	1.3	.18	.40	.34	.04
23	.66	38	1.5	5.4	2.7	3.7	2.5	1.3	.18	.34	.30	.04
24	.66	21	10	19	2.3	3.6	2.2	1.9	.12	.52	.21	.04
25	5.1	15	22	55	2.6	6.1	3.2	1.8	.12	2.4	.21	.04
26	13	14	10	38	3.3	19	20	1.2	.09	.82	.73	.04
27	7.1	15	7.0	19	3.3	12	15	1.0	.07	.66	.30	.04
28	4.6	24	4.5	7.2	3.8	7.8	8.3	.82	.07	.66	.25	.03
29	3.3	55	3.4	4.9	---	6.0	5.2	.73	.07	.59	.18	.03
30	2.6	25	3.2	4.9	---	4.6	5.0	.59	.05	.59	.34	.03
31	2.1	---	3.0	2.3	---	3.9	---	.52	---	.59	.34	---
TOTAL	110.15	507.6	202.6	335.9	66.74	232.9	113.81	167.86	48.41	16.29	43.02	3.62
MEAN	3.55	16.9	6.54	10.8	2.38	7.51	3.79	5.41	1.61	.53	1.39	.12
MAX	38	55	22	55	3.8	29	20	26	18	2.4	9.3	.28
MIN	.14	1.9	1.5	1.3	.72	3.4	.84	.52	.05	.05	.18	.03
CFSM	1.62	7.72	2.99	4.93	1.09	3.43	1.73	2.47	.74	.24	.64	.06
IN.	1.87	8.62	3.44	5.70	1.13	3.95	1.93	2.85	.82	.28	.73	.06

CAL YR 1977 TOTAL 1627.06 MEAN 4.46 MAX 102 MIN .01 CFSM 2.04 IN 27.63
WTR YR 1978 TOTAL 1848.90 MEAN 5.07 MAX 55 MIN .03 CFSM 2.32 IN 31.39

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L 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)
OCT											
07...	1240	.14	6.6	14.0	95	17	2	2.3	2.5	2.7	2.5
NOV											
06...	1620	30	6.2	16.0	225	9	3	1.2	1.3	1.9	1.3
21...	1530	6.0	6.1	12.5	400	11	5	1.6	1.5	4.5	1.8
DEC											
08...	1355	5.7	6.3	5.5	18	9	4	1.3	1.3	1.3	1.3
MAR											
17...	--	7.3	--	5.0	180	43	--	8.5	9.6	4.6	4.6
MAY											
19...	--	3.4	7.1	16.0	35	10	--	1.5	1.7	1.4	1.5
JUN											
29...	--	.07	7.0	22.5	16	14	--	1.6	1.9	2.1	2.3
JUL											
15...	--	.73	--	20.5	110	15	--	1.3	2.0	2.3	2.4
28...	--	.25	7.6	21.5	110	17	--	1.7	2.3	2.6	2.8
AUG											
12...	--	.91	6.4	21.5	26	12	--	1.3	1.6	1.8	2.0
SEP											
10...	--	.40	6.5	21.0	4	20	--	2.6	2.9	3.1	3.2
27...	--	.29	7.1	19.0	3	22	--	2.8	3.0	3.3	3.5

DATE	BICAR-BONATE (MG/L AS HCO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (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)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)
OCT											
07...	18	15	13	.1	--	--	--	--	--	2	--
NOV											
06...	7	6	19	1.0	--	--	--	--	--	6	--
21...	7	6	37	1.6	--	--	--	--	--	4	4
DEC											
08...	6	5	12	.1	--	--	--	--	--	--	--
MAR											
17...	--	17	16	1.6	344	7500	0	0	--	6	--
MAY											
19...	--	5	9.0	--	76	2100	--	0	3	0	--
JUN											
29...	--	17	6.0	--	37	2110	0	0	5	1	--
JUL											
15...	--	15	9.0	--	210	4410	0	0	--	3	1
28...	--	20	13	--	150	5570	1	0	--	3	0
AUG											
12...	--	12	11	--	73	2540	2	3	7	2	--
SEP											
10...	--	21	10	--	4	700	0	0	0	0	0
27...	--	24	17	--	2	--	24	2	0	1	0

03407877 BOWLING BRANCH ABOVE SMOKY JUNCTION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT											
07...	3	1	3000	100	--	--	110	80	2	--	--
NOV											
06...	9	3	7600	100	--	--	110	80	30	--	10
21...	110	15	41000	1500	--	--	790	160	140	--	20
DEC											
08...	--	--	800	100	--	--	30	20	2	--	--
MAR											
17...	6	1	7000	100	1	0	1000	--	23	2	20
MAY											
19...	2	3	1920	110	1	1	30	--	2	1	--
JUN											
29...	2	4	1080	--	0	1	50	50	2	3	--
JUL											
15...	--	--	3860	250	--	1	100	75	9	2	--
28...	5	2	3650	230	--	0	52	25	7	2	--
AUG											
12...	5	3	1560	--	0	1	50	50	4	1	--
SEP											
10...	1	3	310	--	0	0	70	80	3	6	--
27...	6	2	550	130	0	0	150	125	3	1	--

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 mi^2 (1.79 km^2).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and 160-degree V-notch weir. Altitude of gage is 1,240 ft (378 m), from topographic map.

REMARKS.--Records good prior to October 1977 and fair thereafter.

EXTREMES FOR PERIOD OF RECORD.--December 1975 to September 1976: Maximum discharge during period, 145 ft^3/s (4.11 m^3/s) Mar. 29, gage height, 4.23 ft (1.289 m); minimum, 0.04 ft^3/s (0.001 m^3/s) Aug. 23-26, Sept. 24-27, gage height, 2.85 ft (0.869 m).

Water year 1977: Maximum discharge, 267 m^3/s (7.56 m^3/s) Apr. 4, gage height, 4.53 ft (1.381 m); minimum, 0.01 ft^3/s (0.0003 m^3/s) several days in July and August, gage height, 2.83 ft (0.863 m).

Water year 1978: Maximum discharge, 125 ft^3/s (3.54 m^3/s) July 16, gage height, 4.16 ft (1.268 m); minimum, 0.01 ft^3/s (0.0003 m^3/s) Sept. 27-30, gage height, 2.82 ft (0.860 m).

DISCHARGE, IN CUBIC FEET PER SECOND, DECEMBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	8.2	1.5	.68	5.6	.40	1.1	.68	.16	.05
2			---	3.8	1.4	.61	3.4	.38	1.5	.53	.15	.15
3			---	3.6	1.2	.58	2.3	.30	1.6	3.4	.12	.10
4			---	3.2	1.2	.53	1.9	.28	1.2	6.1	.12	.10
5			.75	2.3	1.2	.68	1.3	.26	.93	6.7	.10	.09
6			.75	1.9	1.4	.70	1.1	.25	.68	5.3	.53	.09
7			.75	1.7	1.3	.61	.93	.53	.61	2.5	.26	.07
8			.68	2.0	1.2	.68	.84	.35	.53	1.6	.15	.07
9			.84	2.0	1.1	3.8	.68	.30	.40	1.1	.12	.46
10			.93	1.7	1.3	4.1	.61	.26	.35	.84	.11	.44
11			.93	1.6	1.7	2.8	.58	.40	.30	.61	.10	.15
12			.92	1.6	.85	2.2	.53	.30	.26	.84	.10	.12
13			.75	2.0	.76	1.6	.46	.28	.22	.61	.09	.10
14			.68	2.7	.66	1.2	.44	.30	.20	.46	.07	.07
15			.93	2.5	.60	1.0	.42	7.0	.18	.40	.07	.07
16			2.2	2.2	.60	.98	.40	3.4	.26	.35	.06	.06
17			2.3	1.7	.70	.84	.35	2.0	.22	.34	.06	.06
18			1.7	1.6	6.3	.75	.34	1.9	.18	.30	.06	.05
19			1.3	1.5	4.3	.70	.32	2.2	.68	.26	.06	.05
20			1.0	1.2	3.2	.68	.31	1.6	5.8	.22	.05	.12
21			.93	.84	2.5	3.2	.46	1.1	5.6	.20	.05	.15
22			.75	.75	2.7	3.0	.47	.84	3.8	.84	.05	.12
23			.68	.68	2.2	2.2	.35	.75	2.2	.46	.04	.07
24			.61	.61	1.7	1.7	.30	.61	1.3	.26	.04	.04
25			2.8	.93	1.5	1.6	.29	.46	1.6	.22	.04	.04
26			11	13	1.2	1.3	.28	.40	2.0	.18	.04	.04
27			4.5	8.4	1.0	1.3	.27	.30	1.6	.17	.07	.04
28			2.7	3.8	.93	1.2	.26	1.6	1.1	.16	.35	.20
29			1.9	2.7	.75	30	.25	5.8	1.0	.16	.15	.15
30			1.6	2.0	---	34	.22	2.8	.84	.15	.07	.23
31			8.4	1.5	---	7.7	---	1.7	---	.18	.05	---
TOTAL			---	84.21	46.95	112.92	25.96	39.05	38.24	36.12	3.49	3.55
MEAN			---	2.72	1.62	3.64	.87	1.26	1.27	1.17	.11	.12
MAX			---	13	6.3	34	5.6	7.0	5.8	6.7	.53	.46
MIN			---	.61	.60	.53	.22	.25	.18	.15	.04	.04
CFSM			---	3.94	2.35	5.28	1.26	1.83	1.84	1.70	.16	.17
IN.			---	4.53	2.53	6.08	1.40	2.10	2.06	1.94	.19	.19

03407881 ANDERSON BRANCH NEAR MONTGOMERY, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.29	2.8	.40	1.0	.15	1.7	.75	1.5	.26	.75	.03	.05
2	.16	2.2	.50	1.0	.14	1.5	2.0	1.2	.18	.26	.02	.04
3	.12	1.0	.64	.96	.21	1.2	8.0	.96	.17	.15	.02	.04
4	.10	.93	.60	.80	.16	2.8	122	.83	.15	.12	.02	.04
5	.08	.64	.54	.86	.15	3.0	12	.61	.10	.10	.01	.04
6	.38	.30	2.3	1.1	.14	2.3	3.8	.58	1.1	.07	.01	.04
7	.24	.27	10	1.5	.13	1.7	2.3	.56	.30	.07	.01	.26
8	.22	.23	4.2	1.3	.12	1.3	1.6	.54	.22	.07	.01	.15
9	2.0	.21	2.0	1.5	.14	1.1	1.1	.53	.18	.05	.02	.10
10	1.4	.20	1.5	3.5	.13	.96	.93	.53	.15	.05	.03	.07
11	.40	.18	1.2	3.8	.14	.90	.75	.46	.12	.10	.06	.07
12	.35	.17	2.2	2.7	.90	6.4	.61	.35	.12	.05	.12	.05
13	.36	.19	2.5	1.7	1.4	8.6	.53	.30	.26	.04	.10	.22
14	.40	.31	1.9	1.5	1.3	3.2	.50	.30	.40	.03	.09	.40
15	.15	.38	1.6	1.7	1.3	2.0	.46	.30	.18	.02	.08	.53
16	.15	.28	1.4	1.3	1.2	1.8	.40	.26	.18	.01	.07	.93
17	.15	.24	1.3	1.1	1.0	1.6	.35	.26	.15	.01	.07	.75
18	.05	.20	1.1	1.0	.86	1.5	.30	.25	.15	.01	.06	.46
19	.05	.18	1.0	.95	.96	1.2	.28	.22	.30	.01	.05	.18
20	1.3	.16	1.1	.90	.86	1.9	.26	.18	.40	.01	.04	.10
21	1.2	.14	1.1	.61	.75	1.9	.22	.18	.26	.01	.03	.10
22	1.0	.13	1.0	.31	.68	1.7	.22	.18	.35	.01	.03	.10
23	.93	.12	.90	.38	.70	1.3	.84	.18	.68	.01	.02	.10
24	1.1	.11	.86	.35	8.0	1.2	2.0	.22	1.9	.01	.93	.10
25	2.7	.11	.80	.28	4.5	1.0	1.4	.18	2.5	.35	.15	.53
26	4.1	.12	1.1	.28	3.0	.93	1.0	.30	2.2	.12	.10	3.0
27	3.2	.17	1.0	.29	2.3	.75	.95	.26	.93	.05	.07	2.2
28	2.2	.22	.90	.21	1.7	.72	.83	.18	.68	.04	.07	.93
29	1.9	.40	.80	.21	---	.68	2.7	1.5	.53	.03	.05	.35
30	2.2	.46	1.0	.20	---	.84	2.1	.46	.30	.03	.05	.35
31	2.8	---	.90	.17	---	.80	---	.30	---	.03	.05	---
TOTAL	31.68	13.05	48.34	33.46	33.02	58.48	171.18	14.66	15.40	2.67	2.47	12.28
MEAN	1.02	.44	1.56	1.08	1.18	1.89	5.71	.47	.51	.086	.080	.41
MAX	4.1	2.8	10	3.8	8.0	8.6	122	1.5	2.5	.75	.93	3.0
MIN	.05	.11	.40	.17	.12	.68	.22	.18	.10	.01	.01	.04
CFSM	1.48	.64	2.26	1.57	1.71	2.74	8.28	.68	.74	.13	.12	.59
IN.	1.71	.70	2.60	1.80	1.78	3.15	9.22	.79	.83	.14	.13	.66

CAL YR 1976 TOTAL 483.56 MEAN 1.32 MAX 34 MIN .04 CFSM 1.91 IN 26.03
WTR YR 1977 TOTAL 436.69 MEAN 1.20 MAX 122 MIN .01 CFSM 1.74 IN 23.51

03407881 ANDERSON BRANCH NEAR MONTGOMERY, TN--Continued

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	.26	.30	4.3	.84	1.4	1.3	1.3	1.5	.46	.05	.30	.15
2	.22	.40	2.7	.68	1.3	1.3	1.1	1.2	.40	.30	.18	.14
3	.18	.53	2.0	.61	1.2	3.0	1.0	1.0	.40	.40	.15	.13
4	.15	.61	2.8	.53	1.1	3.2	.93	2.7	.35	.12	.18	.11
5	.15	.53	3.6	.53	1.0	2.7	.93	2.7	.30	.07	.84	.09
6	.10	11	3.4	.84	1.4	2.2	.84	2.0	.26	.07	.40	.07
7	.10	7.0	2.5	.75	1.5	1.9	.84	1.6	.53	.07	.30	.05
8	1.0	3.8	2.0	5.3	1.3	2.5	.75	1.9	5.6	.07	3.6	.03
9	9.5	2.2	2.0	6.3	1.2	2.8	.75	1.6	4.3	.10	2.3	.03
10	1.7	1.6	1.6	6.0	1.1	7.0	.68	1.3	2.0	.18	1.5	.03
11	.84	1.0	1.5	6.0	1.0	5.0	.68	1.2	1.0	.35	1.3	.10
12	.46	.75	1.3	5.4	.93	3.4	.53	1.2	1.0	.15	2.2	.07
13	.35	.61	1.2	1.8	1.1	2.7	.53	8.7	.75	.10	13	.04
14	.26	.53	1.0	1.5	1.9	15	.53	7.4	.46	.10	3.4	.02
15	.26	.35	1.0	1.5	1.6	5.8	.46	5.6	.35	.93	1.5	.02
16	.40	.26	.84	1.4	1.5	3.2	.46	4.3	.30	2.8	.84	.02
17	.26	1.2	.84	3.2	1.5	2.2	.40	2.8	.22	.53	.53	.02
18	.26	1.7	1.3	4.4	1.4	1.7	.35	1.9	.22	.26	.35	.02
19	.26	1.5	1.3	3.5	1.3	1.5	1.2	1.3	.18	.18	.26	.02
20	.22	1.1	1.3	2.8	1.3	1.2	1.0	1.0	.18	.18	.26	.02
21	.18	2.3	1.2	2.4	1.2	1.3	.93	.84	.18	.15	.22	.02
22	.15	16	1.0	1.9	1.2	1.5	.84	.68	.15	.12	.18	.02
23	.12	11	.93	1.7	1.1	1.3	.75	.93	.15	.12	.15	.02
24	.12	4.1	1.6	6.0	.93	1.3	.68	2.8	.12	.61	.12	.02
25	1.0	2.7	4.5	17	1.0	2.5	1.0	2.8	.12	2.3	.16	.03
26	3.0	1.9	3.0	12	1.0	7.0	5.6	1.9	.10	1.2	.30	.02
27	1.5	1.7	2.2	9.0	.95	4.5	5.0	1.3	.10	.46	.16	.02
28	.84	4.1	1.7	5.3	1.4	3.4	3.0	.93	.07	.30	.15	.01
29	.61	27	1.2	3.5	---	2.7	2.2	.84	.07	.22	.13	.01
30	.53	8.7	1.0	2.5	---	2.0	1.9	.75	.05	.22	.18	.01
31	.40	---	.93	1.7	---	1.7	---	.61	---	.46	.18	---
TOTAL	25.38	116.47	57.74	116.88	34.81	98.8	37.16	67.28	20.37	13.17	35.32	1.36
MEAN	.82	3.88	1.86	3.77	1.24	3.19	1.24	2.17	.68	.42	1.14	.045
MAX	9.5	27	4.5	17	1.9	15	5.6	8.7	5.6	2.8	13	.15
MIN	.10	.26	.84	.53	.93	1.2	.35	.61	.05	.05	.12	.01
CFSM	1.19	5.62	2.70	5.46	1.80	4.62	1.80	3.15	.99	.61	1.65	.07
IN.	1.37	6.27	3.11	6.29	1.87	5.32	2.00	3.62	1.10	.71	1.90	.07

CAL YR 1977 TOTAL 546.36 MEAN 1.50 MAX 122 MIN .01 CFSM 2.17 IN 29.41
WTR YR 1978 TOTAL 624.74 MEAN 1.71 MAX 27 MIN .01 CFSM 2.48 IN 33.63

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L 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)
OCT											
07...	1040	.05	7.1	13.0	12	69	0	19	19	4.7	4.6
NOV											
06...	1150	9.3	6.5	16.0	175	16	2	3.5	3.8	2.0	1.6
21...	1150	1.9	6.8	11.0	600	29	0	5.2	7.5	3.1	2.6
DEC											
08...	1030	1.8	6.4	4.5	20	13	5	2.7	2.7	1.6	1.5
JAN											
04...	--	.47	6.2	--	7	17	--	3.0	3.7	1.7	1.7
28...	--	2.3	6.4	--	11	19	--	2.3	5.1	1.5	1.4
FEB											
24...	--	.65	6.4	1.5	2	15	--	3.2	3.3	1.6	1.6
MAR											
17...	--	2.4	7.2	5.0	9	18	--	3.5	3.8	2.0	2.0
APR											
08...	--	.54	6.6	10.5	7	25	--	5.4	5.5	2.6	2.7
29...	--	2.1	7.3	13.0	8	16	--	3.6	3.6	1.7	1.8
MAY											
19...	--	1.4	7.3	15.5	15	19	--	4.4	4.4	2.0	2.0
JUN											
17...	--	.35	7.2	19.0	16	41	--	7.4	9.1	4.0	4.5
JUL											
28...	--	.36	7.6	21.5	380	44	--	--	10	4.0	4.5
AUG											
12...	--	.76	6.8	23.0	120	49	--	--	12	4.5	4.5
25...	--	.15	6.6	23.5	9	71	--	14	15	5.6	8.2
SEP											
27...	--	.07	7.0	19.0	4	88	--	21	21	8.6	8.2

DATE	BICAR-BONATE (MG/L AS HCO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (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)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)	COBALT, DIS-SOLVED (UG/L AS CO)
OCT											
07...	85	70	14	3.8	--	--	--	--	--	--	--
NOV											
06...	17	14	17	1.2	--	--	--	--	--	7	--
21...	36	30	26	.4	--	--	--	--	--	19	--
DEC											
08...	10	8	7.0	.5	--	--	--	--	--	1	--
JAN											
04...	--	13	15	.0	32	2400	1	0	1	1	1
28...	--	7	7.0	.4	26	1900	0	--	2	1	1
FEB											
24...	--	12	16	1.4	4	--	--	--	0	1	1
MAR											
17...	--	12	15	1.0	19	1500	0	--	1	1	1
APR											
08...	--	20	5.0	.8	16	1900	0	0	1	1	1
29...	--	12	--	--	2	1900	0	--	2	1	0
MAY											
19...	--	13	8.0	--	36	1500	--	0	2	--	--
JUN											
17...	--	41	11	--	52	1900	0	--	1	1	1
JUL											
28...	--	43	16	--	343	20080	0	0	--	7	--
AUG											
12...	--	41	12	--	170	--	0	0	5	4	0
25...	--	55	15	--	4	1880	0	1	0	0	0
SEP											
27...	--	84	31	--	6	930	0	0	0	--	--

03407881 ANDERSON BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT											
07...	2	2	1000	100	--	--	150	130	9	--	10
NOV											
06...	14	7	6700	100	2	--	340	130	11	--	10
21...	23	3	26000	300	20	--	790	160	39	--	80
DEC											
08...	1	1	1100	100	--	--	110	80	--	--	--
JAN											
04...	1	0	590	140	--	0	210	160	--	--	--
28...	1	1	610	140	0	0	130	100	5	3	--
FEB											
24...	--	--	260	160	--	--	210	200	1	--	--
MAR											
17...	1	1	630	310	--	0	160	150	1	1	--
APR											
08...	3	3	840	--	0	--	190	170	6	1	--
29...	1	2	890	80	--	--	120	60	2	3	--
MAY											
19...	14	3	980	100	--	--	110	90	2	1	--
JUN											
17...	5	2	1710	120	--	--	200	190	4	1	--
JUL											
28...	9	3	9300	150	1	0	280	180	5	3	--
AUG											
12...	5	2	4600	--	0	0	310	210	16	1	--
25...	3	3	8700	1050	--	1	190	130	1	1	--
SEP											
27...	5	2	470	90	0	0	130	--	1	0	--

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 mi^2 (2.38 km^2).

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. Discharge less than 0.005 ft^3/s shown as 0.00 ft^3/s in daily tables.

EXTREMES FOR CURRENT PERIOD.--Maximum discharges:

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)
Sept. 23, 1975	2040	33	0.93	1.23	0.375	Apr. 4, 1977	1040	350	9.91	2.81	0.856
Mar. 29, 1976	2030	112	3.17	1.53	0.466	Jan. 25, 1978	2245	278	7.87	2.75	0.838

Minimum discharge, no flow many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, APRIL TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	.98	.44	.02	---	---
2							---	.92	.33	.02	---	---
3							---	.92	.25	.01	---	.00
4							---	1.1	.20	.01	---	.00
5							---	1.1	.21	.01	---	.00
6							---	1.1	.23	.08	---	.00
7							---	1.1	.16	.04	---	.00
8							---	1.6	.12	.08	---	.00
9							---	2.0	.10	.09	---	.00
10							---	.85	.18	.04	---	.00
11							---	.39	.19	.02	---	.00
12							---	.35	2.8	.01	---	.00
13							---	.31	1.2	.09	---	.00
14							---	.25	.74	.04	---	.00
15							---	3.1	.49	.01	---	.00
16							---	11	.39	---	.00	.00
17							---	4.0	.27	---	.00	.00
18							---	3.4	.19	---	1.1	.08
19							---	2.3	.14	---	.42	.06
20							---	1.6	.11	---	.11	.03
21							---	1.0	.10	---	.05	.01
22							---	.79	.08	---	.03	.06
23							---	.74	.07	---	.02	3.4
24							---	.50	.04	---	.01	1.9
25							---	.41	.03	---	.01	.34
26							2.8	.89	.03	---	---	.16
27							2.4	.75	.03	---	---	.10
28							2.0	.48	.03	---	---	.06
29							1.6	.60	.03	---	---	.04
30							1.2	.66	.02	---	---	.03
31							---	.48	---	---	---	---
TOTAL							---	45.67	9.20	---	---	---
MEAN							---	1.47	.31	---	---	---
MAX							---	11	2.8	---	---	---
MIN							---	.25	.02	---	---	---
CFSM							---	1.60	.34	---	---	---
IN.							---	1.84	.37	---	---	---

NOTE.--No gage-height record July 16 to Aug. 15., Aug. 26 to Sept. 2.

03407882 LOWE BRANCH NEAR MONTGOMERY, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.19	3.0	7.8	1.4	.61	5.2	.30	.85	.43	---	.00
2	.04	.18	2.4	3.6	1.2	.54	2.8	.26	.98	.32	---	.00
3	.02	.18	1.8	2.8	1.1	.49	2.1	.18	1.1	3.4	---	.00
4	.01	.16	1.2	2.7	1.0	.43	1.8	.14	.86	7.4	---	.00
5	.01	.16	.96	2.3	.92	.65	1.3	.11	.54	6.1	---	.00
6	---	.15	.80	1.9	.85	.79	1.1	.09	.31	5.2	.04	.00
7	---	.29	.78	1.7	.80	.76	.90	.27	.27	2.4	.08	.00
8	.11	.36	.76	2.1	.72	.82	.77	.19	.22	1.6	.02	.00
9	.27	.34	.90	2.1	.69	3.8	.62	.14	.16	1.1	.00	.01
10	.18	.34	1.1	2.0	.64	4.4	.52	.10	.13	.70	.00	.05
11	.13	.34	1.2	1.8	.60	2.6	.52	.15	.11	.48	.00	.01
12	.09	47	1.1	1.7	.58	2.1	.46	.13	.08	.50	.00	.00
13	.06	8.5	.88	1.5	.55	1.6	.44	.09	.07	.41	.00	.00
14	.04	3.6	.78	1.3	.52	1.2	.41	.10	.06	.28	.00	.00
15	.04	2.0	.90	1.2	.50	1.0	.38	3.8	.05	.19	.00	.00
16	.65	1.5	2.2	1.1	.49	1.0	.34	2.2	.11	.15	.00	.00
17	9.0	1.1	2.3	.95	.49	.73	.29	1.4	.05	.12	.00	.00
18	3.3	.86	1.9	.87	4.7	.64	.27	1.4	.05	.08	.00	.00
19	1.0	.74	1.4	.79	5.7	.58	.25	1.3	.29	.06	.00	.00
20	.53	.78	1.1	.72	2.8	.57	.25	.97	7.5	.04	.00	.00
21	.35	.89	.90	.66	2.2	2.2	.28	.66	3.9	.02	.00	.00
22	.27	.76	.74	.61	2.2	2.5	.32	.48	2.7	.12	.00	.00
23	.20	.70	.60	.56	2.0	2.0	.22	.40	1.6	.14	.00	.00
24	.16	.69	.44	.52	1.7	1.5	.18	.31	.98	.05	.00	.00
25	.14	.68	2.1	.87	1.4	1.5	.20	.22	1.1	.02	.00	.00
26	.22	.62	9.0	9.3	1.2	1.3	.20	.15	1.9	---	.00	.00
27	.29	.65	4.5	8.2	.94	1.4	.18	.10	1.4	---	.00	.14
28	.27	.58	2.5	3.6	.81	1.2	.16	.63	.95	---	.01	.05
29	.25	.50	1.9	2.4	.72	25	.14	3.9	.75	---	.03	.08
30	.23	1.0	1.7	1.9	---	27	.11	2.1	.64	---	.00	.23
31	.20	---	7.1	1.5	---	6.6	---	1.3	---	---	.00	---
TOTAL	---	75.84	58.94	71.05	39.42	97.51	22.71	23.57	29.71	---	---	.57
MEAN	---	2.53	1.90	2.29	1.36	3.15	.76	.76	.99	---	---	.019
MAX	---	47	9.0	9.3	5.7	27	5.2	3.9	7.5	---	---	.23
MIN	---	.15	.44	.52	.49	.43	.11	.09	.05	---	---	.00
CFSM	---	2.75	2.07	2.49	1.48	3.42	.83	.83	1.08	---	---	.02
IN.	---	3.06	2.38	2.87	1.59	3.94	.92	.95	1.20	---	---	.02

Note.--No gage-height record for days of missing record.

03407882 LOWE BRANCH NEAR MONTGOMERY, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.37	.21	.63	.19	2.0	.44	11	.12	.09	.00	.00
2	.02	.22	.32	.63	.16	1.5	2.3	6.0	.07	.07	.00	.00
3	.01	.34	.31	.63	.27	1.0	10	5.0	.07	.05	.00	.00
4	.01	.26	.31	.54	.21	2.0	112	4.0	.07	.04	.00	.00
5	.00	.20	.31	.46	.19	2.4	68	2.6	.07	.02	.00	.00
6	.00	.19	1.5	.54	.17	2.1	30	2.1	.29	.01	.00	.00
7	.02	.16	13	1.0	.16	1.7	19	1.9	.13	.00	.00	.02
8	.02	.13	4.3	1.0	.14	1.0	14	2.1	.07	.00	.00	.03
9	.33	.11	2.1	1.1	.18	.66	9.7	1.3	.08	.00	.00	.01
10	.08	.11	1.2	2.4	.67	.50	6.8	1.1	.07	.00	.00	.01
11	.03	.10	.68	4.6	1.2	.41	5.0	.80	.07	.00	.00	.00
12	.02	.10	1.8	3.2	.68	5.3	4.0	.63	.07	.00	.00	.00
13	.02	.09	2.3	2.3	1.0	7.4	3.5	.54	.07	.01	.00	.00
14	.02	.09	2.1	1.4	1.1	3.1	3.0	.43	.29	.00	.01	.01
15	.01	.09	1.8	2.3	1.2	2.1	2.6	.29	.07	.00	.02	.03
16	.01	.09	1.1	1.8	1.1	1.5	2.2	.16	.07	.00	.03	.28
17	.01	.09	.79	1.5	1.1	.93	2.1	.11	.07	.00	.07	.07
18	.01	.09	.54	1.4	.63	1.1	2.0	.08	.07	.00	.04	.03
19	.01	.09	.46	1.3	.58	.81	1.9	.07	.17	.00	.01	.02
20	.02	.09	.54	1.2	.43	1.5	1.5	.09	.11	.00	.00	.01
21	.02	.09	.58	.81	.37	1.7	1.2	.07	.13	.00	.00	.01
22	.02	.09	.58	.30	.34	1.6	1.0	.10	.06	.00	.00	.00
23	.02	.08	.58	.47	.34	.95	5.0	.24	.16	.00	.00	.00
24	.02	.07	.46	.44	6.3	.69	13	.40	1.0	.00	.06	.00
25	3.2	.07	.50	.36	3.5	.54	8.7	.24	2.4	.00	.01	.01
26	1.7	.07	1.7	.37	2.2	.45	5.3	.21	2.3	.00	.01	1.6
27	.34	.08	2.0	.38	2.2	.36	3.8	.40	.31	.00	.00	.91
28	.15	.09	1.7	.27	2.2	.35	2.8	.26	.12	.00	.00	.30
29	.10	.21	1.1	.27	---	.27	15	.21	.07	.00	.00	.08
30	.12	.21	.73	.26	---	.41	16	.16	.05	.00	.00	.04
31	.50	---	.63	.22	---	.43	---	.12	---	.00	.00	---
TOTAL	6.90	4.07	46.23	34.08	28.81	46.76	371.84	42.71	8.70	.29	.26	3.47
MEAN	.22	.14	1.49	1.10	1.03	1.51	12.4	1.38	.29	.009	.008	.12
MAX	3.2	.37	13	4.6	6.3	7.4	112	11	2.4	.09	.07	1.6
MIN	.00	.07	.21	.22	.14	.27	.44	.07	.05	.00	.00	.00
CFSM	.24	.15	1.62	1.20	1.12	1.64	13.5	1.50	.32	.01	.009	.13
IN.	.28	.16	1.87	1.38	1.16	1.89	15.02	1.73	.35	.01	.01	.14

WTR YR 1977 TOTAL 594.12 MEAN 1.63 MAX 112 MIN .00 CFSM 1.77 IN 24.00

03407882 LOWE BRANCH NEAR MONTGOMERY, TN.--Continued

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	.02	.19	3.5	.37	.86	.40	.85	.71	.02	.00	.01	.11
2	.02	.19	2.1	.29	.54	.68	.54	.41	.02	.00	.01	.09
3	.01	.19	1.8	.24	.31	1.9	.37	.27	.02	.01	.00	.08
4	.01	.19	1.6	.22	.22	2.0	.26	1.2	.01	.00	.00	.06
5	.01	.18	4.7	.19	.21	1.9	.22	1.6	.01	.00	.02	.05
6	.01	9.3	2.8	.24	.21	1.6	.21	1.6	.01	.00	.01	.04
7	.01	7.0	2.2	.26	.19	1.2	.16	1.4	.01	.00	.01	.03
8	.09	3.9	1.8	4.7	.17	1.8	.13	1.3	2.0	.00	1.7	.02
9	10	2.1	1.5	6.8	.16	2.2	.12	1.3	2.6	.00	1.9	.01
10	1.0	1.4	1.1	5.0	.16	4.7	.11	.75	2.1	.01	1.0	.00
11	.24	.63	.92	4.0	.17	4.0	.11	.55	.42	.02	.58	.01
12	.12	.41	.79	2.7	.15	2.4	.10	.43	.33	.01	2.6	.01
13	.07	.26	.63	.99	.26	1.9	.08	6.4	.51	.00	11	.01
14	.05	.21	.52	.58	.73	8.7	.07	5.3	.14	.00	4.1	.01
15	.04	.18	.47	.37	.79	3.5	.06	4.3	.10	.28	1.8	.00
16	.05	.16	.34	.31	.79	2.3	.05	3.0	.08	.81	.38	.00
17	.04	.72	.31	.99	.73	1.8	.05	2.2	.06	.04	.55	.00
18	.03	.84	.68	2.0	.73	1.1	1.2	1.4	.01	.02	.38	.00
19	.03	.79	.79	2.0	.68	.79	1.9	.73	.01	.01	.31	.00
20	.03	.54	.99	1.8	.63	.59	1.2	.40	.01	.00	.22	.00
21	.02	.92	.79	1.1	.50	.63	.73	.19	.01	.00	.22	.00
22	.02	16	.54	.68	.46	.63	.40	.07	.01	.00	.14	.00
23	.02	12	.43	.54	.37	.63	.29	.10	.00	.00	.13	.00
24	.02	3.8	.73	2.1	.34	.63	.24	1.1	.00	.01	.09	.00
25	.22	2.3	4.0	21	.37	1.1	.43	1.9	.00	.40	.09	.00
26	.92	1.7	3.0	14	.31	5.0	3.0	1.3	.00	.05	.31	.00
27	.91	1.1	2.1	3.5	.29	3.8	3.3	.54	.00	.01	.13	.00
28	.60	2.2	1.5	2.4	.27	2.4	2.1	.17	.00	.01	.11	.00
29	.30	18	.99	2.0	---	2.2	1.7	.07	.00	.01	.08	.00
30	.20	9.2	.63	1.5	---	1.8	1.2	.05	.00	.00	.14	.00
31	.16	---	.46	1.0	---	1.3	---	.03	---	.03	.14	---
TOTAL	15.27	96.60	44.71	83.87	11.60	65.58	21.18	40.77	8.49	1.73	28.16	.53
MEAN	.49	3.22	1.44	2.71	.41	2.12	.71	1.32	.28	.056	.91	.018
MAX	10	18	4.7	21	.86	8.7	3.3	6.4	2.6	.81	11	.11
MIN	.01	.16	.31	.19	.15	.40	.05	.03	.00	.00	.00	.00
CFSM	.53	3.50	1.57	2.95	.45	2.30	.77	1.44	.30	.06	.99	.02
IN.	.62	3.90	1.81	3.39	.47	2.65	.86	1.65	.34	.07	1.14	.02

CAL YR 1977 TOTAL 693.50 MEAN 1.90 MAX 112 MIN .00 CFSM 2.07 IN 28.01
WTR YR 1978 TOTAL 418.49 MEAN 1.15 MAX 21 MIN .00 CFSM 1.25 IN 16.90

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	CALCIUM DIS-SOLVED (MG/L AS CA)
OCT										
07...	0945	.07	--	6.1	14.0	0	12	3	1.7	1.7
NOV										
06...	1220	12	--	6.2	16.0	3	9	4	1.3	1.2
21...	1230	2.1	--	6.5	12.0	3	9	2	1.2	1.2
DEC										
08...	1105	2.4	--	6.5	4.5	2	8	5	1.1	1.1
JAN										
04...	--	.49	--	6.7	--	--	9	--	1.6	1.7
28...	--	2.3	--	6.6	2.0	11	10	--	1.4	2.4
FEB										
24...	--	.70	--	6.3	2.5	--	10	--	1.8	2.3
MAR										
17...	--	2.1	--	7.6	5.0	2	9	--	1.9	1.6
APR										
08...	--	.38	--	7.1	16.0	1	9	--	1.4	1.5
29...	--	1.8	--	7.3	13.5	2	9	--	1.3	1.5
MAY										
19...	--	1.1	--	6.8	14.0	1	9	--	1.4	1.3
JUN										
17...	--	.23	--	6.4	18.0	--	8	--	.8	.9
29...	--	.01	--	6.6	23.0	--	9	--	1.1	1.1
JUL										
11...	1515	.17	35	--	24.5	--	--	--	--	--
15...	--	.78	--	--	21.0	4	9	--	.9	1.1
28...	--	.12	--	6.5	21.0	1	10	--	.9	1.0
AUG										
12...	--	.49	--	6.6	21.0	--	9	--	.9	1.0
25...	--	.04	--	5.9	22.0	--	9	--	.9	1.0

DATE	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	BICAR-BONATE (MG/L AS HCO3)	ALKA-LINITY (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (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)
OCT										
07...	1.8	1.8	11	9	9.0	.1	--	--	--	--
NOV										
06...	1.4	1.4	6	5	7.0	.2	--	--	--	--
21...	1.4	1.4	8	7	15	.3	--	--	--	--
DEC										
08...	1.2	1.2	4	3	4.0	.4	--	--	--	--
JAN										
04...	1.2	1.2	--	4	15	.0	18	--	--	0
28...	1.4	1.0	--	2	11	.4	6	--	0	0
FEB										
24...	1.1	1.1	--	3	12	1.2	--	--	--	--
MAR										
17...	1.1	1.1	--	4	--	.6	7	--	--	--
APR										
08...	1.3	1.3	--	5	8.0	1.0	8	--	--	0
29...	1.2	1.3	--	4	10	--	--	--	--	0
MAY										
19...	1.3	1.3	--	4	10	--	4	--	--	--
JUN										
17...	1.3	1.3	--	8	6.0	--	5	--	0	0
29...	1.4	1.5	--	9	7.0	--	4	--	0	0
JUL										
11...	--	--	--	--	--	--	--	--	--	--
15...	1.7	1.5	--	7	5.0	--	33	0	--	0
28...	1.4	1.7	--	10	16	--	5	460	--	0
AUG										
12...	1.3	1.5	--	7	17	--	9	460	--	0
25...	1.6	1.5	--	8	10	--	10	760	0	0

03407882 LOWE BRANCH NEAR MONTGOMERY, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, DISSOLVED (UG/L AS NI)
OCT									
07...	--	4	1	100	100	--	--	--	--
NOV									
06...	--	5	1	300	100	--	--	--	--
21...	--	--	--	200	--	--	--	--	--
DEC									
08...	--	--	1	--	--	--	--	--	--
JAN									
04...	0	2	2	120	--	--	0	1	2
28...	0	1	4	160	100	0	0	--	2
FEB									
24...	0	0	3	--	--	--	--	1	5
MAR									
17...	0	2	1	100	100	0	0	1	1
APR									
04...	0	1	1	140	--	0	0	1	1
29...	0	2	1	240	--	0	0	1	1
MAY									
19...	--	1	3	190	--	0	0	2	2
JUN									
17...	0	1	2	140	150	0	0	0	1
29...	0	1	2	150	170	0	0	1	1
JUL									
11...	--	--	--	--	--	--	--	--	--
19...	2	1	1	310	80	2	1	1	2
28...	0	1	1	100	--	--	0	1	--
AUG									
12...	0	1	2	270	--	--	--	0	0
25...	0	1	1	80	--	0	0	0	2

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 mi^2 (513 km^2).

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

EXTREMES FOR PERIOD OF RECORD.--May to September 1977: Maximum discharge during **period, 3,460 ft^3/s** (98.0 m^3/s) June 26, gage **height, 6.11 ft (1.862 m); minimum**, 3.9 ft^3/s (0.11 m^3/s) June 12, 13, gage height, 0.07 ft (0.021 m).

Water year 1978: Maximum discharge, 13,500 ft^3/s (382 m^3/s) Oct. 9, gage height, 15.48 ft (4.718 m); minimum, 6.2 ft^3/s (0.18 m^3/s) Sept. 30, gage height, 1.04 ft (0.317 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								420	30	210	21	6.7
2								317	19	396	20	34
3								289	13	216	16	26
4								335	12	167	36	73
5								272	8.0	137	21	38
6								225	7.3	120	18	22
7								181	64	88	11	276
8								173	29	78	8.7	462
9								139	13	73	57	162
10								107	11	57	107	88
11								98	8.7	66	88	57
12								82	4.9	56	48	51
13								69	6.0	52	26	45
14								64	90	48	30	441
15								54	120	38	198	396
16								49	64	32	90	789
17								45	132	23	69	536
18								38	100	21	123	253
19								34	125	21	71	162
20								34	296	18	42	113
21								31	204	19	29	80
22								31	132	13	19	56
23								54	219	15	10	46
24								73	240	26	102	29
25								60	625	59	152	23
26								42	1440	314	57	725
27								38	915	96	34	694
28								32	462	51	22	645
29								39	293	30	25	332
30								86	222	31	17	215
31								45	---	27	9.5	---
TOTAL								3556	5904.9	2598	1577.2	6875.7
MEAN								115	197	83.8	50.9	229
MAX								420	1440	396	198	789
MIN								31	4.9	13	8.7	6.7
CFSM								.58	1.00	.42	.26	1.16
IN.								.67	1.11	.49	.30	1.29

03407908 NEW RIVER AT CORDELL, TN--Continued

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	165	288	1660	270	330	288	286	426	99	34	101	46
2	123	233	1110	240	315	275	266	333	84	33	60	39
3	94	197	832	190	260	600	225	273	86	86	40	36
4	84	175	984	162	235	752	181	660	85	68	130	34
5	60	199	3490	167	220	530	165	937	69	44	905	30
6	69	2750	1410	220	190	475	142	623	61	36	565	26
7	65	2150	800	315	160	430	130	426	74	32	277	25
8	410	1360	579	875	180	585	113	889	1460	30	659	23
9	6700	798	450	3130	160	940	113	1510	1340	32	420	19
10	1180	593	173	1020	150	1700	125	757	622	47	353	14
11	551	441	458	600	145	1330	135	538	355	68	258	27
12	353	347	320	523	138	855	150	429	257	46	376	31
13	249	284	378	450	168	690	126	2220	408	35	1570	32
14	206	247	305	372	390	2240	110	2020	220	31	836	30
15	161	219	237	300	325	1660	100	1570	156	163	435	27
16	161	195	216	252	290	912	94	1090	124	672	269	30
17	143	1230	198	438	295	550	90	753	103	199	198	27
18	120	925	300	1030	300	505	265	534	87	89	152	24
19	105	583	279	705	290	445	715	400	77	61	109	15
20	93	437	270	645	260	365	470	310	75	49	91	13
21	83	622	266	500	257	335	365	252	67	45	79	9.6
22	77	4270	310	400	230	436	310	208	62	43	69	8.8
23	71	4740	263	345	200	346	254	185	56	37	58	9.6
24	68	1520	240	445	207	335	225	443	51	36	50	10
25	131	946	1600	3550	212	314	228	583	48	110	44	8.8
26	1720	600	920	7800	270	1450	1080	320	44	108	54	7.8
27	805	490	585	1520	245	1090	1360	230	42	63	51	7.2
28	497	1100	415	820	257	746	770	238	42	47	45	7.0
29	342	6870	330	550	---	606	535	178	37	42	35	6.4
30	266	3170	315	460	---	453	470	150	36	36	31	6.2
31	220	---	295	400	---	373	---	123	---	49	48	---
TOTAL	15372	37979	19988	28694	6679	22611	9598	19608	6327	2471	8368	629.4
MEAN	496	1266	645	926	239	729	320	633	211	79.7	270	21.0
MAX	6700	6870	3490	7800	390	2240	1360	2220	1460	672	1570	46
MIN	60	175	173	162	138	275	90	123	36	30	31	6.2
CFSM	2.51	6.39	3.26	4.68	1.21	3.68	1.62	3.20	1.07	.40	1.36	.11
IN.	2.89	7.14	3.76	5.39	1.25	4.25	1.80	3.68	1.19	.46	1.57	.12

WTR YR 1978 TOTAL 178324.4 MEAN 489 MAX 7800 MIN 6.2 CFSM 2.47 IN 33.50

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 mi^2 (989 km^2).

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.--44 years, 741 ft^3/s (20.99 m^3/s), 26.34 in/yr (669 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,700 ft^3/s (1,810 m^3/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 ft^3/s (765 m^3/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 ft^3/s (2,120 m^3/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 ft^3/s (340 m^3/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)
Oct. 9	1330	17100	484	18.87	5.752	Nov. 29	1900	16400	464	18.42	5.614
Nov. 23	0500	14500	411	17.19	5.240	Jan. 26	0830	*23300	660	22.21	6.770

Minimum discharge, 19 ft^3/s (0.54 m^3/s) Sept. 30, gage height, 1.77 ft (0.540 m).

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	297	461	2650	524	633	556	649	779	188	46	139	81
2	420	435	1660	468	605	532	548	600	159	46	123	63
3	291	364	1220	366	503	1170	475	491	161	102	72	52
4	203	322	1120	312	459	1450	414	939	163	133	98	45
5	157	345	4810	323	430	1030	383	1680	134	78	925	40
6	133	3810	2620	429	366	918	349	1130	114	53	858	36
7	117	3540	1470	609	314	828	316	849	114	43	492	33
8	200	2260	1100	1690	343	1130	284	892	1370	37	934	30
9	10000	1330	1030	6040	314	1820	263	2150	2420	56	1060	28
10	2260	1080	836	1970	295	3280	251	1220	1040	93	642	26
11	992	832	700	1160	282	2570	258	852	587	112	426	60
12	650	662	655	1010	267	1650	292	680	406	101	538	72
13	454	540	610	869	325	1330	243	4050	757	62	3330	61
14	345	459	622	718	748	4320	215	3680	425	46	2060	48
15	282	406	608	580	626	3200	195	2800	282	179	926	67
16	262	363	503	488	560	1760	181	1900	219	1230	569	96
17	259	1190	472	846	570	1200	173	1330	181	497	426	55
18	205	1300	675	1980	572	950	509	963	151	200	309	90
19	179	881	722	1360	555	795	1380	719	132	123	220	69
20	160	687	707	1250	498	683	901	555	131	91	203	41
21	144	900	637	959	495	623	706	442	119	71	174	33
22	131	6560	552	779	442	745	597	356	104	62	133	29
23	121	9670	478	666	387	662	490	301	94	56	112	27
24	114	2740	461	860	400	628	434	842	84	103	97	26
25	115	1550	3110	6860	409	626	439	1580	75	401	85	26
26	1720	1110	1770	15000	525	2590	2080	781	68	445	105	24
27	1120	869	1130	2930	475	2040	2620	500	62	203	98	22
28	730	1520	802	1580	495	1440	1490	422	56	123	86	21
29	536	8880	643	1060	---	1130	1030	319	54	89	68	20
30	424	6760	609	891	---	908	821	275	56	71	59	20
31	354	---	573	790	---	754	---	228	---	59	56	---
TOTAL	23375	61826	35555	55367	12893	43318	18986	34305	9906	5011	15423	1341
MEAN	754	2061	1147	1786	460	1397	633	1107	330	162	498	44.7
MAX	10000	9670	4810	15000	748	4320	2620	4050	2420	1230	3330	96
MIN	114	322	461	312	267	532	173	228	54	37	56	20
CFSM	1.97	5.40	3.00	4.68	1.20	3.66	1.66	2.90	.86	.42	1.30	.12
IN.	2.28	6.02	3.46	5.39	1.26	4.22	1.85	3.34	.96	.49	1.50	.13

CAL YR 1977 TOTAL 299092 MEAN 819 MAX 26200 MIN 15 CFSM 2.14 IN 29.13
WTR YR 1978 TOTAL 317306 MEAN 869 MAX 15000 MIN 20 CFSM 2.28 IN 30.90

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.--Six 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.
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, 694 micromhos/cm June 30; **minimum daily,** 90 micromhos/cm Nov. 29, 30.
WATER TEMPERATURE: Maximum daily, 29.5°C June 28, July 1; minimum daily 0.5°C many days during winter months.
DISSOLVED OXYGEN: Maximum daily, 13.4 mg/L Feb. 7, 8; minimum daily, 6.1 mg/L Sept. 23.
SEDIMENT CONCENTRATIONS: Maximum daily mean, 2,790 mg/L Oct. 9; minimum daily mean 5 mg/L Dec. 24.
SEDIMENT LOADS: Maximum daily, 100,000 tons (91,000 tonnes) Jan. 26; minimum daily, 0.63 tons (0.57 tonnes) Sept. 10.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	218	200	211	212	196	205	140	112	127	---	---	---
2	232	194	221	236	214	217	160	138	144	---	---	---
3	210	180	193	216	204	209	160	148	152	---	---	---
4	208	194	201	208	202	204	160	154	157	---	---	---
5	280	210	225	218	204	211	162	118	136	---	---	---
6	336	254	301	232	126	172	124	116	120	198	188	193
7	258	246	250	144	122	129	134	124	127	212	194	202
8	266	250	258	198	138	149	138	130	134	216	172	204
9	246	116	163	202	160	181	158	136	146	188	136	147
10	156	126	142	196	158	171	170	146	157	148	140	144
11	176	156	166	186	164	169	156	152	154	154	148	151
12	192	178	184	174	168	171	---	---	---	162	156	159
13	200	190	196	178	170	174	244	174	201	168	162	165
14	210	200	205	182	174	179	206	180	191	174	166	170
15	222	210	216	184	180	182	218	194	203	176	170	173
16	244	218	233	190	182	185	222	204	212	184	174	178
17	258	236	242	226	178	193	238	196	215	188	180	184
18	300	240	270	186	148	164	254	202	227	190	152	168
19	340	252	298	152	146	148	228	194	206	156	148	152
20	342	262	288	158	148	152	200	180	193	164	152	157
21	270	260	264	158	150	154	202	188	195	170	160	165
22	274	266	271	148	102	127	198	186	190	172	162	167
23	278	270	274	114	100	104	192	186	188	178	168	171
24	284	278	281	132	114	122	214	190	203	180	170	176
25	286	276	281	142	130	137	222	154	185	170	148	161
26	316	182	262	150	142	145	156	148	151	148	126	135
27	182	170	173	152	148	149	156	148	152	156	136	150
28	178	170	174	152	146	149	---	---	---	172	152	161
29	184	176	180	148	90	119	---	---	---	164	154	159
30	192	182	187	112	90	102	---	---	---	160	150	154
31	200	192	196	---	---	---	---	---	---	164	154	159
MONTH	342	116	226	236	90	162	254	112	172	216	126	166

03408500 NEW RIVER AT NEW RIVER, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	166	162	165	174	162	169	174	158	166	178	160	169
2	168	160	163	170	164	166	178	168	173	184	174	179
3	168	162	165	166	148	157	190	176	183	192	180	185
4	170	164	167	152	140	146	198	184	189	185	171	179
5	172	168	170	140	132	135	204	188	195	192	166	182
6	182	172	177	140	132	136	212	200	206	159	149	154
7	232	178	212	150	140	145	222	206	214	161	151	154
8	238	202	220	176	148	160	304	216	238	162	152	157
9	206	198	201	182	166	176	296	228	234	207	159	184
10	210	196	202	168	150	162	248	232	240	160	152	156
11	200	194	196	148	142	144	248	238	243	167	153	159
12	198	190	195	154	142	147	254	238	245	174	164	169
13	206	192	197	170	154	161	252	240	247	173	129	148
14	200	188	194	184	172	177	264	244	254	131	121	126
15	200	182	191	171	140	160	262	248	256	142	130	137
16	182	170	177	154	138	146	270	254	263	161	139	146
17	172	164	167	164	144	152	280	264	270	163	139	148
18	170	162	165	178	150	161	270	240	256	163	151	157
19	168	162	165	168	156	162	260	206	238	178	158	167
20	168	162	164	218	164	185	200	160	172	190	174	182
21	166	160	163	226	180	198	190	158	166	266	188	203
22	164	156	160	224	182	198	196	158	170	222	204	212
23	166	158	161	202	190	196	180	170	175	265	215	237
24	170	158	163	206	198	202	188	174	181	329	183	256
25	172	164	169	202	192	197	246	186	196	187	149	162
26	182	170	174	198	160	177	246	142	169	157	141	149
27	178	172	175	168	146	152	170	138	152	173	149	162
28	178	170	173	156	144	150	204	136	165	192	172	180
29	---	---	---	156	136	145	162	144	149	240	192	206
30	---	---	---	154	142	147	166	152	158	244	212	221
31	---	---	---	160	148	154	---	---	---	248	208	224
MONTH	238	156	178	226	132	163	304	136	205	329	121	176

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	232	194	206	680	444	558	294	268	279	---	---	---
2	228	184	203	454	376	424	320	292	304	---	---	---
3	256	188	219	472	380	420	382	324	364	---	---	---
4	216	194	206	448	392	421	380	298	357	---	---	---
5	276	186	202	404	370	379	466	316	371	---	---	---
6	276	190	190	396	378	384	300	244	263	---	---	---
7	352	228	296	410	392	400	258	246	251	---	---	---
8	346	164	267	406	396	401	252	208	231	---	---	---
9	192	112	134	400	316	380	208	150	172	---	---	---
10	128	106	117	398	380	391	168	144	153	---	---	---
11	136	124	129	398	372	384	206	168	189	---	---	---
12	150	136	143	412	390	399	224	164	211	---	---	---
13	166	150	157	484	412	443	218	122	169	---	---	---
14	178	146	164	494	426	474	140	116	129	---	---	---
15	176	166	170	430	266	368	156	138	148	---	---	---
16	184	164	171	340	252	283	168	156	161	---	---	---
17	210	180	201	298	254	281	188	164	174	---	---	---
18	228	206	215	264	252	257	198	182	188	---	---	---
19	236	226	229	264	256	259	230	200	214	---	---	---
20	280	232	246	258	250	254	230	218	222	---	---	---
21	266	246	302	262	252	256	232	218	226	360	352	356
22	268	252	260	276	260	267	272	234	253	352	344	348
23	278	266	271	282	272	278	274	242	269	358	344	351
24	288	272	279	288	240	278	260	242	247	358	348	353
25	300	282	290	248	214	230	260	246	254	360	348	354
26	310	294	300	266	232	250	276	262	267	362	352	357
27	420	310	352	248	226	237	278	270	275	366	356	362
28	502	410	439	270	242	255	282	246	276	366	360	363
29	552	456	493	274	264	269	290	276	284	398	364	375
30	694	518	578	272	264	268	---	---	---	426	378	400
31	---	---	---	272	262	267	---	---	---	---	---	---
MONTH	694	106	248	680	214	336	466	116	238	---	---	---
YEAR	694	90	212									

03408500 NEW RIVER AT NEW RIVER, TN--Continued

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

03408500 NEW RIVER AT NEW RIVER, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.5	17.5	18.0	14.0	13.5	14.0	12.5	11.5	12.0	---	---	---
2	18.5	18.5	18.5	14.0	13.5	14.0	11.5	9.0	10.5	---	---	---
3	18.5	16.5	17.5	15.0	14.0	14.5	9.0	8.0	8.5	---	---	---
4	16.5	15.5	16.0	15.5	15.0	15.0	10.0	8.5	9.0	---	---	---
5	16.5	15.0	15.5	16.0	15.5	15.5	12.5	10.0	12.0	---	---	---
6	15.5	15.0	15.5	16.0	15.5	16.0	12.0	7.0	10.0	3.0	2.5	3.0
7	16.0	15.0	15.5	16.0	15.0	15.5	7.0	3.5	5.0	5.0	3.0	4.0
8	15.5	15.0	15.5	15.5	15.0	15.5	3.5	2.5	3.0	7.5	5.5	6.5
9	15.5	15.0	15.5	15.5	15.0	15.0	4.0	3.5	4.0	7.0	2.0	4.5
10	14.5	13.5	14.0	15.0	13.0	14.0	3.5	2.5	3.0	2.0	.5	1.0
11	13.5	13.0	13.0	12.5	10.5	11.5	2.5	1.5	2.0	1.0	.5	.5
12	13.0	12.5	12.5	10.0	8.0	9.0	---	---	---	1.0	.5	.5
13	12.5	11.5	12.0	7.5	6.5	7.0	3.5	3.0	3.0	1.0	1.0	1.0
14	11.5	10.5	11.0	6.5	6.0	6.5	7.0	3.5	5.5	1.0	1.0	1.0
15	11.5	10.5	11.0	6.5	6.0	6.5	8.0	7.0	7.5	1.0	.5	1.0
16	11.5	11.0	11.5	8.0	7.0	7.5	8.0	7.5	8.0	1.0	.5	1.0
17	11.0	10.5	11.0	10.5	8.0	9.0	8.0	7.5	7.5	1.0	1.0	1.0
18	11.0	10.0	10.5	10.5	9.5	10.0	7.5	7.0	7.5	2.5	1.0	1.5
19	11.5	10.0	10.5	9.5	8.0	8.5	7.0	6.5	7.0	3.0	2.5	2.5
20	11.5	10.0	11.0	8.5	8.0	8.0	7.5	7.0	7.5	2.5	2.0	2.5
21	12.0	10.5	11.0	11.0	8.5	9.5	7.0	5.5	6.5	2.0	2.0	2.0
22	12.5	10.5	11.0	11.0	11.0	11.0	5.5	4.0	4.5	2.0	1.5	2.0
23	12.0	11.0	11.5	13.0	11.5	12.5	4.0	3.5	4.0	2.0	1.5	1.5
24	12.0	11.0	11.5	13.5	12.5	13.0	6.0	4.0	5.0	2.5	1.5	2.0
25	12.5	12.0	12.0	12.5	10.5	11.5	8.0	6.0	7.0	5.5	2.5	4.0
26	13.5	12.5	13.0	10.5	7.0	8.5	6.5	3.0	4.5	5.5	2.5	4.0
27	14.0	13.5	14.0	6.5	5.0	5.5	3.0	1.5	2.0	2.5	1.5	2.0
28	14.5	14.0	14.5	5.5	4.5	5.0	---	---	---	1.5	1.0	1.0
29	15.0	14.0	14.5	10.5	5.5	8.0	---	---	---	1.0	.5	1.0
30	14.5	14.0	14.0	11.5	10.5	11.0	---	---	---	1.0	.5	.5
31	14.0	14.0	14.0	---	---	---	---	---	---	1.0	.5	.5
MONTH	18.5	10.0	13.5	16.0	4.5	11.0	12.5	1.5	6.5	7.5	.5	2.0

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

03408500 NEW RIVER AT NEW RIVER, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.0	21.5	22.5	29.5	26.5	28.0	27.0	25.5	26.0	---	---	---
2	24.0	22.5	23.0	29.0	26.5	27.5	28.0	25.5	26.5	---	---	---
3	23.5	22.5	23.0	27.5	26.0	27.0	28.5	25.5	27.0	---	---	---
4	23.5	21.5	22.5	28.5	26.0	27.0	27.5	24.0	26.0	---	---	---
5	24.0	21.5	23.0	29.0	26.0	27.5	25.5	23.0	24.5	---	---	---
6	23.5	21.5	22.5	29.0	26.5	27.5	22.5	22.0	22.0	---	---	---
7	23.0	22.0	22.5	29.0	26.5	27.5	23.0	22.0	22.5	---	---	---
8	22.5	19.0	21.0	29.0	28.5	28.0	23.0	22.0	22.5	---	---	---
9	19.0	17.5	18.0	28.5	24.0	26.5	21.5	21.0	21.0	---	---	---
10	19.0	17.0	18.0	28.0	25.5	26.5	21.5	20.5	21.0	---	---	---
11	20.5	19.0	19.5	27.0	25.5	26.0	22.5	21.5	22.0	---	---	---
12	22.0	20.5	21.0	28.0	25.0	26.0	22.5	21.5	22.0	---	---	---
13	21.5	21.0	21.0	26.5	25.5	25.5	22.0	20.5	21.0	---	---	---
14	21.0	20.0	20.5	27.0	25.0	26.0	21.0	20.5	20.5	---	---	---
15	21.0	19.5	20.5	26.5	22.0	24.5	22.5	21.0	21.5	---	---	---
16	22.0	20.5	21.0	23.5	21.0	22.0	23.5	22.0	22.5	---	---	---
17	23.5	21.0	22.5	23.0	21.5	22.0	24.0	22.5	23.0	---	---	---
18	24.5	22.0	23.5	24.0	22.0	23.0	24.5	23.5	24.0	---	---	---
19	24.5	23.0	24.0	25.5	23.0	24.0	26.0	24.5	25.0	---	---	---
20	25.0	23.0	24.0	27.0	24.0	25.0	25.5	25.0	25.5	---	---	---
21	25.5	23.5	24.5	27.5	25.0	26.0	26.0	24.5	25.0	25.5	25.0	25.5
22	26.0	23.5	24.5	28.5	25.0	26.5	26.0	24.0	25.0	25.0	23.0	24.0
23	26.0	23.5	24.5	28.5	26.0	27.0	26.5	24.5	25.5	23.0	22.5	23.0
24	26.5	23.5	25.0	27.5	25.5	26.5	27.0	24.5	25.5	23.0	22.0	22.5
25	27.0	24.0	25.5	23.5	22.5	23.0	28.0	25.5	26.5	23.0	21.5	22.0
26	27.0	25.0	26.0	23.0	22.0	22.5	27.5	25.5	26.5	23.5	21.0	22.0
27	29.0	25.5	27.0	24.5	22.5	23.5	27.0	25.5	26.5	23.0	21.0	22.0
28	29.5	26.5	28.0	25.5	23.5	24.5	27.5	25.5	26.5	22.0	21.0	21.5
29	29.0	27.0	28.0	26.5	23.5	25.0	27.5	26.0	26.5	23.0	20.5	21.5
30	29.0	26.0	27.5	27.5	24.5	25.5	---	---	---	22.0	20.5	21.5
31	---	---	---	27.5	25.5	26.5	---	---	---	---	---	---
MONTH	29.5	17.0	23.0	29.5	21.0	25.5	28.5	20.5	24.0	---	---	---

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.2	9.0	9.1	9.5	9.3	9.4	9.9	9.7	9.8	---	---	---
2	9.0	8.7	8.9	9.5	9.4	9.5	10.6	9.9	10.3	---	---	---
3	9.2	8.7	9.0	9.4	9.2	9.4	10.9	10.6	10.8	---	---	---
4	9.4	9.2	9.3	9.2	9.1	9.2	10.8	10.3	10.6	---	---	---
5	9.6	9.4	9.5	9.0	8.9	8.9	10.3	9.6	9.8	---	---	---
6	9.6	9.5	9.6	9.0	8.4	8.7	11.0	9.6	10.2	12.8	12.4	12.6
7	9.7	9.5	9.6	9.1	8.8	9.0	12.4	11.1	11.9	12.4	12.0	12.2
8	9.5	9.3	9.4	9.2	9.1	9.1	12.6	12.4	12.5	11.9	10.8	11.3
9	9.3	7.7	8.5	9.2	9.2	9.2	12.5	12.2	12.3	12.3	10.7	11.6
10	9.8	9.0	9.5	9.6	9.2	9.4	12.7	12.3	12.5	13.0	12.3	12.7
11	10.0	9.7	9.9	10.4	9.7	10.0	12.9	12.7	12.8	13.1	13.0	13.0
12	10.2	10.0	10.1	11.1	10.4	10.7	---	---	---	13.0	12.8	12.9
13	10.2	10.1	10.1	11.6	11.1	11.4	13.0	12.8	12.9	12.8	12.5	12.7
14	10.3	10.2	10.3	11.7	11.6	11.7	12.7	11.6	12.1	12.5	12.5	12.5
15	10.4	10.3	10.3	11.7	11.6	11.6	11.6	11.1	11.3	12.7	12.5	12.6
16	10.3	10.1	10.1	11.5	11.1	11.3	11.1	11.0	11.0	12.8	12.7	12.7
17	10.2	10.1	10.2	11.1	10.2	10.7	11.1	11.1	11.1	12.7	12.3	12.5
18	10.3	10.2	10.3	10.6	10.2	10.4	11.2	11.1	11.1	12.3	12.3	12.3
19	10.3	10.1	10.2	11.2	10.7	11.0	11.5	11.2	11.4	12.3	12.0	12.1
20	10.1	10.1	10.1	11.2	11.1	11.2	11.4	11.3	11.3	12.2	12.0	12.1
21	10.1	10.0	10.1	11.1	10.3	10.8	11.7	11.3	11.4	12.4	12.2	12.3
22	10.1	9.9	10.0	10.3	9.8	10.2	12.2	11.7	11.9	12.4	12.4	12.4
23	10.0	9.9	10.0	10.0	9.6	9.7	12.4	12.2	12.3	12.4	12.3	12.4
24	9.9	9.8	9.8	9.7	9.5	9.6	12.4	11.9	12.2	12.4	11.9	12.2
25	9.7	9.4	9.5	10.2	9.8	10.0	11.8	10.9	11.2	11.9	11.0	11.3
26	9.4	8.8	9.0	11.1	10.2	10.7	12.4	11.4	12.0	11.8	10.8	11.2
27	9.5	9.1	9.3	11.8	11.2	11.5	12.9	12.5	12.8	12.2	11.8	12.0
28	9.4	9.3	9.4	12.0	11.8	12.0	---	---	---	12.3	12.1	12.2
29	9.3	9.3	9.3	11.8	10.3	11.0	---	---	---	12.4	12.2	12.3
30	9.3	9.3	9.3	10.3	9.9	10.1	---	---	---	13.1	12.2	12.8
31	9.4	9.3	9.4	---	---	---	---	---	---	12.9	12.8	12.8
MONTH	10.4	7.7	9.7	12.0	8.4	10.3	13.0	9.6	11.5	13.1	10.7	12.3

03408500 NEW RIVER AT NEW RIVER, TN--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.1	12.8	13.0	12.5	12.3	12.4	10.2	9.7	9.9	9.6	9.4	9.5
2	13.0	12.9	12.9	12.5	12.4	12.5	9.8	9.6	9.7	9.6	9.5	9.5
3	13.1	12.9	13.0	12.6	12.5	12.5	9.6	9.3	9.5	9.6	9.5	9.5
4	13.2	13.0	13.1	12.8	12.5	12.7	9.3	9.1	9.2	9.6	9.4	9.5
5	13.0	12.9	13.0	13.1	12.8	12.9	9.2	8.9	9.1	9.6	9.4	9.6
6	13.0	12.9	12.9	12.9	12.5	12.7	9.0	8.7	8.9	9.9	9.6	9.8
7	13.4	13.0	13.3	12.5	12.1	12.2	8.9	8.7	8.8	9.6	9.4	9.5
8	13.4	13.2	13.3	12.1	11.8	11.9	8.9	8.8	8.8	9.4	9.1	9.3
9	13.3	13.1	13.2	11.9	11.7	11.8	9.0	8.7	8.9	9.2	8.8	9.0
10	13.1	13.0	13.1	11.7	11.6	11.6	8.9	8.6	8.8	9.2	8.9	9.1
11	13.0	12.9	12.9	11.8	11.7	11.7	8.8	8.6	8.7	9.3	9.0	9.2
12	13.0	12.9	12.9	11.8	11.4	11.6	9.3	8.8	9.1	9.3	9.0	9.1
13	12.9	12.6	12.8	11.4	11.0	11.3	9.5	9.1	9.3	9.3	9.1	9.2
14	12.6	12.4	12.5	11.1	10.6	10.8	9.6	9.2	9.4	10.2	9.4	9.8
15	12.5	12.5	12.5	10.9	10.7	10.8	9.8	9.3	9.6	10.4	10.3	10.4
16	12.5	12.3	12.4	11.3	10.9	11.0	9.8	9.3	9.6	10.2	10.1	10.1
17	12.4	12.1	12.2	11.9	11.3	11.7	9.8	9.3	9.6	10.1	9.8	10.0
18	12.1	11.9	12.0	12.2	12.0	12.1	9.3	8.7	9.1	9.8	9.6	9.7
19	12.0	12.0	12.0	12.0	11.5	11.8	9.6	8.9	9.2	9.6	9.3	9.4
20	12.0	11.9	11.9	11.4	10.9	11.2	10.2	9.7	10.0	9.3	8.9	9.1
21	12.0	11.7	11.8	10.9	10.5	10.6	10.7	10.3	10.5	9.0	8.6	8.8
22	12.1	11.9	12.0	10.5	10.3	10.5	10.9	10.7	10.8	8.6	8.5	8.6
23	12.1	12.0	12.0	10.5	10.3	10.3	10.7	10.3	10.4	8.5	8.4	8.5
24	12.3	12.1	12.2	10.4	10.1	10.2	10.4	10.0	10.3	8.5	8.2	8.3
25	12.2	12.0	12.1	10.1	9.8	10.0	10.0	9.5	9.7	9.0	8.5	8.9
26	12.6	11.7	12.0	10.8	9.8	10.2	10.3	9.6	9.9	9.0	8.6	8.8
27	12.5	12.3	12.4	11.4	10.9	11.2	10.6	10.2	10.4	8.6	8.4	8.5
28	13.0	12.4	12.6	11.6	11.1	11.4	10.2	9.9	10.1	8.5	8.2	8.4
29	---	---	---	11.2	10.9	11.0	9.9	9.7	9.9	8.3	8.0	8.2
30	---	---	---	10.8	10.5	10.7	9.7	9.4	9.6	8.0	7.9	8.0
31	---	---	---	10.5	10.2	10.4	---	---	---	8.0	7.9	8.0
MONTH	13.4	11.7	12.6	13.1	9.8	11.4	10.9	8.6	9.6	10.4	7.9	9.1
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.9	7.7	7.9	7.6	7.2	7.4	8.1	7.3	7.6	---	---	---
2	7.8	7.6	7.8	7.9	7.2	7.5	7.5	7.1	7.3	---	---	---
3	7.7	7.6	7.6	7.6	6.4	7.0	7.6	6.9	7.2	---	---	---
4	7.9	7.6	7.7	7.0	6.3	6.7	7.7	7.1	7.3	---	---	---
5	8.1	7.8	7.9	7.9	6.8	7.3	7.5	6.8	7.1	---	---	---
6	8.1	7.8	7.9	7.9	7.3	7.6	7.9	7.6	7.8	---	---	---
7	7.9	7.6	7.7	8.0	7.6	7.8	7.9	7.8	7.9	---	---	---
8	8.1	7.4	7.7	8.0	7.7	7.8	7.8	7.6	7.7	---	---	---
9	8.9	8.2	8.7	8.2	7.5	7.8	8.2	7.8	8.1	---	---	---
10	9.0	8.8	8.9	7.7	6.8	7.2	8.4	8.3	8.3	---	---	---
11	8.8	8.5	8.6	7.5	6.6	7.0	8.3	8.1	8.2	---	---	---
12	8.5	8.2	8.3	7.9	6.9	7.4	8.3	8.1	8.2	---	---	---
13	8.3	8.2	8.2	7.4	7.0	7.3	8.4	7.9	8.2	---	---	---
14	8.3	8.2	8.3	7.4	7.0	7.2	8.5	8.3	8.5	---	---	---
15	8.5	8.3	8.4	7.8	6.5	7.3	8.5	8.3	8.5	---	---	---
16	8.3	8.2	8.3	7.9	6.7	7.7	8.4	8.2	8.3	---	---	---
17	8.2	7.8	8.1	7.9	7.8	7.9	8.3	8.1	8.2	---	---	---
18	7.9	7.6	7.8	7.8	7.6	7.7	8.1	7.8	8.0	---	---	---
19	7.6	7.4	7.6	7.6	7.3	7.5	7.9	7.4	7.7	---	---	---
20	7.4	7.3	7.4	7.3	7.1	7.2	7.5	7.2	7.4	---	---	---
21	7.6	7.3	7.5	7.2	7.0	7.1	7.5	7.2	7.3	6.9	6.8	6.9
22	7.7	7.2	7.5	7.3	6.9	7.1	8.2	7.1	7.4	6.9	6.2	6.5
23	7.8	7.3	7.5	7.5	6.9	7.2	8.1	7.6	7.8	7.2	6.1	6.7
24	7.9	7.4	7.6	7.5	7.0	7.2	8.4	7.4	7.9	7.2	6.8	7.1
25	7.9	7.4	7.7	7.4	7.1	7.3	8.3	7.4	7.8	7.2	6.7	7.0
26	7.9	7.4	7.7	7.9	7.5	7.8	8.1	7.5	7.8	7.6	7.0	7.3
27	7.7	7.4	7.5	7.8	7.5	7.7	7.6	7.1	7.4	8.0	7.2	7.7
28	7.9	7.3	7.6	7.7	7.3	7.5	7.5	7.0	7.2	8.0	7.2	7.6
29	7.5	7.1	7.3	8.0	7.3	7.6	7.7	7.1	7.4	8.3	7.7	8.0
30	7.5	7.0	7.2	8.2	7.4	7.8	---	---	---	8.1	7.5	7.8
31	---	---	---	8.4	7.7	8.0	---	---	---	---	---	---
MONTH	9.0	7.0	7.9	8.4	6.3	7.4	8.5	6.8	7.8	---	---	---
YEAR	13.4	6.1	9.8									

03408500 NEW RIVER AT NEW RIVER, TN--Continued

TURBIDITY (JTU), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	70	55	40	30	130	90	---	---	30	25	25	20
2	450	50	60	25	160	75	---	---	30	20	40	20
3	400	110	65	30	100	55	---	---	30	20	150	25
4	490	130	40	30	190	45	---	---	25	20	120	75
5	120	60	35	25	---	320	---	---	30	20	70	35
6	60	55	850	30	500	95	50	30	25	20	35	25
7	55	45	440	170	100	70	40	25	25	20	50	25
8	110	40	250	100	100	40	800	30	35	15	100	25
9	---	230	110	60	65	35	---	160	15	15	260	100
10	750	170	120	45	65	40	140	65	20	15	---	150
11	170	120	55	45	70	55	65	35	20	15	600	100
12	240	150	55	40	---	---	40	35	20	15	100	60
13	250	130	40	25	25	15	45	25	30	20	100	55
14	120	35	25	20	25	20	30	25	70	35	---	110
15	35	25	20	20	30	15	25	20	110	60	---	110
16	30	25	25	15	70	35	25	20	60	35	120	85
17	30	25	950	20	75	40	90	20	35	25	80	55
18	25	20	850	85	65	45	170	95	50	25	70	30
19	30	20	80	35	65	45	120	35	40	20	40	25
20	30	25	35	25	140	65	35	30	25	20	30	25
21	35	25	180	25	85	35	40	30	25	20	30	20
22	30	25	500	180	50	30	30	25	25	20	40	25
23	25	20	750	170	30	20	25	20	25	20	45	30
24	25	20	170	95	30	15	100	25	35	20	35	25
25	25	20	75	50	---	40	650	150	25	20	60	25
26	900	25	50	35	230	95	---	340	50	20	650	70
27	320	85	40	30	90	35	290	80	25	20	270	65
28	110	45	70	35	---	---	80	45	25	20	65	45
29	50	40	---	80	---	---	55	35	---	---	75	40
30	45	30	500	120	---	---	45	30	---	---	130	55
31	40	30	---	---	---	---	30	25	---	---	120	25
MONTH	900	20	950	15	500	15	800	20	110	15	650	20

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	300	45	50	40	75	35	25	15				
2	55	20	55	35	35	25	35	15				
3	25	20	45	25	40	30	50	30				
4	25	20	220	25	45	25	55	20				
5	40	15	500	120	35	25	40	25				
6	40	20	260	70	35	20	30	20				
7	80	20	150	30	30	25	20	15				
8	45	20	45	25	---	30	30	10				
9	30	20	---	55	---	450	650	15				
10	95	35	210	65	480	130	130	30				
11	70	15	90	40	150	65	55	30				
12	40	20	45	30	95	55	40	20				
13	40	20	---	35	320	95	25	20				
14	40	20	1000	160	300	220	20	15				
15	30	20	210	100	220	170	300	35				
16	25	20	130	100	330	210	430	310				
17	25	15	100	55	230	60	---	---				
18	200	20	65	35	65	40	---	---				
19	440	130	40	25	50	40	---	---				
20	340	55	50	25	55	35	---	---				
21	55	40	85	20	45	25	---	---				
22	40	25	30	20	40	25	---	---				
23	35	25	25	20	40	25	---	---				
24	45	20	600	20	40	25	---	---				
25	55	20	---	280	30	20	---	---				
26	340	60	390	160	50	20	---	---				
27	290	100	160	55	50	15	---	---				
28	100	50	60	45	25	15	---	---				
29	70	45	160	55	25	15	---	---				
30	70	45	340	10	30	20	---	---				
31	---	---	160	50	---	---	---	---				
MONTH	440	15	1000	10	480	15	---	---				

03408500 NEW RIVER AT NEW RIVER, TN--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	297	53	43	461	19	24	2650	145	1040
2	420	98	111	435	21	25	1660	90	403
3	291	173	136	364	29	29	1220	102	336
4	203	122	67	322	26	23	1120	88	266
5	157	50	21	345	44	41	4810	550	7140
6	133	35	13	3810	692	10700	2620	335	2370
7	117	33	10	3540	300	2870	1470	80	318
8	200	38	21	2260	160	976	1100	54	160
9	10000	2790	92100	1330	77	277	1030	48	133
10	2260	558	3940	1080	52	152	836	68	153
11	992	198	530	832	33	74	700	53	100
12	650	178	312	662	34	61	655	37	65
13	454	173	212	540	24	35	610	27	44
14	345	54	50	459	12	15	622	22	37
15	282	31	24	406	10	11	608	22	36
16	262	23	16	363	11	11	503	38	52
17	259	22	15	1190	176	875	472	51	65
18	205	18	10	1300	246	863	675	52	95
19	179	19	9.2	881	40	95	722	89	173
20	160	16	6.9	687	23	43	707	72	137
21	144	30	12	900	50	121	637	42	72
22	131	25	8.8	6560	540	11400	552	20	30
23	121	28	9.1	9670	649	20300	478	8	10
24	114	30	9.2	2740	235	1740	461	5	6.2
25	115	34	11	1550	70	293	3110	548	5800
26	1720	459	2130	1110	44	132	1770	150	717
27	1120	115	348	869	39	92	1130	30	92
28	730	45	89	1520	40	164	802	18	39
29	536	26	38	8880	733	25500	643	15	26
30	424	20	23	6760	370	7620	609	14	23
31	354	18	17	---	---	---	573	13	20
TOTAL	23375	---	100342.2	61826	---	84562	35555	---	19958.2
		JANUARY			FEBRUARY			MARCH	
1	524	12	17	633	45	---	556	21	32
2	468	11	14	605	32	52	532	23	33
3	366	10	9.9	503	29	39	1170	80	253
4	312	10	8.4	459	30	37	1450	76	298
5	323	6	5.2	430	21	24	1030	30	83
6	429	55	64	366	18	18	918	14	35
7	609	222	365	314	9	7.6	828	15	34
8	1690	338	3340	343	8	7.4	1130	48	146
9	6040	944	20000	314	10	8.5	1820	245	1200
10	1970	155	824	295	14	11	3280	621	6470
11	1160	80	251	282	13	9.9	2570	245	1700
12	1010	92	251	267	10	7.2	1650	110	490
13	869	97	228	325	28	25	1330	120	431
14	718	106	205	748	70	141	4320	1500	25000
15	580	98	153	626	55	93	3200	570	4920
16	488	84	111	560	40	60	1760	148	703
17	846	83	190	570	28	43	1200	84	272
18	1980	169	903	572	27	42	950	174	446
19	1360	75	275	555	30	45	795	275	590
20	1250	56	189	498	31	42	683	348	642
21	959	57	148	495	26	35	623	380	639
22	779	63	133	442	20	24	745	421	847
23	666	56	101	387	17	18	662	194	347
24	860	67	156	400	16	17	628	29	49
25	6860	640	12600	409	19	21	626	28	47
26	15000	1980	100000	525	19	27	2590	371	2890
27	2930	278	2200	475	20	26	2040	156	859
28	1580	176	751	495	23	31	1440	44	171
29	1060	129	369	---	---	---	1130	35	107
30	891	70	168	---	---	---	908	75	184
31	790	39	83	---	---	---	754	50	102
TOTAL	55367	---	144112.5	12893	---	911.6	43318	---	50020

03408500 NEW RIVER AT NEW RIVER, TN--Continued

SUSPENDED-SEDIMENT DISCHARGE (TONS/DAY), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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	649	104	182	779	40	84	188	81	41
2	548	32	47	600	42	68	159	101	43
3	475	16	21	491	43	57	161	121	53
4	414	17	19	939	92	233	163	130	57
5	383	22	23	1680	242	1100	134	152	55
6	349	39	37	1130	108	330	114	161	50
7	316	51	44	849	50	115	114	254	78
8	284	34	26	892	61	147	1370	974	6440
9	263	33	23	2150	470	2730	2420	1480	10900
10	251	31	21	1220	108	356	1040	340	955
11	258	32	22	852	65	150	587	268	425
12	292	39	31	680	50	92	406	369	404
13	243	23	15	4050	1270	17200	757	498	1020
14	215	22	13	3680	1240	12300	425	515	591
15	195	22	12	2800	830	6270	282	550	419
16	181	31	15	1900	360	1850	219	444	263
17	173	20	9.3	1330	116	417	181	385	188
18	509	60	82	963	66	172	151	405	165
19	1380	226	842	719	42	82	132	448	160
20	901	91	221	555	30	45	131	515	182
21	706	29	55	442	31	37	119	300	96
22	597	24	39	356	40	38	104	146	41
23	490	21	28	301	42	34	94	242	61
24	434	20	23	842	145	330	84	444	101
25	439	25	30	1580	725	3090	75	253	51
26	2080	210	1180	781	183	386	68	430	79
27	2620	208	1470	500	89	120	62	660	110
28	1490	60	241	422	60	68	56	150	23
29	1030	49	136	319	64	55	54	166	24
30	821	50	111	275	116	86	56	245	37
31	---	---	---	228	97	60	---	---	---
TOTAL	18986	---	5018.3	34305	---	48102	9906	---	23112
		JULY			AUGUST			SEPTEMBER	
1	46	122	15	139	345	129	81	16	3.5
2	46	89	11	123	440	146	63	12	2.0
3	102	160	44	72	518	101	52	14	2.0
4	133	165	59	98	902	381	45	13	1.6
5	78	140	29	925	1640	4760	40	12	1.3
6	53	88	13	858	2580	5980	36	10	.97
7	43	102	12	492	1500	1990	33	9	.80
8	37	98	9.8	934	1090	2750	30	9	.73
9	56	175	26	1060	1550	4440	28	12	.91
10	93	255	64	642	1220	2110	26	9	.63
11	112	237	72	426	470	541	60	14	2.3
12	101	266	73	538	1000	1450	72	16	3.1
13	62	175	29	3330	1840	19600	61	14	2.3
14	46	212	26	2060	1380	7680	48	9	1.2
15	179	440	213	926	300	750	67	43	7.8
16	1230	790	2620	569	350	538	96	20	5.2
17	497	715	959	426	430	495	55	19	2.8
18	200	445	240	309	274	229	90	130	32
19	123	380	126	220	208	124	69	84	16
20	91	320	79	203	200	110	41	36	4.0
21	71	380	73	174	198	93	33	29	2.6
22	62	266	45	133	258	93	29	26	2.0
23	56	242	37	112	88	27	27	37	2.7
24	103	215	60	97	24	6.3	26	20	1.4
25	401	340	368	85	33	7.6	26	20	1.4
26	445	360	433	105	24	6.8	24	18	1.2
27	203	330	181	98	15	4.0	22	14	.83
28	123	324	108	86	18	4.2	21	15	.85
29	89	255	61	68	23	4.2	20	13	.70
30	71	245	47	59	41	6.5	20	15	.81
31	59	240	38	56	49	7.4	---	---	---
TOTAL	5011	---	6170.8	15423	---	54564.0	1341	---	105.63
YEAR	317306		536979.23						

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 mi^2 (2.87 km^2).

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

EXTREMES FOR PERIOD OF RECORD.--July to September 1976: Maximum discharge during period, 7.23 ft^3/s (0.205 m^3/s) July 4, gage height, 1.52 ft (0.463 m); no flow many days during August and September.

Water year 1977: Maximum discharge, 105 ft^3/s (2.974 m^3/s) Apr. 4, gage height, 2.87 ft (0.875 m); no flow many days in October and June to September.

Water year 1978: Maximum discharge, 37.5 ft^3/s (1.062 m^3/s) Oct. 8, gage height, 2.15 ft (0.655 m); no flow Sept. 5-9.

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										4.0	.12	.01
2										3.2	.07	.02
3										3.9	.03	.01
4										6.0	.02	.00
5										4.6	.02	.00
6										3.6	.06	.00
7										3.2	.12	.00
8										2.4	.07	.00
9										1.9	.03	.00
10										1.6	.02	.00
11										1.2	.01	.00
12										1.8	.00	.00
13										2.1	.00	.00
14										1.3	.00	.00
15										.96	.03	.00
16										.82	.03	.00
17										.75	.01	.00
18										.53	.00	.00
19										.37	.00	.00
20										.32	.00	.01
21										.27	.00	.00
22										.23	.00	.00
23										.18	.00	.00
24										.12	.00	.00
25										.08	.00	.00
26										.07	.00	.00
27										.41	.01	.03
28										.94	.01	.02
29										.33	.01	.04
30										.24	.00	.03
31										.19	.00	---
TOTAL										47.61	.67	.17
MEAN										1.54	.022	.006
MAX										6.0	.12	.04
MIN										.07	.00	.00
CFSM										1.39	.02	.005
IN.										1.59	.02	.01

03408600 LONG BRANCH NEAR GRIMSLEY, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.82	.33	1.5	.80	2.8	1.6	2.6	.05	.39	.00	.00
2	.01	.61	.33	1.3	.70	2.7	2.0	2.3	.02	.45	.00	.00
3	.00	.53	.33	1.2	.60	2.8	6.3	2.3	.01	.32	.00	.00
4	.00	.48	.33	1.2	.56	6.5	76	2.0	.01	.22	.00	.02
5	.00	.41	.33	1.3	.73	5.6	23	1.7	.01	.13	.00	.01
6	.00	.38	.67	1.5	.73	4.3	11	1.5	.04	.10	.00	.02
7	.07	.36	3.2	1.5	.66	3.6	8.1	1.4	.06	.07	.00	.09
8	.06	.32	2.7	1.5	.58	3.1	6.0	1.4	.03	.04	.00	.08
9	.17	.28	2.0	1.6	.52	2.7	4.7	1.3	.02	.03	.00	.04
10	.11	.28	1.7	2.9	.50	2.4	3.8	1.1	.01	.02	.00	.01
11	.09	.28	1.6	2.8	.51	2.2	3.1	.99	.00	.02	.00	.01
12	.05	.28	2.5	2.7	1.1	12	2.7	.80	.00	.01	.00	.01
13	.01	.28	2.5	2.3	1.6	16	2.5	.66	.00	.01	.00	.00
14	.01	.28	2.1	3.1	1.0	9.2	2.1	.56	.01	.01	.00	.02
15	.01	.28	2.0	4.2	.95	6.3	2.0	.49	.01	.00	.00	.05
16	.01	.28	1.9	3.9	.90	4.9	1.7	.43	.54	.00	.00	1.3
17	.01	.25	1.8	3.7	.88	3.9	1.5	.33	.52	.00	.00	1.1
18	.01	.24	1.6	3.5	.85	3.8	1.2	.27	.20	.00	.00	.55
19	.01	.24	1.5	3.2	.80	3.4	1.1	.23	.13	.00	.00	.35
20	.07	.24	1.5	2.9	.75	3.8	1.0	.21	.40	.00	.00	.35
21	.14	.20	1.6	2.7	.70	3.4	1.0	.19	.25	.00	.00	.27
22	.09	.20	1.4	2.4	.68	3.2	2.0	.16	.40	.00	.00	.19
23	.08	.20	1.3	2.1	1.0	2.9	10	.29	.68	.00	.00	.12
24	.11	.20	1.2	2.0	3.7	2.5	11	.48	.65	.01	.10	.08
25	2.4	.20	1.2	1.5	2.6	2.3	8.9	.33	3.1	.02	.02	.97
26	1.2	.21	1.6	1.1	2.2	2.1	6.2	.22	3.3	.01	.00	4.9
27	.53	.41	1.6	1.0	4.1	1.9	4.7	.16	1.6	.00	.00	7.1
28	.35	.43	1.5	.98	3.6	1.8	3.8	.13	.92	.00	.00	6.8
29	.29	.40	1.4	.95	---	1.6	3.4	.15	.57	.00	.00	3.7
30	.88	.35	1.3	.90	---	1.7	3.0	.14	.42	.00	.00	2.8
31	1.4	---	1.6	.88	---	1.7	---	.10	---	.00	.00	---
TOTAL	8.19	9.92	46.62	64.31	34.30	127.1	215.4	24.92	13.96	1.86	.12	30.94
MEAN	.26	.33	1.50	2.07	1.23	4.10	7.18	.80	.47	.060	.004	1.03
MAX	2.4	.82	3.2	4.2	4.1	16	76	2.6	3.3	.45	.10	7.1
MIN	.00	.20	.33	.88	.50	1.6	1.0	.10	.00	.00	.00	.00
CFSM	.23	.30	1.35	1.87	1.11	3.69	6.47	.72	.42	.05	.004	.93
IN.	.27	.33	1.56	2.15	1.15	4.26	7.21	.83	.47	.06	.00	1.04

WTR YR 1977 TOTAL 577.64 MEAN 1.58 MAX 76 MIN .00 CFSM 1.42 IN 19.34

03408600 LONG BRANCH NEAR GRIMSLEY, TN--Continued

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	2.4	1.3	7.9	1.4	2.6	1.5	1.5	1.5	.40	.08	.65	.01
2	2.1	1.2	5.4	1.3	2.3	1.6	1.0	1.3	.42	.11	.60	.01
3	1.6	1.2	4.4	1.2	2.1	3.8	.92	1.2	.42	.10	.55	.01
4	.95	1.7	4.6	1.0	2.1	3.3	.84	1.8	.40	.09	.50	.01
5	.79	1.7	6.9	1.1	1.9	2.7	.81	1.6	.39	.09	.47	.01
6	.66	2.6	5.7	1.1	1.8	2.6	.71	1.3	.38	.08	.45	.00
7	.61	2.4	4.4	1.0	1.6	2.6	.66	1.3	.39	.08	.40	.00
8	7.2	2.1	3.7	2.9	1.4	2.8	.61	2.3	1.0	.07	.38	.00
9	21	1.9	3.7	4.4	1.2	2.9	.65	2.5	.79	.07	.35	.01
10	8.2	1.9	3.3	3.5	1.1	5.2	.97	2.0	.71	.06	.33	.01
11	4.7	1.7	2.9	2.4	1.0	4.2	.79	1.7	.63	.06	.37	.37
12	3.4	1.5	2.6	1.8	.92	3.5	.71	2.2	1.0	.05	.22	.11
13	2.6	1.4	2.4	1.8	1.5	3.0	.70	13	1.2	.04	.26	.05
14	2.1	1.2	2.2	1.7	2.6	9.6	.60	9.0	.78	.04	.27	.07
15	1.8	1.1	2.0	1.7	2.4	6.0	.59	6.7	.59	.90	.18	.10
16	1.5	1.1	1.7	1.7	2.1	4.9	.56	5.0	.52	2.9	.12	.07
17	1.4	1.9	1.7	2.6	1.9	3.9	.52	3.9	.39	.40	.17	.06
18	1.2	1.5	2.5	3.3	1.9	3.4	1.3	3.1	.31	.20	.12	.06
19	1.1	1.4	2.1	3.1	1.8	3.0	1.0	2.5	.29	.44	.07	.06
20	.98	1.3	1.9	2.9	1.7	2.6	.90	2.1	.27	.68	.24	.06
21	.87	4.6	1.8	2.6	1.7	2.7	.90	1.7	.21	.60	.18	.06
22	.78	12	1.6	2.3	1.6	2.7	.86	1.5	.19	.58	.10	.06
23	.72	10	1.5	2.1	1.5	2.3	.82	1.2	.21	.65	.06	.06
24	.64	6.3	1.8	3.6	1.4	2.0	.76	1.6	.12	.65	.04	.07
25	1.1	4.6	2.8	12	1.5	2.0	.78	1.8	.10	1.0	.03	.08
26	2.9	3.7	2.4	17	1.8	1.8	1.7	1.2	.10	.95	.05	.08
27	2.2	3.9	2.1	8.7	1.6	1.8	1.4	.95	.09	.90	.06	.08
28	1.9	6.6	2.0	5.9	1.5	1.6	1.2	.79	.08	.85	.03	.08
29	1.7	18	1.8	4.4	---	1.5	1.1	.71	.09	.80	.03	.08
30	1.6	14	1.7	3.5	---	1.3	1.6	.63	.09	.75	.01	.09
31	1.4	---	1.5	3.1	---	1.5	---	.48	---	.70	.01	---
TOTAL	82.10	115.8	93.0	107.1	48.52	94.3	27.46	78.56	12.56	14.97	7.30	1.82
MEAN	2.65	3.86	3.00	3.45	1.73	3.04	.92	2.53	.42	.48	.24	.061
MAX	21	18	7.9	17	2.6	9.6	1.7	13	1.2	2.9	.65	.37
MIN	.61	1.1	1.5	1.0	.92	1.3	.52	.48	.08	.04	.01	.00
CFSM	2.39	3.48	2.70	3.11	1.56	2.74	.83	2.28	.38	.43	.22	.06
IN.	2.75	3.88	3.11	3.59	1.62	3.16	.92	2.63	.42	.50	.24	.06

CAL YR 1977 TOTAL 803.81 MEAN 2.20 MAX 76 MIN .00 CFSM 1.98 IN 26.91
WTR YR 1978 TOTAL 683.49 MEAN 1.87 MAX 21 MIN .00 CFSM 1.69 IN 22.89

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 mi^2 (0.65 km^2).

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

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

REMARKS.--Records fair prior to October 1976 and poor thereafter. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--July to September 1976: Maximum discharge during period, **1.8 ft^3/s** (0.05 m^3/s) Aug. 9, gage height, 2.31 ft (0.704 m); no flow many days

Water year 1977: Maximum discharge observed, 44.2 ft^3/s (1.252 m^3/s) Mar. 12, gage height, 1.97 ft (0.600 m); minimum observed, 0.06 ft^3/s (0.002 m^3/s) Oct. 5, 6, gage height, 1.04 ft (0.317 m).

Water year 1978: Maximum discharge observed, 81.4 ft^3/s (2.305 m^3/s) Jan. 8, gage height, 2.19 ft (0.668 m); minimum **observed, 0.04 ft^3/s** (0.001 m^3/s) July 13, 14, Sept. 8, gage height, 1.03 ft (0.314 m).

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	.02	.32
2										.02	.01	.35
3										.27	.01	.32
4										.40	.01	.32
5										.09	.01	.32
6										.09	.02	.32
7										.07	.03	.13
8										.05	.56	.01
9										.05	1.8	.02
10										.04	.00	.04
11										.03	.00	.01
12										.27	.00	.01
13										.22	.00	.00
14										.04	.00	.01
15										.02	.03	.00
16										.03	.03	.01
17										.02	.01	.00
18										.01	.00	.01
19										.01	.00	.01
20										.01	.00	.02
21										.01	.00	.01
22										.01	.00	.00
23										.01	.00	.00
24										.00	.16	.00
25										.01	.12	.00
26										.01	.15	.01
27										.19	.08	.04
28										.13	.43	.03
29										.03	.38	.23
30										.02	.32	.11
31										.02	.32	---
TOTAL	---	---	---	---	---	---	---	---	---	---	4.50	2.66
MEAN	---	---	---	---	---	---	---	---	---	---	.15	.089
MAX	---	---	---	---	---	---	---	---	---	---	1.8	.35
MIN	---	---	---	---	---	---	---	---	---	---	.00	.00
CFSM	---	---	---	---	---	---	---	---	---	---	.60	.36
IN.	---	---	---	---	---	---	---	---	---	---	.67	.39

03408810 CROOKED CREEK TRIBUTARY NEAR ALLARDT, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.39	.45	---	1.8	.28	.19	.39	.10	.28	.61	---
2	.09	.33	.28	---	2.1	.23	.39	.39	.09	.23	.19	---
3	.07	.28	.19	---	.74	.45	1.7	.45	.09	.15	.23	---
4	.07	.23	.15	---	1.2	1.4	12	.33	.07	.12	.15	---
5	.07	.19	.15	.39	.45	.52	1.4	.28	.07	.10	.15	---
6	.09	.19	.52	.28	.28	.39	.74	.28	.09	.12	.12	---
7	.28	.19	1.1	.28	.39	.33	.66	.45	.07	.10	.10	---
8	.15	.15	.45	.28	1.3	.28	.52	.33	.07	.10	.39	---
9	.92	.15	.39	---	1.2	.28	.45	.28	.09	.10	.66	---
10	.15	.15	.23	---	.45	.22	.45	.23	.07	2.5	.28	---
11	.10	.15	.23	---	.28	.23	.39	.23	.07	.39	---	---
12	.09	.19	.66	---	.83	5.4	.39	.23	.09	.19	---	---
13	.09	.17	.45	---	.45	1.2	.33	.23	3.4	.12	---	---
14	.09	.18	.28	---	.39	.74	.33	.23	.74	.10	---	---
15	.09	.16	.33	.74	.33	.59	.33	.19	.19	.09	---	---
16	.09	.14	.28	.66	.23	.45	.28	.18	.15	.07	---	---
17	.09	.12	.28	1.4	.39	.39	.23	.15	.19	.07	---	---
18	.07	.12	.23	.74	.23	.39	.23	.15	.15	.09	---	---
19	.07	.12	.23	.45	.23	.39	.28	.15	.66	.07	---	---
20	.39	.15	.23	.52	.23	.45	.28	.15	.33	.07	---	---
21	.12	.15	.23	.28	.23	.33	.23	.15	.15	.07	---	---
22	.10	.12	.23	---	.23	.33	1.8	.15	.19	.09	---	---
23	.09	.12	.23	---	.28	.28	4.8	.74	.39	.09	---	---
24	.12	.28	.28	---	.83	.28	1.3	.28	.92	.09	---	---
25	5.4	.12	.15	---	.39	.23	.83	.19	.74	3.4	---	---
26	.66	.19	---	---	.33	.23	.60	.18	.45	.59	---	---
27	.33	.28	---	---	.74	.23	.45	.16	.23	.19	---	---
28	.23	.28	---	---	.39	.28	.45	.15	.15	.12	---	---
29	.19	.45	---	---	---	.28	.60	.19	.15	.15	---	---
30	1.1	.39	---	---	---	.28	.45	.15	.12	.12	---	---
31	.66	---	---	---	---	.19	---	.12	---	.28	---	---
TOTAL	12.16	6.13	---	---	16.92	17.55	33.08	7.76	10.27	10.25	---	---
MEAN	.39	.20	---	---	.60	.57	1.10	.25	.34	.33	---	---
MAX	5.4	.45	---	---	2.1	5.4	12	.74	3.4	3.4	---	---
MIN	.07	.12	---	---	.23	.19	.19	.12	.07	.07	---	---
CFSM	1.56	.80	---	---	2.40	2.28	4.40	1.00	1.36	1.32	---	---
IN.	1.80	.91	---	---	2.51	2.60	4.90	1.15	1.52	1.52	---	---

Note.--No gage-height record for days of missing record.

03408810 CROOKED CREEK TRIBUTARY NEAR ALLARDT, TN--Continued

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	---	---	.83	---	---	---	.33	---	---	---	.16	---
2	---	---	.70	---	---	---	.31	---	---	---	.11	---
3	---	---	.63	---	---	---	.28	---	---	---	.12	---
4	---	---	2.2	---	---	---	.28	---	---	---	.12	---
5	---	---	3.5	---	---	---	.27	---	---	---	.15	---
6	---	---	.93	---	---	---	.23	---	.12	---	.24	---
7	.10	---	.92	---	---	---	.23	---	.24	---	.24	.16
8	2.7	---	.75	---	---	---	.22	1.2	.45	---	.19	.04
9	1.9	---	.83	---	---	---	.24	.73	.28	---	.20	.06
10	.49	---	.83	---	---	---	.29	.49	.24	---	.13	.07
11	.36	---	.67	---	---	---	.45	.40	.33	---	.09	.19
12	.30	---	.48	---	---	---	.33	.50	.24	.06	.15	.12
13	.24	---	.48	---	---	---	---	2.1	.12	.06	.15	.10
14	.23	.19	.51	---	---	---	---	1.1	.10	.04	.12	.11
15	.23	.19	.45	---	---	.78	---	.74	.10	1.8	.10	.20
16	.23	.25	.44	---	.57	.78	---	.66	.09	2.5	.11	.13
17	.19	.46	.49	---	.54	.66	---	.52	.09	.33	---	.12
18	.19	.28	.56	---	.54	.64	---	.39	.07	.15	---	.10
19	.18	.23	.45	---	.53	.59	---	.33	.06	.24	---	.10
20	.15	.28	.42	---	1.2	.51	---	.19	---	.28	---	.10
21	.15	1.6	.39	---	.42	.52	---	---	---	.19	---	.16
22	.15	3.0	.36	---	.41	.52	---	---	---	.12	---	.15
23	.15	.85	.33	---	---	.45	---	---	---	.12	---	.15
24	.15	.69	.47	---	---	.42	---	---	---	5.1	---	.12
25	.36	.59	.49	---	---	.53	---	---	---	4.4	---	.12
26	.36	.52	.45	---	---	.52	---	---	---	1.0	---	.10
27	.21	.89	.45	---	---	.51	---	---	---	.33	---	.11
28	.19	.97	.45	---	---	.43	---	---	---	.28	---	.12
29	.17	4.7	---	---	---	.36	---	---	---	.24	---	.13
30	.15	1.1	---	---	---	.33	---	---	---	.15	---	.24
31	.16	---	---	---	---	.33	---	---	---	.16	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---
CFSM	---	---	---	---	---	---	---	---	---	---	---	---
IN.	---	---	---	---	---	---	---	---	---	---	---	---

Note.--No gage-height record for days of missing record.

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 mi^2 (9.38 km^2).

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 poor prior to October 1976 and fair to good thereafter. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data. Discharge less than 0.005 ft^3/s shown as 0.00 ft^3/s in daily tables.

EXTREMES FOR PERIOD OF RECORD.--June to September 1976: Maximum discharge during period, 48 ft^3/s (1.36 m^3/s) Aug. 28, gage height, 2.23 ft (0.680 m); minimum not determined.

Water year 1977: Maximum discharge, 383 ft^3/s (10.85 m^3/s) Apr. 4, gage height, 3.44 ft (1.049 m); minimum, less than 0.005 ft^3/s (0.0001 m^3/s) June 11.

Water year 1978: Maximum discharge, 181 ft^3/s (5.13 m^3/s) July 24, gage height, 3.04 ft (0.927 m); minimum less than 0.005 ft^3/s (0.0001 m^3/s) July 6.

DISCHARGE, IN CUBIC FEET PER SECOND, JUNE TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									---	1.0	.40	.52
2									---	.62	.26	1.6
3									---	4.7	.19	1.1
4									---	10	.10	.80
5									---	4.5	.09	.89
6									---	2.9	.08	.58
7									---	4.3	.05	.40
8									---	2.9	.05	.26
9									---	2.3	---	.22
10									---	1.9	---	1.6
11									1.2	1.4	---	.58
12									.97	7.2	---	.31
13									.81	5.8	---	.22
14									.73	1.9	---	.19
15									.65	1.3	---	.16
16									.58	1.1	---	.16
17									.77	1.0	---	.13
18									.48	.60	---	.05
19									1.2	.46	---	.05
20									7.4	.40	---	.08
21									3.0	.35	---	.10
22									3.7	.31	---	---
23									1.5	.26	---	---
24									1.1	.19	3.9	---
25									2.0	.16	.52	---
26									2.3	.13	.40	---
27									1.2	4.5	.40	.22
28									.76	3.1	7.5	.46
29									.77	.89	3.7	5.3
30									2.0	.58	.65	4.8
31									---	.46	.22	---
TOTAL	---	---	---	---	---	---	---	---	---	67.21	---	---
MEAN	---	---	---	---	---	---	---	---	---	2.17	---	---
MAX	---	---	---	---	---	---	---	---	---	10	---	---
MIN	---	---	---	---	---	---	---	---	---	.13	---	---
CFSM	---	---	---	---	---	---	---	---	---	.60	---	---
IN.	---	---	---	---	---	---	---	---	---	.69	---	---

03408815 CROOKED CREEK NEAR ALLARDT, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	5.3	2.0	1.6	.93	5.7	2.2	4.6	.27	1.5	4.1	3.1
2	.51	3.0	2.4	1.4	.86	4.7	2.9	4.8	.17	1.2	.80	1.0
3	.30	2.1	2.1	1.5	1.1	5.9	13	5.8	.12	.47	.92	.33
4	.18	1.5	2.0	1.8	3.4	26	244	4.8	.07	.30	.44	.20
5	.14	1.1	1.9	3.6	4.0	13	52	3.7	.04	.18	.28	.11
6	.18	1.4	4.7	3.8	1.8	8.5	20	2.9	.05	.15	.17	1.1
7	2.1	1.3	20	3.6	1.2	6.1	12	5.8	.02	.13	.07	2.5
8	1.4	1.3	9.1	2.9	.97	4.9	8.7	4.5	.01	.07	1.0	1.8
9	11	2.1	5.2	3.2	1.4	4.2	6.4	2.8	.04	.02	4.6	.75
10	3.0	2.0	4.5	6.9	2.3	3.8	5.3	2.1	.01	16	6.4	.46
11	1.4	1.9	4.2	4.1	2.7	3.3	4.3	1.8	.00	10	1.9	.33
12	.96	1.9	10	3.4	10	63	3.7	1.5	.05	3.0	.64	.20
13	.69	1.8	7.0	2.4	8.1	49	3.2	1.4	13	1.1	.45	.21
14	.55	1.7	5.0	15	5.6	15	3.0	1.2	18	.52	.61	1.1
15	.44	2.0	5.2	19	5.3	10	2.6	1.2	2.4	.58	.65	2.9
16	.39	1.7	4.4	9.1	3.8	7.3	2.2	.96	1.0	.22	.38	37
17	.35	1.5	3.6	6.6	3.2	5.8	1.9	.84	2.0	.10	4.7	19
18	.34	1.5	3.1	5.8	3.1	5.4	1.7	.74	1.0	.08	4.3	6.1
19	.30	1.5	2.8	3.8	3.2	4.2	1.8	.66	6.2	.05	1.2	34
20	2.3	1.4	3.1	3.4	3.0	6.5	1.9	.60	9.8	.01	.61	14
21	2.1	1.3	2.4	2.6	2.8	4.1	1.6	.58	2.4	.01	.31	6.3
22	1.0	1.2	2.0	2.3	2.7	4.6	7.9	.50	1.3	.02	.18	4.0
23	.76	.98	2.0	1.9	3.2	3.4	61	2.7	6.6	.10	.09	2.8
24	.89	1.1	1.7	2.4	14	2.8	47	2.0	21	.06	2.7	2.3
25	69	1.2	2.2	2.3	6.7	2.4	19	1.0	15	15	.68	3.3
26	33	1.5	3.9	2.1	5.1	2.4	10	2.1	12	14	.29	11
27	10	4.0	2.8	2.3	12	2.3	7.0	.82	5.0	2.1	.14	20
28	6.2	3.0	2.8	2.6	7.8	2.1	5.4	.59	2.4	.98	.07	11
29	4.4	3.8	2.0	1.6	---	2.4	9.5	.73	1.4	.81	.03	6.0
30	15	2.3	2.0	1.4	---	2.9	5.8	.85	.90	.89	.03	4.6
31	12	---	2.3	1.1	---	3.1	---	.40	---	.61	.02	---
TOTAL	181.98	58.38	128.4	125.5	120.26	284.8	567.0	64.97	122.25	70.26	38.76	197.49
MEAN	5.87	1.95	4.14	4.05	4.30	9.19	18.9	2.10	4.08	2.27	1.25	6.58
MAX	69	5.3	20	19	14	63	244	5.8	21	16	6.4	37
MIN	.14	.98	1.7	1.1	.86	2.1	1.6	.40	.00	.01	.02	.11
CFSM	1.62	.54	1.14	1.12	1.19	2.54	5.22	.58	1.13	.63	.35	1.82
IN.	1.87	.60	1.32	1.29	1.24	2.93	5.83	.67	1.26	.72	.40	2.03

WTR YR 1977 TOTAL 1960.05 MEAN 5.37 MAX 244 MIN .00 CFSM 1.48 IN 20.14

CUMBERLAND RIVER BASIN

03408815 CROOKED CREEK NEAR ALLARDT, TN--Continued

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	4.0	3.2	18	4.9	5.3	7.8	4.5	---	---	.10	2.8	.46
2	3.4	2.4	12	3.6	5.6	6.6	4.0	---	---	.35	2.0	.46
3	2.8	4.0	9.4	2.1	4.7	18	3.8	---	---	.58	1.7	.40
4	2.1	8.4	19	2.3	4.2	11	3.0	---	---	.30	1.9	.35
5	1.8	7.1	54	2.6	4.5	7.8	2.8	---	---	.10	4.5	.30
6	1.6	19	24	8.1	3.6	8.5	3.4	---	.81	.03	6.3	.26
7	1.6	12	13	6.3	3.6	9.5	3.0	---	2.0	.01	4.7	.26
8	33	8.1	11	22	3.0	14	2.8	---	11	.40	3.2	.26
9	53	6.4	16	19	3.0	17	2.8	---	10	.98	3.4	.22
10	14	6.2	9.1	8.8	3.2	20	4.5	---	3.6	1.1	2.8	.30
11	8.5	4.6	7.3	6.3	3.0	12	5.1	---	2.1	.40	2.0	2.1
12	6.2	3.8	6.8	5.8	3.4	11	4.2	---	2.8	.30	2.3	1.2
13	4.8	3.2	7.5	6.1	15	8.5	3.0	---	3.6	.40	2.8	.81
14	4.1	3.1	7.2	5.3	19	59	2.4	---	1.5	.52	2.1	1.1
15	3.4	3.0	5.8	4.2	8.5	21	2.3	---	.98	29	1.7	1.5
16	4.0	3.1	4.9	4.5	7.2	17	2.1	---	.73	36	1.5	.52
17	3.1	6.1	5.6	12	7.2	13	2.0	---	.58	6.3	2.3	.35
18	2.6	3.7	9.5	12	7.2	13	9.5	---	.46	2.6	1.4	.19
19	2.2	2.9	5.6	8.1	5.8	11	9.1	---	2.3	3.4	1.1	.22
20	2.0	2.3	5.3	7.2	5.1	9.1	6.1	---	1.4	2.8	3.2	---
21	1.9	23	4.7	5.6	5.1	9.1	4.9	---	.73	1.7	1.9	---
22	1.7	55	4.0	5.1	4.5	9.5	3.8	---	.52	1.2	1.4	---
23	1.6	34	3.8	4.7	4.5	6.9	7.2	---	.40	.98	1.2	---
24	1.5	17	5.8	17	4.5	6.1	8.5	---	.35	27	.89	---
25	3.6	12	8.8	66	8.1	8.1	4.7	---	.26	64	.89	---
26	8.4	8.7	4.7	64	7.8	8.1	---	---	.35	20	1.1	---
27	4.6	12	3.8	18	5.8	7.8	---	---	.26	12	.81	---
28	3.7	23	3.2	11	6.6	6.9	---	---	.13	13	.65	---
29	3.0	76	2.8	8.1	---	6.1	---	---	.10	6.3	.58	---
30	2.6	33	3.6	7.2	---	5.3	---	---	.13	4.2	.52	---
31	2.7	---	4.7	6.3	---	4.9	---	---	---	3.8	.46	---
TOTAL	193.5	406.3	300.9	364.2	169.0	373.6	---	---	---	239.85	64.10	---
MEAN	6.24	13.5	9.71	11.7	6.04	12.1	---	---	---	7.74	2.07	---
MAX	53	76	54	66	19	59	---	---	---	64	6.3	---
MIN	1.5	2.3	2.8	2.1	3.0	4.9	---	---	---	.01	.46	---
CFSM	1.72	3.73	2.68	3.23	1.67	3.34	---	---	---	2.14	.57	---
IN.	1.99	4.17	3.09	3.74	1.74	3.84	---	---	---	2.46	.66	---

CAL YR 1977 TOTAL 2491.99 MEAN 6.83 MAX 244 MIN .00 CFSM 1.89 IN 25.60

NOTE.--Missing record **Apr. 26 to June 5,** Sept. 20-30.

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 mi^2 (704 km^2).

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 except October and November, which are fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--44 years (water years 1930-71, 1975-78), 468 ft^3/s (13.25 m^3/s), 23.37 in/yr (594 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft^3/s (963 m^3/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 ft^3/s (396 m^3/s) on basis of slope-area measurement of peak flow; minimum observed, 0.2 ft^3/s (0.006 m^3/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 ft^3/s (1,010 m^3/s), from rating curve extended above 14,000 ft^3/s (396 m^3/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 ft^3/s (184 m^3/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)
Oct. 9	1100	9080	257	10.43	3.179	Jan. 26	0500	*12500	354	11.98	3.652
Nov. 22	2330	6790	192	9.17	2.795	May 13	1300	6530	185	9.01	2.746
Nov. 29	2100	10300	292	11.04	3.365						

Minimum discharge, 14 ft^3/s (0.40 m^3/s) Sept. 10, 11, gage height, 1.26 ft (0.384 m).

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	282	215	2300	362	816	502	385	528	130	20	72	49
2	225	195	1420	322	734	510	331	400	106	22	59	43
3	183	180	1030	261	354	966	287	330	108	128	48	39
4	147	215	848	207	311	1280	253	800	110	152	57	35
5	121	255	2340	247	275	900	230	1100	90	69	187	30
6	102	1180	1950	298	256	805	212	760	80	44	284	26
7	90	1340	1280	474	250	710	194	570	73	31	367	22
8	297	940	949	760	242	774	173	590	264	25	414	20
9	6420	680	861	2820	178	991	160	1500	1770	44	591	18
10	2390	720	732	1530	101	1460	159	720	756	772	412	15
11	1040	720	567	894	82	1580	174	559	386	227	265	91
12	639	540	499	938	159	1160	198	461	248	118	241	184
13	435	420	462	782	215	882	170	3990	296	77	503	135
14	320	340	442	540	784	2700	146	3020	266	55	620	109
15	260	290	424	450	684	2530	130	2070	169	287	812	84
16	215	260	360	377	569	1570	122	1460	129	2720	697	75
17	190	360	326	542	576	1150	116	1050	105	1190	542	61
18	170	440	517	1350	592	908	170	757	86	428	336	53
19	120	360	593	1090	561	799	551	553	72	230	212	48
20	130	320	543	906	476	661	426	419	113	187	154	39
21	120	1200	485	677	457	579	340	329	111	443	141	33
22	105	4200	407	541	392	624	291	263	81	214	116	44
23	96	4800	347	448	343	542	246	219	62	120	89	47
24	90	2400	330	604	351	483	218	195	51	282	72	44
25	92	1400	843	3600	350	469	241	233	44	1380	61	38
26	400	950	934	9150	452	800	1690	234	38	1010	78	33
27	505	800	704	2850	409	836	1640	174	34	421	96	28
28	365	1300	507	1510	408	757	965	150	32	246	148	24
29	300	4800	453	973	---	637	643	184	29	172	112	21
30	250	6370	418	852	---	528	510	180	24	120	77	20
31	230	---	387	821	---	443	---	150	---	91	60	---
TOTAL	16329	38190	24258	37176	11377	29536	11371	23948	5863	11325	7923	1508
MEAN	527	1273	783	1199	406	953	379	773	195	365	256	50.3
MAX	6420	6370	2340	9150	816	2700	1690	3990	1770	2720	812	184
MIN	90	180	326	207	82	443	116	150	24	20	48	15
CFSM	1.94	4.68	2.88	4.41	1.49	3.50	1.39	2.84	.72	1.34	.94	.19
IN.	2.23	5.22	3.32	5.08	1.56	4.04	1.56	3.28	.80	1.55	1.08	.21

CAL YR 1977 TOTAL 213291.3 MEAN 584 MAX 18600 MIN 4.7 CFSM 2.15 IN 29.17
WTR YR 1978 TOTAL 218804.0 MEAN 599 MAX 9150 MIN 15 CFSM 2.20 IN 29.92

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 mi^2 (523 km^2), includes 6 mi^2 (16 km^2) without surface drainage.

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

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

AVERAGE DISCHARGE.--36 years, 419 ft^3/s (11.87 m^3/s), 28.17 in/yr (716 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,800 ft^3/s (1,270 m^3/s) May 27, 1973, gage height, 30.46 ft (9.284 m) from rating curve extended above 32,000 ft^3/s (906 m^3/s) on basis of slope-area measurement of peak flow; minimum, 3.6 ft^3/s (0.10 m^3/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 ft^3/s (227 m^3/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)
Nov. 29	1615	8570	243	13.09	3.990	Jan. 26	0200	*10600	300	*14.81	4.514

Minimum discharge 13 ft^3/s (0.37 m^3/s) Sept. 8, 9, 10, gage height, 0.92 ft (0.280).

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	227	186	1770	366	445	370	317	418	115	23	26	20
2	180	166	1140	338	406	381	286	410	100	23	21	19
3	148	156	837	293	362	1030	258	366	90	28	18	18
4	121	255	738	262	317	1080	239	349	80	84	18	17
5	92	356	3030	262	300	759	224	363	75	55	47	16
6	76	562	2010	317	275	644	213	310	65	40	201	15
7	67	987	1260	418	218	589	198	272	68	31	649	14
8	518	649	930	998	224	728	180	349	121	26	310	13
9	4360	493	941	2000	218	1040	169	779	580	24	414	13
10	1500	414	842	1190	210	1410	175	678	381	24	314	23
11	759	352	693	837	198	1250	183	502	255	26	198	377
12	489	289	584	693	192	924	192	421	189	23	134	307
13	366	246	518	598	258	718	175	3400	180	21	134	124
14	279	218	473	518	821	3160	156	2550	183	20	192	71
15	224	201	421	449	703	2060	142	1970	132	64	161	86
16	201	189	366	384	575	1400	132	1410	102	335	112	86
17	175	265	342	566	518	1050	126	987	83	252	112	57
18	153	384	473	1010	481	837	236	698	68	90	119	44
19	132	345	523	821	437	713	457	514	63	49	81	36
20	114	303	485	688	391	593	381	410	65	35	107	29
21	98	1030	453	527	363	531	335	338	46	51	161	26
22	88	3790	403	441	331	553	296	275	42	43	112	23
23	79	3210	359	391	307	497	262	233	38	33	77	23
24	73	1630	345	644	293	449	239	215	34	26	58	22
25	74	1100	805	3890	296	433	236	314	32	137	46	21
26	221	779	790	5840	342	473	445	272	29	156	49	21
27	324	683	630	1990	335	469	733	207	29	109	47	20
28	282	1730	502	1210	331	445	584	166	27	84	38	18
29	249	4940	433	826	---	410	469	142	24	50	30	17
30	221	3280	403	598	---	373	414	126	24	35	25	17
31	201	---	388	544	---	342	---	120	---	35	22	---
TOTAL	12091	29188	23887	29909	10137	25711	8452	19564	3320	2032	4033	1593
MEAN	390	973	771	965	362	829	282	631	111	65.5	130	53.1
MAX	4360	4940	3030	5840	821	3160	733	3400	580	335	649	377
MIN	67	156	342	262	192	342	126	120	24	20	18	13
CFSM	1.93	4.82	3.82	4.78	1.79	4.10	1.40	3.12	.55	.32	.64	.26
IN.	2.23	5.38	4.40	5.51	1.87	4.73	1.56	3.60	.61	.37	.74	.29

CAL YR 1977 TOTAL 171590 MEAN 470 MAX 18000 MIN 14 CFSM 2.33 IN 31.60
WTR YR 1978 TOTAL 169917 MEAN 466 MAX 5840 MIN 13 CFSM 2.31 IN 31.29

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 mi^2 (275 km^2).

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 fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--36 years, 189 ft^3/s (5.352 m^3/s), 24.21 in/yr (615 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,600 ft^3/s (640 m^3/s) Jan. 29, 1957, gage height, 10.84 ft (3.304 m); from rating curve extended above 7,300 ft^3/s (207 m^3/s) on basis of velocity-area study; minimum, 2.0 ft^3/s (0.057 m^3/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 ft^3/s (102 m^3/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)
Nov. 29	1700	3970	112	6.04	1.841	Jan. 26	0230	*6480	184	7.18	2.188
Dec. 5	1430	3760	106	5.93	1.807						

Minimum discharge, 21 ft^3/s (0.59 m^3/s) July 8, 9, gage height, 1.32 ft (0.402 m).

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	71	55	587	128	208	160	186	169	54	22	72	38
2	65	52	376	118	189	160	166	146	49	26	57	35
3	65	54	295	105	164	328	153	137	48	39	49	34
4	55	97	242	97	148	321	139	139	47	36	48	32
5	48	100	1640	97	139	262	132	143	42	29	86	31
6	41	213	924	103	128	232	124	130	38	25	197	30
7	38	392	477	118	114	229	116	122	50	23	348	29
8	265	255	357	688	109	308	107	208	134	22	164	28
9	585	194	357	773	107	502	102	372	246	50	122	26
10	298	162	291	411	102	458	100	268	144	118	94	39
11	191	132	252	291	98	367	105	210	98	48	85	124
12	141	112	227	252	93	301	105	194	79	35	72	120
13	110	97	205	227	148	255	100	605	85	30	242	77
14	90	86	192	197	440	1740	93	788	70	28	239	57
15	75	80	171	166	301	798	88	641	57	35	153	110
16	71	77	155	148	252	737	85	450	48	254	112	126
17	61	77	146	229	221	545	83	334	41	131	92	92
18	54	71	181	318	202	406	100	252	37	73	75	69
19	49	63	171	272	183	332	134	200	38	46	60	50
20	43	60	164	242	166	282	128	166	36	36	141	39
21	40	245	155	208	164	252	120	139	37	34	137	37
22	38	980	141	181	146	232	109	116	33	31	90	35
23	37	1060	130	166	139	208	107	100	30	28	71	33
24	36	472	137	321	132	192	103	107	28	34	57	31
25	39	331	242	1940	139	229	100	143	26	349	60	29
26	63	248	208	3160	162	268	194	112	25	305	95	28
27	65	221	189	794	150	258	329	92	24	213	65	26
28	58	349	160	470	153	265	252	83	23	278	51	25
29	54	1850	146	341	---	245	205	74	22	160	44	24
30	51	1210	143	272	---	221	178	68	22	109	42	23
31	52	---	134	239	---	202	---	60	---	85	39	---
TOTAL	2949	9395	9195	13072	4697	11295	4043	6768	1711	2732	3259	1477
MEAN	95.1	313	297	422	168	364	135	218	57.0	88.1	105	49.2
MAX	585	1850	1640	3160	440	1740	329	788	246	349	348	126
MIN	36	52	130	97	93	160	83	60	22	22	39	23
CFSM	.90	2.95	2.80	3.98	1.59	3.43	1.27	2.06	.54	.83	.99	.46
IN.	1.03	3.30	3.23	4.59	1.65	3.96	1.42	2.38	.60	.96	1.14	.52

CAL YR 1977 TOTAL 70477 MEAN 193 MAX 12600 MIN 17 CFSM 1.82 IN 24.73
WTR YR 1978 TOTAL 70593 MEAN 193 MAX 3160 MIN 22 CFSM 1.82 IN 24.77

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 mi^2 (18,925 km^2).

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 ft^3/s (85.0 m^3/s), which are fair due to indefinite stage-fall-discharge relation. Flow regulated by Lake Cumberland and Dale Hollow Lake (see page 123).

AVERAGE DISCHARGE.--56 years, 11,690 ft^3/s (331.1 m^3/s), 21.73 in/yr (552 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 145,000 ft^3/s (4,110 m^3/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 ft^3/s (1.95 m^3/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, 43,800 ft^3/s (1,240 m^3/s) Jan. 26, gage height, 26.43 ft (8.056 m); minimum daily, 1,380 ft^3/s (39.1 m^3/s) Oct. 31; minimum recorded gage height, 6.30 ft (1.920 m) Dec. 29.

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	6320	5160	19400	18100	23600	18800	3880	9020	18800	9280	11000	13100
2	12600	8020	17600	18200	23700	20200	3980	10600	20800	1790	11100	14600
3	6930	7080	19700	21000	23000	23000	5510	12400	20800	5190	10600	12600
4	6370	5270	19100	20600	22800	24600	7470	13500	17300	5970	3910	6620
5	17200	5040	24100	18200	23100	22700	10500	12000	14100	7080	3170	7800
6	12400	3730	28300	21100	24200	17600	11300	6030	17000	10600	3970	14700
7	2940	3940	27900	20100	23200	14500	10000	3610	17000	11300	12100	15100
8	4570	6250	25500	18100	22300	14000	7770	7350	16400	13200	11000	13700
9	3080	3910	25000	26100	21400	16800	2590	12000	16600	16200	10700	13400
10	3130	5190	22500	29300	22100	14800	6720	10300	14400	14100	12400	14600
11	6840	13600	20500	28700	20400	11600	2000	7880	14600	9550	14500	15100
12	7910	20000	17800	26900	21100	9310	3190	4780	17300	5660	12000	15900
13	12700	14800	8700	26000	17100	4200	1730	15900	19800	5500	12800	8060
14	17800	9060	11200	26200	24200	4500	1590	18500	17000	6890	11400	8120
15	18100	8080	13300	24300	23500	4800	5320	16700	14900	7470	15600	11700
16	15400	7100	15200	17600	21200	8750	4360	18900	17700	5070	15500	13000
17	16900	7480	17300	19100	21600	8870	9560	19100	19600	10000	15700	11500
18	20000	15200	14500	19800	18900	9900	2340	18500	17600	9420	16600	12100
19	20400	16900	12200	19400	18400	7140	5390	19500	10500	13000	19400	16900
20	22100	12200	14100	18800	15900	3610	5180	20700	11200	14000	16200	17500
21	24800	7710	19300	19400	16500	4490	8220	18200	12600	15700	11600	15000
22	22800	11200	15600	19800	22000	4170	11100	19100	13300	9400	14400	14600
23	14800	13100	8450	18100	20200	7340	5040	19200	10400	2500	17200	7180
24	7690	6590	6000	19200	20300	6140	1730	17400	5900	9390	17200	2040
25	11000	4910	11800	28400	18200	4140	5470	15600	6110	8840	18400	4450
26	13000	12600	8160	41800	13200	4460	5470	21900	7260	2360	16600	8980
27	11300	21500	15700	30100	11400	5480	11300	24400	15600	8220	14400	9210
28	9060	17500	20300	25300	16100	11300	7310	19000	19000	8040	10400	7940
29	2920	17500	15400	23900	---	13100	5120	14800	19200	7630	13500	9870
30	2570	22900	16300	21700	---	8660	1850	16800	18800	4450	15800	11400
31	1380	---	20300	22900	---	5940	---	18500	---	9800	14100	---
TOTAL	355010	313520	531210	708200	569600	334900	172990	462170	461570	267600	403250	346770
MEAN	11450	10450	17140	22850	20340	10800	5766	14910	15390	8632	13010	11560
MAX	24800	22900	28300	41800	24200	24600	11300	24400	20800	16200	19400	17500
MIN	1380	3730	6000	17600	11400	3610	1590	3610	5900	1790	3170	2040

CAL YR 1977 TOTAL 4161253 MEAN 11400 MAX 37300 MIN 367 MEAN‡ 12790 CFSM‡ 1.75 IN.‡ 23.76
WTR YR 1978 TOTAL 4926790 MEAN 13500 MAX 41800 MIN 1380 MEAN‡ 13740 CFSM‡ 1.88 IN.‡ 25.52

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

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 mi^2 (544 km^2), includes 34 mi^2 (88 km^2) 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 ft^3/s (0.14 m^3/s), which are 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, 22,400 ft^3/s (634 m^3/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 ft^3/s (142 m^3/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)
Nov. 29	1515	6070	172	11.99	3.655	Mar. 14	0845	6280	178	12.18	3.712
Jan. 26	0130	*6540	185	12.41	3.783						

Minimum discharge, no flow many days.

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	167	22	1310	113	370	200	123	117	12	.00	.00	.04
2	119	22	890	92	340	210	103	89	11	.20	.00	.00
3	81	22	644	74	290	730	85	61	12	22	.00	.00
4	56	61	531	64	250	720	71	95	9.7	3.3	.00	.00
5	41	76	2850	61	230	530	63	114	7.6	.00	3.3	.00
6	36	365	1960	87	200	450	55	75	8.0	.00	15	.00
7	32	412	1040	117	175	390	47	54	19	.00	17	.00
8	405	252	800	1430	170	420	40	603	18	.00	3.5	.00
9	1310	167	979	1870	150	600	36	821	22	.00	.22	.00
10	706	173	867	811	140	800	36	386	17	1.1	.44	.00
11	398	130	625	605	135	770	38	229	9.1	.00	.49	.00
12	258	97	543	471	125	610	33	166	4.3	.00	.95	.00
13	175	72	430	395	240	485	26	1030	4.1	.00	21	.00
14	128	56	440	314	530	3920	21	943	2.6	.00	20	.00
15	100	46	244	243	380	1850	19	970	.28	3.9	5.4	.00
16	81	42	206	194	310	1280	18	747	.03	91	39	.00
17	65	93	186	446	275	970	15	511	.00	28	287	.00
18	49	128	288	861	250	714	24	349	.00	2.4	84	.00
19	39	86	266	649	225	546	46	252	.00	.00	35	.00
20	33	65	228	530	200	426	34	177	.00	.00	22	.00
21	28	328	190	397	195	363	22	130	.00	.00	85	.00
22	24	1450	161	315	175	352	17	96	.00	.00	31	.00
23	22	1940	139	268	170	284	15	80	.00	.00	11	.00
24	20	1010	137	709	155	238	15	74	.00	.00	5.7	.00
25	23	672	331	3370	160	233	17	85	.00	99	2.8	.00
26	43	481	269	4260	180	354	292	51	.00	85	.72	.00
27	42	448	213	1600	170	294	370	33	.00	13	15	.00
28	33	844	167	956	175	241	179	26	.00	9.4	6.7	.00
29	28	3110	144	690	---	197	110	21	.00	.85	1.0	.00
30	24	2410	137	530	---	164	107	18	.00	.00	.00	.00
31	22	---	128	450	---	140	---	15	---	.00	.00	---
TOTAL	4588	15080	17343	22972	6365	19481	2077	8418	156.71	359.15	713.22	.04
MEAN	148	503	559	741	227	628	69.2	272	5.22	11.6	23.0	.001
MAX	1310	3110	2850	4260	530	3920	370	1030	22	99	287	.04
MIN	20	22	128	61	125	140	15	15	.00	.00	.00	.00
CFSM	.71	2.40	2.66	3.53	1.08	2.99	.33	1.30	.03	.06	.11	.000
IN.	.81	2.67	3.07	4.07	1.13	3.45	.37	1.49	.03	.06	.13	.00

CAL YR 1977 TOTAL 95470.45 MEAN 262 MAX 9870 MIN .00 CFSM 1.25 IN 16.91
WTR YR 1978 TOTAL 97553.12 MEAN 267 MAX 4260 MIN .00 CFSM 1.27 IN 17.28

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) northeast of McMinnville, and at mile 19.5 (31.4 km).

DRAINAGE AREA.--640 mi^2 (1,658 km^2).

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. Periodic observation of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--54 years, 1,172 ft^3/s (33.19 m^3/s), 24.87 in/yr (632 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,300 ft^3/s (2,130 m^3/s) Mar. 23, 1929, gage height, 39.1 ft (11.92 m) from rating curve extended above 42,000 ft^3/s (1,190 m^3/s) on basis of slope-area measurement of peak flow; minimum, 35 ft^3/s (0.991 m^3/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.--Maximum discharge, 15,800 ft^3/s (447 m^3/s), at 0400 hours Nov. 30, gage height, 17.82 ft (5.432 m), no other peak above base of 11,000 ft^3/s (311 m^3/s); minimum, 103 ft^3/s (2.92 m^3/s) Sept. 30, gage height 1.31 ft (0.399 m).

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	874	719	6110	1250	1430	685	808	4410	412	259	168	273
2	913	648	3860	1150	1310	732	750	4400	386	247	162	194
3	911	626	2870	1020	1200	1300	703	3000	405	327	159	167
4	803	2010	4430	922	1090	1600	658	2290	485	325	210	150
5	675	3160	4870	866	1030	1400	623	2450	482	254	483	141
6	586	4170	3330	874	969	1230	601	1970	408	234	1250	136
7	507	4590	2560	984	869	1120	580	1580	391	222	446	131
8	1040	3340	2080	1480	792	1040	534	3230	4540	215	324	127
9	5210	2270	2060	3800	763	1160	512	7560	6120	212	494	125
10	4790	2140	1960	3040	736	5680	512	4090	2970	297	308	182
11	2740	2010	1640	2110	710	5580	534	2690	1830	263	256	222
12	1760	1600	1500	1680	683	3660	557	1970	1290	221	297	155
13	1310	1310	1390	1490	721	2770	618	2880	1280	209	360	148
14	1040	1110	1310	1340	978	7060	567	3010	1060	211	319	182
15	870	974	1230	1150	1000	6540	521	2320	828	219	287	138
16	758	900	1100	1010	928	3900	492	1960	696	222	287	129
17	673	1500	1060	1240	900	2870	472	1610	598	209	717	127
18	602	1830	1400	2440	862	2290	647	1350	522	192	386	123
19	542	1550	1340	2110	820	1900	1270	1150	570	184	276	118
20	488	1310	1220	1900	765	1650	1240	979	549	184	234	114
21	443	2850	1130	1680	730	1510	1010	862	506	179	205	114
22	407	8450	1020	1440	698	1820	850	773	468	174	187	112
23	377	9490	930	1290	663	1670	741	700	422	168	174	112
24	349	5630	1000	1440	647	1480	677	641	372	166	164	114
25	370	3540	3670	4500	636	1400	633	592	343	187	155	114
26	1090	2550	3340	7360	644	1380	642	541	321	252	234	110
27	1970	2110	2400	5560	619	1250	786	494	301	209	247	108
28	1510	3930	1820	3510	610	1130	813	498	282	219	219	106
29	1180	8910	1480	2530	---	1030	742	579	268	199	172	104
30	966	12600	1330	1950	---	944	907	533	272	181	167	104
31	819	---	1320	1630	---	833	---	469	---	178	231	---
TOTAL	36573	97827	66760	64746	23803	68614	21000	61581	29377	6818	9578	4180
MEAN	1180	3261	2154	2089	850	2213	700	1986	979	220	309	139
MAX	5210	12600	6110	7360	1430	7060	1270	7560	6120	327	1250	273
MIN	349	626	930	866	610	685	472	469	268	166	155	104
CFSM	1.84	5.10	3.37	3.26	1.33	3.46	1.09	3.10	1.53	.34	.48	.22
IN.	2.13	5.69	3.88	3.76	1.38	3.99	1.22	3.58	1.71	.40	.56	.24

CAL YR 1977 TOTAL 550640 MEAN 1509 MAX 38500 MIN 135 CFSM 2.36 IN 32.01
WTR YR 1978 TOTAL 490857 MEAN 1345 MAX 12600 MIN 104 CFSM 2.10 IN 28.53

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 mi^2 (4,346 km^2).

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).

AVERAGE DISCHARGE.--64 years (1915-78), 3,209 ft^3/s (90.88 m^3/s), 25.97 in/yr (660 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft^3/s (5,950 m^3/s) Mar. 23, 1929, gage height, 43.6 ft (13.29 m), present datum, from floodmark, from rating curve extended above 110,000 ft^3/s (3,120 m^3/s); minimum daily, 25 ft^3/s (0.71 m^3/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, 40,200 ft^3/s (1,140 m^3/s) Nov.29, gage height, 21.74 ft (6.626 m); minimum, 48 ft^3/s (1.36 m^3/s) Oct.26, gage height, 2.14 ft (0.652 m); minimum daily, 56 ft^3/s (1.59 m^3/s) June 4.

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	3300	1260	14400	3150	3520	2510	3120	2400	1240	1080	378	68
2	3190	1260	8860	3150	3290	2510	3100	4950	1720	62	375	68
3	3170	1260	6480	3150	3180	2520	3080	5540	57	61	375	68
4	3150	1280	13300	3140	3170	2880	3060	4780	56	60	391	69
5	2500	1300	16300	3100	3160	2980	2030	5790	1300	1100	1260	383
6	3050	1500	9200	3080	3160	2970	2010	4540	1310	539	2120	68
7	2510	7030	6990	3070	3140	2980	2030	3620	1300	634	5450	69
8	3010	6020	5200	3080	3110	2980	63	6290	2140	61	3590	481
9	12800	3830	5280	6860	3080	2990	989	14600	13000	64	3160	68
10	12300	3950	5050	6650	3060	8230	2230	8480	7200	532	3150	720
11	6140	4360	3870	5010	3040	13500	2230	4890	4230	417	3130	446
12	4190	3460	3520	4280	3010	7890	1980	4340	3210	61	2680	788
13	3510	3220	3500	3750	2950	6280	1940	10400	6810	61	597	685
14	3190	3150	3310	3430	2940	19600	1970	10300	4210	61	1830	67
15	3170	2810	3190	3210	2940	16500	1140	7250	3250	61	1800	67
16	3150	3100	3150	3170	2930	9590	1090	5690	3180	61	1350	67
17	3130	3100	3110	3160	2910	6790	1440	4900	3170	63	2260	67
18	3080	4450	3110	5260	61	5260	1360	3840	2670	420	2880	1210
19	2840	4220	3110	5690	58	4400	1910	3350	2720	491	1180	667
20	2890	3430	3110	5120	2270	3980	1860	3100	2220	729	952	685
21	2520	9420	3120	4480	2260	4320	2000	3100	2040	774	807	420
22	2050	25000	3120	3690	1980	4000	931	3080	1990	65	293	63
23	2020	23900	3090	3170	1980	3500	1250	3050	1980	64	367	63
24	1740	13800	3070	4730	1980	3650	1890	3010	99	64	361	63
25	1730	7550	9420	13000	870	3470	1870	2990	71	65	343	623
26	1990	6480	8480	27300	850	3360	1920	2970	1820	1410	71	550
27	1990	4700	5560	14700	2020	3220	1920	2940	1300	2200	71	529
28	2830	11700	4520	8690	2480	3150	1860	1900	1390	2640	383	518
29	2830	29100	3650	5760	---	3150	1750	1930	1330	67	1390	529
30	2820	27900	3250	4700	---	3150	2230	1920	1370	68	1260	69
31	1950	---	3190	4010	---	3130	---	1180	---	318	431	---
TOTAL	108740	223540	174510	174740	69399	165440	56253	147120	78383	14353	44685	10238
MEAN	3508	7451	5629	5637	2479	5337	1875	4746	2613	463	1441	341
MAX	12800	29100	16300	27300	3520	19600	3120	14600	13000	2640	5450	1210
MIN	1730	1260	3070	3070	58	2510	63	1180	56	60	71	63
(†)	-11900	+12900	+100	+300	-11400	+7900	-6500	-3500	+2000	+5900	-1200	-2700
MEAN‡	3124	7881	5633	5646	2071	5592	1658	4633	2679	653	1403	251
CFSM‡	1.86	4.70	3.36	3.36	1.23	3.33	.99	2.76	1.60	.39	.84	.15
IN.‡	2.15	5.24	3.87	3.88	1.28	3.84	1.10	3.18	1.78	.45	.96	.17

CAL YR 1977 TOTAL 1299768 MEAN 3561 MAX 84400 MIN 42 MEAN‡ 3601 CFSM‡ 2.15 IN‡ 29.13
WTR YR 1978 TOTAL 1267401 MEAN 3472 MAX 29100 MIN 56 MEAN‡ 3450 CFSM‡ 2.06 IN‡ 27.91

† Change in contents, in cfs-days, in Great Falls Lake.
‡ Adjusted for change in contents.

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 mi^2 (27, 687 km^2).

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.123).

AVERAGE DISCHARGE.--56 years, 17,530 ft^3/s (496.0 m^3/s), 22.26 in/yr (565 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 210,000 ft^3/s (5,950 m^3/s) Dec. 30, 1926; maximum gage height, 59.8 ft (18.23 m) Dec. 30, 1926; minimum daily discharge, 366 ft^3/s (10.4 m^3/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 discharge, 95,400 ft^3/s (2,700 m^3/s) Jan. 27; maximum gage height, 35.23 ft (10.738 m) Jan. 27; minimum daily, 1,700 ft^3/s (48.1 m^3/s), July 16.

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	12400	7680	38900	20300	35500	24700	5200	3560	25200	22700	12400	14700
2	7860	9910	39100	25900	32600	29000	5410	14600	30100	14900	14600	11800
3	14300	10300	38400	28100	38300	29000	6720	21200	27500	12300	15100	13100
4	12200	13300	32800	31500	35600	31300	15000	14300	21400	8440	14500	9580
5	21800	10300	43300	25800	30000	32700	14700	13100	15700	7800	8940	12800
6	14400	9320	53000	31500	39900	23800	15900	6890	19600	11400	6640	17200
7	12400	8270	56900	38600	36300	15100	15800	3170	19400	17700	9420	16200
8	5500	8690	52000	27400	29600	21700	16300	15300	18000	14900	14500	16500
9	8890	7130	46500	36100	37800	18600	12000	19300	17700	18000	15600	19800
10	7400	11400	50500	43400	37300	21100	7400	13600	18500	18400	13200	17200
11	12100	21500	57400	44800	34200	18700	8920	14800	13800	8200	15100	16100
12	18200	25800	44100	39100	22800	12000	4890	15400	19900	4650	12800	15800
13	19300	22400	30100	48400	30600	10200	3500	22600	26200	6000	9010	11300
14	17700	17200	28600	45300	32000	26700	3760	31600	25400	9400	21300	8410
15	23200	8690	28800	41500	36100	28800	2380	29700	21400	7800	15900	11000
16	23800	13700	25700	39800	31600	17200	3100	31200	20000	1700	19800	8610
17	27200	15500	22300	30700	27400	18300	8500	26400	23100	3400	23500	19600
18	26200	25000	23600	37800	32000	13600	9790	28800	18900	9980	21000	13300
19	26300	28500	23100	34300	22600	10700	6550	29500	13700	18300	21000	23700
20	32300	16700	21300	33500	22600	10200	7980	23500	13300	19400	18100	19700
21	32200	15000	25500	31000	26800	9970	13800	23400	15500	18900	14000	17400
22	33500	25200	24900	25100	31700	12200	9100	24300	16400	15400	20700	13400
23	20000	22200	26500	28800	27500	13800	3760	22700	16800	13500	21100	9450
24	18500	10900	18800	37000	24000	8910	3580	21100	12000	5950	24400	1960
25	13100	12100	12000	46700	23000	4850	2840	20500	8220	11100	22600	3770
26	14100	20000	12200	55800	16000	4190	5620	20000	9500	16400	23000	9030
27	11600	32300	16200	58300	16100	10200	11300	32100	18100	12100	9410	6520
28	12500	30800	25400	51800	21800	21600	6800	26100	23400	12300	14400	6400
29	8070	30800	24800	52300	---	17500	5880	21200	25300	11500	13800	4860
30	4400	47000	24200	54900	---	13400	3050	19100	22400	6720	14400	6840
31	7610	---	23300	57000	---	11000	---	21700	---	7600	12000	---
TOTAL	519030	537590	990200	1202500	831700	541020	239530	630720	576420	366840	492220	376030
MEAN	16740	17920	31940	38790	29700	17450	7984	20350	19210	11830	15880	12530
MAX	33500	47000	57400	58300	39900	32700	16300	32100	30100	22700	24400	23700
MIN	4400	7130	12000	20300	16000	4190	2380	3170	8220	1700	6640	1960

CAL YR 1977 TOTAL 6260890 MEAN 17150 MAX 78500 MIN 1800 MEAN‡ 18950 CFSM‡ 1.77 IN.‡ 24.06
WTR YR 1978 TOTAL 7303800 MEAN 20010 MAX 58300 MIN 1700 MEAN‡ 20040 CFSM‡ 1.88 IN.‡ 25.45

‡ 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 Feb. 10 to Mar. 14.

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, 295 micromhos/cm Nov. 23, 1977; 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.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 295 micromhos/cm Nov. 23; minimum, 125 micromhos/cm Jan. 29, Feb. 25.
WATER TEMPERATURES: Maximum daily, 29.5°C Oct. 10; minimum, 3.5°C Feb. 24.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	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)
OCT 21...	1030	37500	180	7.2	15.5	10	--	7.8	K16	K8	72
DEC 01...	1115	38000	200	7.6	12.0	15	--	9.0	170	K460	88
JAN 04...	1030	34300	170	7.4	9.0	9	--	9.8	--	K12	71
FEB 03...	1215	39200	170	7.6	4.0	15	--	11.4	K9	34	74
MAR 16...	0945	17500	200	7.9	7.5	150	--	12.0	44	K20	85
MAY 17...	1100	26400	190	7.4	14.0	15	--	8.2	160	120	89
JUN 12...	1200	16000	170	7.3	16.5	6	--	9.3	K9	--	68
JUL 26...	1130	23100	180	7.8	20.0	--	20	8.3	--	K1000	79
AUG 09...	1100	10500	180	7.9	18.0	--	10	8.5	--	390	72
SEP 19...	0945	17800	165	6.9	19.5	--	5.0	7.8	K5	31	69

DATE	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)	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)
OCT 21...	25	21	4.8	2.8	.1	1.7	57	0	47	22	2.7
DEC 01...	24	27	4.9	3.3	.2	1.6	77	0	63	21	3.2
JAN 04...	21	21	4.6	3.0	.2	1.9	61	0	50	20	3.0
FEB 03...	25	22	4.6	3.5	.2	1.5	59	0	48	24	1.8
MAR 16...	19	26	4.9	3.2	.2	1.6	81	0	66	--	--
MAY 17...	24	27	5.2	2.5	.1	1.3	79	0	65	19	2.1
JUN 12...	27	19	4.9	3.7	.2	1.5	50	0	41	26	2.4
JUL 26...	30	24	4.7	3.5	.2	1.5	--	--	49	23	4.0
AUG 09...	18	22	4.1	2.6	.1	1.4	--	--	54	17	2.9
SEP 19...	22	20	4.7	3.6	.2	1.2	--	--	47	26	3.0

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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)	SOLIDS, DISSOLVED (TONS PER DAY)	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)	PHOSPHORUS, DISSOLVED (MG/L AS P)
OCT 21...	.1	4.1	79	87	.11	8000	.32	.00	--	.03	.01
DEC 01...	--	--	102	--	.14	10500	.49	.01	--	.05	.02
JAN 04...	.0	4.2	98	88	.13	9080	.34	.01	--	.02	.01
FEB 03...	.1	5.0	92	92	.13	9740	.42	.00	.19	.02	.03
MAR 16...	--	--	116	--	.16	5480	.52	.01	--	.08	.03
MAY 17...	.0	4.8	108	101	.15	7700	.53	.00	--	.05	.01
JUN 12...	.1	4.3	108	87	.15	4670	.42	.01	.26	.03	.00
JUL 26...	.1	4.2	130	95	.18	8110	.40	.00	.32	.09	.03
AUG 09...	.1	3.8	102	86	.14	2890	.41	.01	--	.06	.01
SEP 19...	.1	4.1	101	91	.14	4850	.36	.02	--	.02	.02

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHYTOPLANKTON, TOTAL (CELLS PER ML)	CHLOR-A PERIPHYTON CHROMOGRAPHIC FLUOROM (MG/M2)	CHLOR-B PERIPHYTON CHROMOGRAPHIC FLUOROM (MG/M2)	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 21...	--	2.7	--	--	--	--	--	--	--	--
DEC 01...	13	--	610	.490	.000	.630	.945	25	2570	92
JAN 04...	--	2.6	--	--	--	--	--	--	--	--
FEB 03...	1.0	--	--	--	--	--	--	37	3920	100
MAR 16...	.6	--	2600	.280	.000	.787	.866	24	1130	83
MAY 17...	--	3.0	920	--	--	--	--	15	1070	76
JUN 12...	6.4	--	1200	--	--	--	--	54	2330	13
JUL 26...	--	4.0	1200	31.3	.000	37.5	40.6	46	2870	49
AUG 09...	2.4	--	21000	--	--	--	--	61	1730	57
SEP 19...	1.6	--	5500	--	--	--	--	10	481	92

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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)	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)
OCT												
21...	--	1	0	0	2	0	20	1	4	2	810	10
JAN												
04...	--	0	0	0	0	1	<10	0	8	3	500	20
MAY												
17...	--	1	0	0	0	0	<10	0	4	2	700	10
JUL												
26...	1	1	0	0	2	3	10	3	8	5	1540	40

DATE	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)	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												
21...	31	9	80	30	--	.5	--	0	0	0	10	0
JAN												
04...	6	11	50	10	--	<.5	--	0	0	0	20	20
MAY												
17...	14	6	60	10	--	<.5	0	0	0	0	20	10
JUL												
26...	12	0	160	10	.5	.5	0	0	0	0	30	20

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	215	133	166	---	---	---	208	197	202	207	174	189
2	186	133	159	---	---	---	197	192	195	194	174	183
3	189	184	185	---	---	---	194	188	191	197	169	182
4	252	141	179	276	156	208	193	185	188	200	149	180
5	181	133	166	269	194	212	212	191	200	184	169	175
6	184	136	172	261	193	217	210	199	204	191	170	179
7	186	159	176	260	148	212	201	193	197	191	178	184
8	228	143	176	---	---	---	196	191	193	242	181	205
9	241	160	212	---	---	---	199	190	195	231	203	212
10	207	160	190	---	---	---	199	193	196	206	194	199
11	205	179	197	189	160	174	196	188	193	200	188	192
12	202	144	166	183	162	169	195	187	190	198	184	190
13	168	141	151	190	168	177	190	185	187	192	183	188
14	173	139	148	209	172	194	189	183	186	188	181	184
15	189	140	176	213	159	188	189	183	185	191	169	184
16	190	141	161	209	158	186	211	183	192	212	168	190
17	---	---	---	279	176	199	213	179	190	196	152	182
18	---	---	---	191	179	185	238	186	202	192	176	182
19	---	---	---	195	175	185	241	184	204	186	175	178
20	---	---	---	210	176	192	225	184	203	181	165	173
21	---	---	---	265	192	213	208	181	190	177	164	170
22	160	151	155	274	211	236	201	179	190	181	160	169
23	183	156	167	293	226	259	207	177	193	187	146	159
24	179	132	165	287	198	244	222	188	200	187	158	170
25	179	133	161	250	177	206	283	193	213	203	186	199
26	195	154	168	182	175	179	219	183	200	198	181	191
27	184	154	171	205	177	186	232	182	200	194	178	186
28	183	163	177	226	173	212	214	142	185	177	165	170
29	---	---	---	226	205	213	206	179	191	169	125	160
30	---	---	---	215	204	209	207	177	188	169	146	156
31	---	---	---	---	---	---	205	142	186	152	147	149
MONTH	---	---	---	---	---	---	283	142	194	242	125	181

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	152	144	148	184	149	168	212	173	196	---	---	---
2	158	144	150	192	151	175	222	165	181	---	---	---
3	164	145	154	244	149	175	210	165	184	---	---	---
4	151	143	147	256	179	201	183	148	167	---	---	---
5	149	144	147	289	168	199	192	147	165	---	---	---
6	149	143	146	217	170	190	181	144	159	---	---	---
7	149	141	145	226	169	194	181	146	161	---	---	---
8	148	141	144	217	173	191	184	145	163	---	---	---
9	159	142	146	273	183	209	188	154	175	---	---	---
10	163	141	148	268	206	246	202	147	173	---	---	---
11	164	139	148	283	187	246	194	149	181	---	---	---
12	154	142	148	245	187	213	204	175	188	---	---	---
13	161	145	153	---	---	---	206	147	188	---	---	---
14	165	151	155	---	---	---	---	---	---	---	---	---
15	167	153	156	---	---	---	---	---	---	---	---	---
16	174	150	161	---	---	---	182	150	164	---	---	---
17	177	146	159	263	193	211	178	141	159	---	---	---
18	175	146	159	259	178	204	180	143	168	186	179	183
19	167	146	154	255	191	208	235	177	192	182	166	177
20	187	145	158	258	143	196	205	143	174	192	158	177
21	174	145	156	267	169	198	173	141	154	194	157	179
22	165	145	155	243	151	184	189	153	172	182	125	168
23	174	146	165	191	152	173	192	172	180	180	151	171
24	172	148	164	229	183	199	---	---	---	183	148	172
25	182	125	169	256	189	212	---	---	---	199	148	170
26	188	150	173	248	194	215	196	144	167	174	147	162
27	191	154	164	224	152	186	177	149	169	167	152	162
28	180	153	167	186	151	173	180	151	171	167	146	160
29	---	---	---	189	150	169	185	167	172	173	151	162
30	---	---	---	189	155	174	193	170	179	172	143	157
31	---	---	---	210	157	183	---	---	---	170	143	155
MONTH	191	125	155	289	143	196	235	141	173	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	168	148	161	180	152	164	217	188	194
2	---	---	---	170	154	164	178	154	165	260	183	200
3	---	---	---	186	163	173	173	151	164	211	183	187
4	---	---	---	171	160	165	175	153	168	189	172	184
5	---	---	---	234	164	176	185	151	169	239	174	188
6	---	---	---	201	157	169	238	177	193	188	171	180
7	---	---	---	189	153	166	241	177	191	189	167	183
8	---	---	---	169	152	161	202	158	173	195	178	189
9	---	---	---	168	152	161	239	160	175	192	176	184
10	---	---	---	182	163	168	214	156	173	191	172	182
11	---	---	---	220	164	175	180	160	170	190	174	185
12	---	---	---	176	169	171	214	172	183	193	173	186
13	164	152	158	195	135	172	211	171	192	193	189	191
14	164	148	158	243	156	196	253	175	196	195	177	187
15	164	148	156	248	173	191	207	159	172	---	---	---
16	165	148	158	224	141	183	196	154	170	---	---	---
17	160	147	155	257	153	177	201	162	180	---	---	---
18	167	148	159	192	153	166	196	166	174	---	---	---
19	166	162	164	172	154	164	192	160	173	168	160	165
20	220	154	170	170	153	163	181	160	176	169	153	163
21	166	148	158	171	152	163	276	177	188	173	153	167
22	167	149	158	172	153	166	201	155	173	174	166	170
23	164	150	158	174	155	167	180	153	169	173	157	168
24	164	150	157	200	166	177	174	152	167	---	---	---
25	164	148	156	188	154	170	172	153	166	---	---	---
26	166	147	159	215	172	179	174	155	168	---	---	---
27	160	132	153	244	173	185	175	155	167	---	---	---
28	162	147	157	262	171	193	223	171	189	---	---	---
29	165	148	161	---	---	---	190	172	186	---	---	---
30	166	149	159	234	170	198	198	182	191	---	---	---
31	---	---	---	---	---	---	195	184	190	---	---	---
MONTH	---	---	---	262	135	173	276	151	177	---	---	---
YEAR	293	125	179									

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

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

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	20.0	12.5	17.5	21.0	14.5	18.0	---	---	---
2	---	---	---	19.5	13.5	17.5	22.0	14.5	18.5	---	---	---
3	---	---	---	22.0	16.5	19.0	22.0	14.5	18.5	---	---	---
4	---	---	---	19.5	14.0	16.5	22.0	14.5	19.5	---	---	---
5	---	---	---	23.0	17.5	18.5	21.5	19.0	20.5	---	---	---
6	---	---	---	21.5	15.0	18.0	23.0	19.5	21.0	---	---	---
7	---	---	---	21.5	14.5	18.5	24.0	21.0	22.5	---	---	---
8	---	---	---	20.0	14.0	17.0	21.5	14.0	18.0	---	---	---
9	---	---	---	20.0	13.0	17.0	21.5	15.0	18.5	---	---	---
10	---	---	---	21.0	17.0	19.5	20.5	14.5	19.0	---	---	---
11	---	---	---	23.0	15.5	20.0	21.0	15.5	19.0	---	---	---
12	---	---	---	21.5	16.5	19.5	21.0	15.0	19.5	---	---	---
13	16.5	13.0	15.0	21.5	20.0	21.0	21.5	19.5	20.5	---	---	---
14	17.0	11.5	15.0	23.0	20.0	21.5	23.0	17.5	21.0	---	---	---
15	17.5	11.0	14.5	22.5	19.5	20.5	20.5	14.5	17.5	---	---	---
16	17.5	11.5	15.5	22.5	18.5	21.0	20.5	14.5	18.0	---	---	---
17	17.0	11.5	15.0	26.5	16.5	20.5	21.0	16.5	19.0	---	---	---
18	18.0	12.5	16.0	19.5	13.0	17.5	20.0	15.0	18.0	---	---	---
19	18.0	17.0	17.5	21.0	13.0	18.0	20.5	15.0	19.0	---	---	---
20	20.0	13.0	17.0	21.5	14.0	18.5	20.5	16.5	19.5	21.0	16.5	19.0
21	18.0	12.0	15.5	21.5	13.5	18.5	22.5	18.5	20.0	21.0	16.5	19.5
22	18.5	12.5	16.0	22.0	14.0	19.0	20.5	14.5	18.5	20.0	18.5	19.5
23	18.5	12.0	16.0	22.0	15.5	19.5	20.5	14.5	18.0	20.5	18.0	19.5
24	19.0	12.5	15.5	25.5	19.5	21.5	20.0	14.5	18.0	---	---	---
25	18.5	12.0	15.5	20.5	14.5	18.5	20.0	15.0	18.0	---	---	---
26	18.0	13.5	16.5	22.0	17.0	20.5	20.5	16.0	19.0	---	---	---
27	18.5	12.0	15.5	22.5	19.5	21.0	20.0	15.5	18.0	---	---	---
28	19.5	12.5	17.5	23.0	17.0	20.5	25.5	18.0	23.0	---	---	---
29	20.5	13.5	18.5	21.5	18.5	20.0	23.5	19.0	22.5	---	---	---
30	20.0	12.5	17.0	24.0	19.0	21.0	24.0	20.0	23.0	---	---	---
31	---	---	---	23.5	16.0	20.0	---	---	---	---	---	---
MONTH	---	---	---	26.5	12.5	19.5	25.5	14.0	19.5	---	---	---
YEAR	26.5	3.5	12.9									

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	DEC 1,77		MAR 16,78		MAY 17,78		JUN 12,78	
TIME	1115		0945		1100		1200	
TOTAL CELLS/ML	610		2600		920		1200	
DIVERSITY: DIVISION	0.5		0.2		0.3		1.0	
.CLASS	0.5		0.2		0.3		1.0	
..ORDER	0.8		0.5		0.8		1.0	
...FAMILY	0.9		0.5		1.0		1.2	
....GENUS	1.0		0.7		1.9		1.6	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...OOCYSTACEAE								
....GLOEOACTINIUM	--	-	--	-	--	-	--	-
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	180	15
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	15	1
....MICRACTINIUM	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	--	-	14	2	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
....SELENASTRUM	--	-	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	--	-
....SCENEDESMUS	63	10	--	-	--	-	--	-
....TETRASTRUM	--	-	--	-	--	-	--	-
..TETRASPORALES								
...PALMELLACEAE								
....SPHAEROCYSTIS	--	-	--	-	--	-	15	1
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	25	1	14	2	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	9	1	2400#	91	400#	43	--	-
....MELOSIRA	490#	81	51	2	380#	42	--	-
....STEPHANODISCUS	--	-	--	-	--	-	--	-
..PENNALES								
...CYMBELLACEAE								
....CYMBELLA	27	4	25	1	14	2	15	1
....EPITHEMIA	--	-	--	-	14	2	--	-
...FRAGILARIACEAE								
....SYNEDRA	--	-	--	-	--	-	15	1
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	25	1	--	-	--	-
...MERIDIONACEAE								
....MERIDION	--	-	--	-	--	-	30	2
...NAVICULACEAE								
....NAVICULA	--	-	25	1	42	5	--	-
...NITZSCHIACEAE								
....NITZSCHIA	18	3	--	-	14	2	15	1
...SURIRELLACEAE								
....SURIRELLA	--	-	25	1	14	2	--	-
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...OCHROMONADACEAE								
....DINOBRYON	--	-	--	-	--	-	--	-
....OCHROMONAS	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	DEC 1,77		MAR 16,78		MAY 17,78		JUN 12,78	
TIME	1115		0945		1100		1200	
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	--	-	--	-	--	-	--	-
....COCCOCHLORIS	--	-	--	-	--	-	--	-
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	--	-	90	7
....OSCILLATORIA	--	-	--	-	--	-	840#	69
...RIVULARIACEAE								
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	14	2	--	-
....PHACUS	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	51	2	--	-	--	-

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

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	JUL 26,78		AUG 9,78		SEP 19,78	
TIME	1130		1100		0945	
TOTAL CELLS/ML	1200		21000		5500	
DIVERSITY: DIVISION	1.7		0.3		1.2	
.CLASS	1.8		0.3		1.2	
..ORDER	2.6		0.3		1.8	
...FAMILY	2.7		1.2		2.2	
....GENUS	2.8		1.2		2.6	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...OOCYSTACEAE						
....GLOEOACTINIUM	--	-	*	0	--	-
...COELASTRACEAE						
....COELASTRUM	--	-	*	0	--	-
...MICRACTINIACEAE						
....GOLENKINIA	--	-	--	-	--	-
....MICRACTINIUM	--	-	120	1	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	44	4	*	0	67	1
....DICTYOSPHAERIUM	200#	16	*	0	130	2
....SELENASTRUM	--	-	--	-	45	1
....TETRAEDRON	--	-	--	-	*	0
....TREUBARIA	--	-	--	-	*	0
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	*	0	180	3
....SCENEDESMUS	--	-	240	1	180	3
....TETRASTRUM	--	-	*	0	--	-
..TETRASPORALES						
...PALMELLACEAE						
....SPHAEROCYSTIS	--	-	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	22	2	--	-	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	110	9	--	-	290	5
....MELOSIRA	--	-	*	0	490	9
....STEPHANODISCUS	--	-	*	0	--	-
..PENNALES						
...CYMBELLACEAE						
....CYMBELLA	--	-	--	-	67	1
....EPITHEMIA	--	-	--	-	--	-
...FRAGILARIACEAE						
....SYNEDRA	--	-	110	1	*	0
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	*	0	--	-
...MERIDIONACEAE						
....MERIDION	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	44	4	--	-	--	-
...NITZSCHIACEAE						
....NITZSCHIA	110	9	*	0	45	1
...SURIRELLACEAE						
....SURIRELLA	--	-	--	-	--	-
.CHRYSOPHYCEAE						
..CHRYSOMONADALES						
...OCHROMONADACEAE						
....DINOBRYON	22	2	--	-	67	1
....OCHROMONAS	--	-	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03425000 CUMBERLAND RIVER AT CARTHAGE, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	JUL 26,78 1130		AUG 9,78 1100		SEP 19,78 0945	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	350#	29	--	-	180	3
....ANACYSTIS	--	-	--	-	490	9
....COCCOCHLORIS	--	-	*	0	--	-
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	1400	7	--	-
...OSCILLATORIACEAE						
....LYNGBYA	--	-	17000#	79	--	-
....OSCILLATORIA	270#	21	--	-	3000#	54
...RIVULARIACEAE						
....RAPHIDIOPSIS	--	-	2000	9	200	4
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	--	-	--	-
....PHACUS	--	-	*	0	--	-
....TRACHELOMONAS	66	5	--	-	--	-

NOTE: # -DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* -OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

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 mi^2 (30,394 km^2).

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 fair. Flow regulated by six lakes or reservoirs (see p.123).

AVERAGE DISCHARGE.--42 years (water years 1932-42, 1948-78), 18,990 ft^3/s (537.8 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 173,000 ft^3/s (4,900 m^3/s) Jan. 29, 1937; maximum gage height, 48.13 ft (14.670 m) Mar. 14, 1975; minimum daily discharge, 86 ft^3/s (2.44 m^3/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 ft^3/s (5,660 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 93,600 ft^3/s (2,650 m^3/s) Jan. 27; maximum gage height, 33.12 ft (10.095 m) Jan. 27; minimum daily discharge, 1,650 ft^3/s (46.7 m^3/s) Apr. 16; minimum gage height, 4.00 ft (1.219 m) Sept. 5, 8, 14, and 29.

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	8750	8230	52800	14200	44200	26300	6630	5350	28000	24400	10200	21400
2	5640	5830	41200	21900	44700	30400	5020	15200	30900	16800	13800	13300
3	12900	10900	41200	34400	38500	35000	5980	23600	31100	17800	13800	12700
4	14200	10100	41800	39100	32200	40300	14000	17000	27700	11000	13700	8410
5	18600	10700	44800	28800	36700	39800	14700	19400	12200	15800	6800	10200
6	12600	7090	56300	30600	38500	34900	17800	12600	14000	13600	5670	18600
7	15100	18500	48100	31100	34400	26900	20200	5570	24900	8620	9440	15900
8	10400	6970	50200	30600	40700	17200	14400	23900	22300	15200	14800	17100
9	23600	6320	47700	48500	40000	23600	9180	39200	21000	17800	15700	16600
10	13300	9880	47700	44700	28300	25800	6550	22600	16500	24400	12800	19300
11	16400	21500	44800	49300	24600	30300	13400	20400	7190	19800	16200	20100
12	15500	12100	42300	50500	32100	18200	4580	15300	21700	7450	18400	15800
13	16700	18500	38200	40500	39400	5690	5610	17800	27300	6890	15600	15100
14	18300	26000	30500	37500	27600	50100	3810	33700	27900	12200	16300	12200
15	22400	7100	29600	37700	40700	51800	2820	37800	18900	16600	19400	12500
16	24300	16000	27600	39200	41800	28000	1650	37500	16800	3190	19200	9170
17	22500	16800	27600	34800	29100	24300	4380	26200	29400	2880	18900	14800
18	24500	22100	26600	40900	29200	20900	12600	24500	22400	8750	24600	17200
19	25900	22700	26500	44400	31400	14300	9970	28200	23600	16200	24700	21800
20	30200	23100	26900	44100	27100	10900	7310	28600	17500	15200	25400	15100
21	33100	18700	24500	34600	23800	10900	11800	24400	15700	15200	19600	16000
22	31900	31600	28800	26900	31800	13700	14900	24200	15000	17200	19300	12100
23	33800	31200	30900	32700	34900	14400	5970	22000	18500	13700	19500	14100
24	11600	12500	28000	40100	30300	14400	6130	23500	13400	5780	19700	6990
25	18400	18100	19800	47300	26600	4610	1650	26700	8520	11000	21000	4540
26	17800	31600	10900	83600	16100	5480	2020	24400	11700	11000	26200	6700
27	18700	39900	18700	75400	22000	11000	11400	33000	18200	17600	17600	8300
28	17900	37900	25200	51600	23600	24600	10000	27800	22200	12900	11300	7180
29	12700	39900	31700	44600	---	19000	6870	21900	26000	9850	17100	7150
30	6680	44800	26000	43900	---	13900	3500	20900	24300	4440	19300	9010
31	14200	---	18100	41300	---	13600	---	19100	---	5440	16800	---
TOTAL	568570	586620	1055000	1264800	910300	700280	254830	722320	614810	398690	522810	399350
MEAN	18340	19550	34030	40800	32510	22590	8494	23300	20490	12860	16860	13310
MAX	33800	44800	56300	83600	44700	51800	20200	39200	31100	24400	26200	21800
MIN	5640	5830	10900	14200	16100	4610	1650	5350	7190	2880	5670	4540
CFSM	1.56	1.67	2.90	3.48	2.77	1.93	.72	1.99	1.75	1.10	1.44	1.13
IN.	1.80	1.86	3.34	4.01	2.89	2.22	.81	2.29	1.95	1.26	1.66	1.27

CAL YR 1977 TOTAL 7092070 MEAN 19430 MAX 118000 MIN 1130
WTR YR 1978 TOTAL 7998380 MEAN 21910 MAX 83600 MIN 1650

NOTE.--No gage-height record Mar. 21 to May 19, July 17 to Aug. 18.

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 mi^2 (101.3 km^2).

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.--16 years, 69.4 ft^3/s (1.965 m^3/s), 24.10 in/yr (612 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft^3/s (374 m^3/s) Mar. 15, 1973, gage height, 16.75 ft (5.105 m), from rating curve extended above 3,000 ft^3/s (85.0 m^3/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 ft^3/s (0.076 m^3/s) Oct. 30, 1963.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,980 ft^3/s (56.1 m^3/s) at 0330 hours Dec. 5, gage height, 8.70 ft (2.652 m), no other peaks above base of 2,000 ft^3/s (56.6 m^3/s); minimum, 5.9 ft^3/s (0.17 m^3/s) Sept. 30, gage height 1.92 ft (0.585).

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	22	13	216	39	60	43	46	115	22	15	9.7	17
2	48	13	135	34	54	78	43	73	23	40	9.4	13
3	32	14	97	30	47	270	40	58	23	64	9.0	12
4	25	46	264	29	44	152	39	84	21	26	15	10
5	19	52	620	29	43	98	38	73	20	20	25	9.7
6	16	97	247	44	39	80	37	54	19	17	60	9.1
7	15	113	142	44	36	68	35	60	22	16	38	8.8
8	336	68	102	213	35	63	33	540	39	16	15	8.5
9	300	48	106	199	34	93	32	342	31	171	23	8.5
10	97	38	81	113	32	385	33	138	23	64	14	8.5
11	54	29	70	81	30	213	34	89	21	29	20	8.5
12	38	24	64	70	29	147	30	74	22	23	38	8.3
13	29	21	57	63	48	108	29	503	23	41	35	8.3
14	23	19	54	53	53	904	27	194	19	44	23	8.3
15	20	19	45	44	42	300	26	145	19	92	17	8.0
16	18	29	41	40	40	191	26	110	17	109	58	8.0
17	16	120	51	181	38	142	25	87	17	40	64	7.7
18	15	56	58	157	38	115	48	72	17	26	32	7.5
19	14	39	52	115	35	102	41	58	23	19	23	7.5
20	13	32	46	90	33	89	34	52	19	17	18	7.0
21	12	256	41	70	33	87	29	45	21	14	15	7.7
22	12	456	36	61	29	86	28	42	19	13	13	7.7
23	12	279	33	60	30	80	27	39	17	12	12	7.7
24	12	133	65	304	29	74	26	35	17	12	11	7.7
25	19	84	174	606	30	73	27	33	16	15	11	7.5
26	27	60	98	468	29	69	36	30	16	13	12	7.0
27	21	256	74	216	29	63	31	29	15	13	11	7.0
28	18	285	58	140	35	57	27	27	15	12	10	7.0
29	16	629	49	100	---	54	25	26	15	11	9.7	6.7
30	15	330	47	80	---	49	104	25	16	10	14	8.3
31	14	---	42	68	---	48	---	24	---	10	40	---
TOTAL	1328	3658	3265	3841	1054	4381	1056	3276	607	1024	704.8	258.5
MEAN	42.8	122	105	124	37.6	141	35.2	106	20.2	33.0	22.7	8.62
MAX	336	629	620	606	60	904	104	540	39	171	64	17
MIN	12	13	33	29	29	43	25	24	15	10	9.0	6.7
CFSM	1.10	3.12	2.69	3.17	.96	3.61	.90	2.71	.52	.84	.58	.22
IN.	1.26	3.48	3.11	3.65	1.00	4.17	1.00	3.12	.58	.97	.67	.25

CAL YR 1977 TOTAL 23478.5 MEAN 64.3 MAX 1730 MIN 6.7 CFSM 1.65 IN 22.34
WTR YR 1978 TOTAL 24453.3 MEAN 67.0 MAX 904 MIN 6.7 CFSM 1.71 IN 23.26

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 mi^2 (679 km^2).

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.--23 years (1950-57, 1964-78), 459 ft^3/s (13.00 m^3/s), 23.79 in/yr (604 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge,41,200 ft^3/s (1,170 m^3/s) Mar. 13, 1975, gage height, 39.48 ft (12,034 m); minimum, 0.2 ft^3/s (0.006 m^3/s) Oct. 23, 1953, gage height, 2.22 ft (0.677 m); minimum daily, 0.4 ft^3/s (0.011 m^3/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 ft^3/s (198 m^3/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)
Nov. 29	1330	9890	280	20.44	6.230	May 8	1830	*11200	317	22.03	6.715
Mar. 14	1000	10500	297	21.26	6.480	May 13	0745	7060	200	16.76	5.108

Minimum daily discharge, 10 ft^3/s (0.28 m^3/s) Sept. 27, 28.

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	120	70	1350	233	350	275	211	1460	76	37	32	180
2	135	64	924	209	311	344	192	841	73	95	27	105
3	180	60	753	182	273	2030	176	517	115	1430	45	73
4	120	64	1180	164	248	1020	160	775	87	176	115	60
5	91	145	3670	154	238	760	154	760	76	93	166	58
6	73	350	1620	235	221	566	143	466	68	64	178	50
7	62	856	952	357	198	449	133	412	58	54	107	35
8	2370	480	779	1170	180	378	122	4970	55	60	269	30
9	2380	296	816	1370	172	432	113	3460	65	1080	401	26
10	760	217	727	650	164	3280	108	976	101	1180	124	24
11	378	164	552	470	154	1430	108	797	78	248	107	23
12	240	133	449	410	145	944	108	570	72	141	103	21
13	170	110	374	360	188	797	98	3980	72	117	103	22
14	129	96	333	300	357	6450	88	1370	70	244	129	21
15	107	87	322	250	294	2040	84	884	64	160	96	21
16	90	95	284	230	256	1260	78	716	57	263	384	20
17	78	1270	275	1050	233	976	78	521	49	174	1110	19
18	68	483	486	900	215	872	145	381	42	101	269	19
19	62	275	408	650	201	764	256	294	42	75	151	18
20	57	207	328	540	182	598	158	246	60	65	96	18
21	52	2030	275	450	176	503	122	215	64	60	68	18
22	49	2970	238	360	166	636	103	184	56	52	60	16
23	43	2140	209	310	154	528	90	160	52	39	55	16
24	43	920	203	1670	154	446	87	141	50	34	49	16
25	52	556	1240	5000	168	408	85	124	45	217	46	16
26	217	371	790	4040	182	415	81	112	37	118	162	12
27	240	1700	528	1400	178	354	96	100	32	72	113	10
28	149	2350	371	916	184	311	88	91	30	70	62	10
29	113	5650	296	719	---	282	78	88	29	54	46	11
30	93	1980	271	538	---	250	804	87	27	43	81	12
31	79	---	256	432	---	227	---	82	---	35	398	---
TOTAL	8800	26189	21259	25719	5942	30025	4347	25780	1802	6651	5152	980
MEAN	284	873	686	830	212	969	145	832	60.1	215	166	32.7
MAX	2380	5650	3670	5000	357	6450	804	4970	115	1430	1110	180
MIN	43	60	203	154	145	227	78	82	27	34	27	10
CFSM	1.08	3.33	2.62	3.17	.81	3.70	.55	3.18	.23	.82	.63	.13
IN.	1.25	3.72	3.02	3.65	.84	4.26	.62	3.66	.26	.94	.73	.14

CAL YR 1977 TOTAL 151875 MEAN 416 MAX 9840 MIN 18 CFSM 1.59 IN 21.56
WTR YR 1978 TOTAL 162646 MEAN 446 MAX 6450 MIN 10 CFSM 1.70 IN 23.09

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 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.--No temperature record June 26 to Aug. 15, Sept. 1-13, no specific conductance record June 26 to Aug. 15, Aug. 26 to Sept. 13 due to instrument malfunction.

EXTREMES FOR PERIOD OF RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 511 micromhos Aug. 15, 1977; minimum, 72 micromhos Aug.16, 1978.
WATER TEMPERATURES: Maximum, 31.5°C July 8, 14-16, 1977; minimum, 0.0°C Jan. 21, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 425 micromhos May 3; minimum, 72 micromhos Aug. 16.
WATER TEMPERATURES: Minimum, 1.5°C Feb. 8.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	359	351	355	384	346	365	344	321	335	361	355	359
2	371	358	365	375	349	361	345	331	340	362	354	358
3	374	354	364	369	353	361	343	336	340	359	346	354
4	369	336	354	368	352	360	347	289	335	358	340	349
5	361	336	351	360	346	353	293	207	261	352	342	347
6	366	342	357	383	350	360	344	298	328	357	338	346
7	374	342	358	397	368	382	352	345	348	358	340	349
8	357	220	295	397	378	386	353	344	349	371	327	345
9	333	251	298	403	383	390	360	350	355	346	330	335
10	356	331	343	409	395	403	358	351	355	355	347	351
11	375	353	362	410	383	398	361	353	358	359	352	355
12	378	355	368	407	377	395	362	347	355	356	355	355
13	378	351	368	404	372	392	353	346	349	361	356	357
14	384	348	370	397	361	382	361	348	355	361	355	357
15	383	341	367	395	355	375	362	350	358	357	349	355
16	380	362	371	372	333	366	369	348	359	356	352	354
17	383	349	368	346	195	302	363	353	357	355	306	338
18	374	347	363	375	339	352	368	348	359	340	306	322
19	377	352	365	386	348	370	368	350	358	352	342	349
20	375	345	362	384	365	377	374	357	365	354	350	352
21	368	340	357	384	252	324	377	365	371	357	350	354
22	366	338	354	344	273	316	369	358	364	359	343	353
23	362	336	352	342	279	320	360	352	355	362	342	356
24	356	334	347	369	344	355	355	348	352	358	233	334
25	351	336	343	381	366	371	368	263	307	277	222	253
26	353	340	346	384	372	378	345	319	334	300	240	268
27	353	321	336	375	234	337	355	346	350	327	304	314
28	342	324	335	334	227	286	357	347	354	336	326	330
29	354	338	346	340	186	256	357	348	353	340	320	335
30	375	344	360	321	248	298	357	353	355	341	331	337
31	368	358	363	---	---	---	360	353	356	342	335	339
MONTH	384	220	353	410	186	356	377	207	347	371	222	341

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	343	329	338	354	344	348	395	343	365	403	341	364
2	343	333	339	357	350	354	382	341	360	422	377	399
3	344	325	335	356	301	320	374	337	359	425	410	417
4	340	324	333	346	324	335	368	340	354	422	400	411
5	340	333	338	350	334	343	368	337	353	418	395	407
6	340	332	337	358	338	348	373	336	354	422	397	409
7	337	327	333	357	347	352	384	340	362	422	409	415
8	337	322	329	369	349	358	379	338	361	415	247	341
9	334	319	327	369	361	364	381	343	365	380	307	348
10	331	310	324	359	269	307	381	353	366	410	370	390
11	331	307	322	342	328	335	383	351	370	414	374	399
12	329	308	319	357	338	349	371	337	356	417	396	410
13	330	308	320	359	340	349	372	342	359	350	241	293
14	335	328	331	323	190	248	374	336	356	381	354	368
15	339	325	334	328	292	313	377	340	361	390	381	383
16	342	328	337	346	329	336	374	342	361	395	367	382
17	345	337	341	352	339	346	371	343	360	396	369	384
18	343	336	339	356	335	346	373	356	365	399	361	382
19	342	327	334	366	329	345	384	355	369	396	367	383
20	338	319	328	375	341	359	393	380	387	399	363	385
21	331	319	326	372	361	366	401	374	389	392	357	378
22	333	314	322	371	338	354	402	367	389	395	363	379
23	324	318	322	364	328	349	401	380	393	386	355	374
24	331	305	320	368	338	358	400	367	386	390	355	375
25	331	309	322	372	359	365	398	387	393	390	352	371
26	340	326	332	369	357	363	396	371	384	388	353	374
27	344	324	334	367	355	363	392	352	376	394	354	376
28	343	335	339	369	334	352	391	351	376	392	356	375
29	---	---	---	372	332	350	390	363	380	385	346	370
30	---	---	---	371	333	356	390	357	377	378	345	363
31	---	---	---	373	327	354	---	---	---	376	341	361
MONTH	345	305	331	375	190	345	402	336	370	425	241	380

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	378	338	361				---	---	---	---	---	---
2	381	350	363				---	---	---	---	---	---
3	356	328	343				---	---	---	---	---	---
4	351	319	339				---	---	---	---	---	---
5	352	311	333				---	---	---	---	---	---
6	352	322	340				---	---	---	---	---	---
7	347	335	340				---	---	---	---	---	---
8	343	320	332				---	---	---	---	---	---
9	341	311	322				---	---	---	---	---	---
10	344	300	324				---	---	---	---	---	---
11	344	302	326				---	---	---	---	---	---
12	344	312	331				---	---	---	---	---	---
13	346	314	330				---	---	---	---	---	---
14	362	323	342				---	---	---	---	---	---
15	364	315	342				---	---	---	350	345	348
16	358	319	338				---	---	---	356	348	352
17	358	316	337				360	72	307	356	351	353
18	367	315	344				337	84	270	361	349	354
19	369	325	348				366	221	328	361	348	354
20	350	309	331				396	360	380	362	347	352
21	344	309	330				402	396	398	358	348	352
22	353	314	333				407	391	398	357	350	353
23	359	313	336				406	393	400	357	353	355
24	347	303	327				398	388	394	360	357	359
25	354	306	334				398	389	394	364	354	360
26	---	---	---				390	371	387	364	352	357
27	---	---	---				---	---	---	361	351	357
28	---	---	---				---	---	---	365	339	349
29	---	---	---				---	---	---	351	341	346
30	---	---	---				---	---	---	352	340	346
31	---	---	---				---	---	---	346	326	339
MONTH	381	300	337				---	---	---	---	---	---
YEAR	425	72	352									

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

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

CUMBERLAND RIVER BASIN

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.0	24.0	25.0				---	---	---	---	---	---
2	25.5	23.5	24.5				---	---	---	---	---	---
3	24.5	23.5	24.0				---	---	---	---	---	---
4	24.5	22.5	23.5				---	---	---	---	---	---
5	26.0	23.0	24.0				---	---	---	---	---	---
6	26.0	24.0	24.5				---	---	---	---	---	---
7	25.0	23.5	24.0				---	---	---	---	---	---
8	26.0	23.5	24.5				---	---	---	---	---	---
9	25.0	23.0	24.5				---	---	---	---	---	---
10	25.5	22.5	23.5				---	---	---	---	---	---
11	26.0	23.5	24.5				---	---	---	---	---	---
12	26.5	23.5	25.0				---	---	---	---	---	---
13	25.5	24.0	25.0				---	---	---	---	---	---
14	25.5	24.0	24.5				---	---	---	27.0	25.5	26.0
15	25.5	23.0	24.5				---	---	---	27.5	24.5	26.0
16	26.0	24.0	25.0				28.5	23.0	26.5	27.0	25.0	26.0
17	27.0	24.5	25.5				25.5	22.0	23.5	27.5	25.0	26.0
18	27.5	26.0	26.5				26.5	23.5	25.0	28.0	26.0	27.0
19	26.5	25.0	26.0				27.0	24.0	25.5	28.5	25.5	27.0
20	28.0	25.0	26.0				27.0	26.0	26.5	28.5	26.0	27.5
21	28.5	25.5	26.5				27.0	24.5	25.5	28.0	26.0	27.0
22	27.0	25.5	26.0				27.5	24.0	25.5	27.0	24.0	25.5
23	27.0	24.5	26.0				28.5	25.5	27.0	24.0	22.5	23.0
24	28.0	25.0	26.5				28.5	26.0	27.5	24.0	21.5	22.5
25	30.0	26.0	27.5				29.0	26.5	28.0	23.5	21.0	22.5
26	---	---	---				28.0	25.5	27.0	23.0	21.0	22.0
27	---	---	---				27.5	24.0	25.5	23.5	21.5	22.5
28	---	---	---				27.5	26.0	26.5	23.0	21.0	22.0
29	---	---	---				27.0	26.0	26.5	23.5	20.5	22.0
30	---	---	---				27.0	25.0	26.0	23.5	21.5	22.5
31	---	---	---				25.0	21.0	22.5	---	---	---
MONTH	30.0	22.5	25.0				---	---	---	---	---	---
YEAR	30.0	1.5	15.0									

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 mi^2 (427 km^2), includes 15 mi^2 (39 km^2) 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 cfs (0.57 m^3/s), which are fair.

AVERAGE DISCHARGE.--5 years, 293 ft^3/s (8.30 m^3/s), 24.11 in/yr (612 mm/year).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,200 ft^3/s (742 m^3/s) Mar. 13, 1975, gage height, 23.22 ft (7.077 m); minimum, 0.42 ft^3/s (0.012 m^3/s) Sept. 9, 1973, gage height, 1.18 ft (0.360 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft^3/s (99.1 m^3/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)
Oct. 8	1815	4300	122	7.89	2.405	Mar. 14	1030	7190	204	10.95	3.338
Nov. 29	1730	7240	205	11.01	3.356	May 8	2115	*8780	249	12.50	3.810
Jan. 26	0300	3940	112	7.51	2.289	May 13	0830	6060	172	9.74	2.969

Minimum discharge, 4.8 ft^3/s (0.14 m^3/s) July 7, gage height, 1.51 ft (0.460 m).

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	97	50	795	148	213	109	118	1080	48	6.4	6.4	286
2	89	44	520	131	203	131	106	481	50	7.2	5.3	196
3	83	40	404	116	177	925	97	290	45	13	188	149
4	66	43	1160	106	161	492	89	409	40	7.3	129	119
5	55	200	1490	102	154	353	85	353	35	6.1	332	96
6	46	404	730	121	140	307	77	246	32	5.3	155	79
7	38	325	454	161	118	265	71	481	35	5.0	105	66
8	1280	235	353	290	109	242	63	3470	60	10	79	57
9	1010	187	353	419	99	265	59	1990	130	35	64	50
10	388	151	290	257	93	1840	55	702	90	33	55	43
11	246	123	242	206	87	695	61	465	60	21	52	38
12	180	104	220	187	81	508	54	378	43	15	45	33
13	140	91	203	173	95	404	47	2620	38	29	37	36
14	118	81	203	157	148	3130	41	723	33	34	32	30
15	99	72	203	140	134	910	38	497	30	53	29	25
16	83	74	177	126	123	661	36	388	26	143	34	21
17	72	197	170	531	116	503	33	307	21	76	92	20
18	61	187	210	566	106	398	55	246	18	49	60	17
19	53	137	190	363	97	329	91	206	21	36	38	14
20	44	118	170	294	89	277	68	180	50	28	29	13
21	39	1160	148	246	87	250	55	164	32	22	23	18
22	35	1450	134	217	81	316	47	140	24	17	19	13
23	31	882	121	200	77	257	43	123	19	14	16	12
24	28	475	129	910	77	224	41	109	16	13	13	12
25	58	344	688	2060	77	224	38	95	13	18	13	12
26	143	261	316	1890	77	231	40	83	11	12	614	11
27	121	910	235	654	72	203	40	72	9.9	11	152	10
28	95	1160	190	454	77	184	40	65	8.6	12	103	9.2
29	77	3450	161	348	---	164	35	68	7.7	8.5	69	8.5
30	66	1500	154	281	---	145	531	54	7.3	7.4	290	12
31	59	---	157	242	---	131	---	47	---	6.8	1070	---
TOTAL	5000	14455	10970	12096	3168	15073	2254	16532	1053.5	754.0	3948.7	1505.7
MEAN	161	482	354	390	113	486	75.1	533	35.1	24.3	127	50.2
MAX	1280	3450	1490	2060	213	3130	531	3470	130	143	1070	286
MIN	28	40	121	102	72	109	33	47	7.3	5.0	5.3	8.5
CFSM	.98	2.92	2.15	2.36	.69	2.95	.46	3.23	.21	.15	.77	.30
IN.	1.13	3.26	2.47	2.73	.71	3.40	.51	3.73	.24	.17	.89	.34

CAL YR 1977 TOTAL 89523.2 MEAN 245 MAX 5760 MIN 1.3 CFSM 1.49 IN 20.18
WTR YR 1978 TOTAL 86809.9 MEAN 238 MAX 3470 MIN 5.0 CFSM 1.44 IN 19.57

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 Sept. 18-30 was due to pump malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 479 micromhos Sept. 29, 1975; minimum, 103 micromhos Apr. 4, 1977.
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, 468 micromhos Sept. 13; minimum, 135 micromhos Aug. 3.
pH: Maximum, 8.8 units Sept. 9, minimum, 7.1 units Aug. 4.
WATER TEMPERATURE: Maximum, 32.5°C June 30, July 1; minimum 2.0°C Jan. 11, Feb. 8.
DISSOLVED OXYGEN: Maximum, 14.0 mg/L Feb. 9; minimum 4.6 mg/L Aug. 3.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	426	418	423	425	420	422	356	325	342	415	411	413
2	428	412	421	424	420	422	373	356	365	414	407	411
3	434	428	430	423	414	419	381	372	377	411	405	408
4	435	430	432	425	417	422	390	252	335	411	405	407
5	437	433	435	423	412	418	299	253	274	410	402	407
6	437	433	435	417	381	399	351	272	318	406	396	402
7	438	433	435	411	378	393	372	351	362	410	399	406
8	433	180	331	432	414	425	385	373	378	408	390	399
9	322	192	270	443	432	438	387	377	383	389	344	361
10	372	322	348	449	442	446	390	387	389	371	347	360
11	397	372	387	450	446	448	394	390	392	390	374	384
12	410	397	405	452	445	449	403	394	398	424	392	405
13	418	409	415	451	444	448	407	402	405	423	414	417
14	423	415	419	450	442	446	407	404	406	416	411	414
15	425	418	422	449	441	444	407	402	405	420	412	415
16	427	418	422	444	410	436	407	403	404	418	414	416
17	426	420	423	433	401	420	406	399	403	440	333	396
18	425	420	423	433	412	425	406	402	404	324	291	302
19	423	418	421	418	411	414	408	402	405	361	316	341
20	420	413	417	420	408	417	408	404	406	385	361	374
21	417	408	412	407	214	338	409	406	408	395	385	390
22	413	402	410	338	220	280	412	406	409	406	394	398
23	410	403	406	356	272	311	414	407	409	400	397	399
24	406	400	404	395	360	382	413	377	402	401	228	378
25	401	323	371	413	397	405	409	252	318	264	187	225
26	401	372	392	418	411	415	330	281	304	286	219	247
27	408	397	401	424	244	384	374	332	354	344	291	323
28	418	408	415	304	210	250	394	376	387	362	346	356
29	422	413	417	320	145	242	403	394	400	370	363	366
30	422	415	419	323	185	268	410	404	407	373	369	371
31	424	419	421	---	---	---	412	409	410	378	374	376
MONTH	438	180	406	452	145	394	414	252	379	440	187	376

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	380	376	378	367	359	363	372	350	362	314	203	249
2	391	379	383	372	355	365	366	349	357	354	313	330
3	383	377	380	369	295	333	360	344	353	386	355	372
4	382	373	378	348	297	322	359	345	351	390	368	384
5	382	375	378	375	350	363	352	346	350	389	384	387
6	382	372	378	384	376	380	353	345	348	391	384	386
7	380	372	376	390	385	388	353	344	347	388	357	381
8	378	371	375	394	388	391	350	340	345	357	142	258
9	375	369	372	397	380	390	346	337	342	324	171	268
10	372	366	369	381	225	276	344	339	341	354	328	343
11	369	365	367	342	268	312	342	332	339	368	353	361
12	367	360	364	364	342	355	343	335	338	371	276	363
13	369	358	363	370	362	365	339	335	336	305	148	213
14	371	362	368	315	149	224	337	331	334	337	252	303
15	376	358	370	327	247	296	336	331	334	364	340	353
16	375	357	366	343	325	335	334	329	331	374	365	369
17	370	355	364	352	342	347	333	326	329	378	372	375
18	371	360	366	362	353	356	330	313	320	380	374	377
19	372	363	368	366	358	362	329	323	326	379	374	377
20	370	358	364	370	361	366	332	326	328	381	368	375
21	382	354	365	372	361	367	334	330	332	377	369	373
22	374	358	365	372	365	369	334	330	332	376	365	371
23	369	355	363	374	359	369	334	330	333	372	362	368
24	369	360	364	374	363	369	342	334	338	369	360	364
25	367	354	361	372	363	367	343	338	341	364	357	361
26	365	350	357	380	372	377	347	343	345	362	356	359
27	364	350	357	386	380	383	346	343	345	359	354	356
28	362	352	357	388	374	382	347	344	345	356	350	352
29	---	---	---	386	369	379	347	344	346	352	345	349
30	---	---	---	382	369	376	349	232	311	347	339	343
31	---	---	---	377	356	368	---	---	---	343	336	340
MONTH	391	350	368	397	149	355	372	232	339	391	142	347

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	344	331	338	301	294	297	291	282	287	301	242	275
2	336	322	341	302	292	298	295	287	290	346	303	325
3	331	323	329	297	289	292	298	135	248	365	342	355
4	333	325	329	295	282	289	249	156	205	378	365	373
5	332	327	329	290	279	285	269	234	244	389	377	383
6	332	325	330	354	280	289	277	242	263	392	387	389
7	329	324	327	291	282	286	305	276	292	395	391	393
8	331	204	308	296	273	287	316	303	309	396	389	393
9	286	265	275	286	217	274	323	316	319	391	335	382
10	317	285	305	275	263	267	333	323	326	385	368	377
11	324	317	321	277	235	266	342	326	333	382	365	374
12	329	317	321	276	254	267	342	331	336	381	360	372
13	315	309	312	325	265	279	350	337	343	468	335	378
14	318	305	312	297	284	288	384	345	351	374	360	369
15	313	307	311	300	255	288	356	349	353	377	369	372
16	311	305	308	290	258	274	371	302	347	433	367	375
17	309	302	306	304	289	295	339	311	328	447	355	374
18	309	295	303	306	298	302	391	339	343	---	---	---
19	301	293	297	307	297	301	344	338	341	---	---	---
20	333	300	305	303	296	300	348	341	345	---	---	---
21	308	302	305	302	287	297	346	337	342	---	---	---
22	306	297	303	298	292	294	345	335	339	---	---	---
23	305	295	300	297	283	290	338	325	332	---	---	---
24	303	291	297	309	279	288	353	324	329	---	---	---
25	298	290	294	336	293	305	386	312	328	---	---	---
26	296	288	291	311	298	304	285	162	213	---	---	---
27	299	291	295	373	293	302	242	177	201	---	---	---
28	299	293	296	311	295	304	262	214	238	---	---	---
29	298	291	294	305	288	298	294	258	272	---	---	---
30	301	293	297	304	286	297	354	174	281	---	---	---
31	---	---	---	297	274	286	237	185	206	---	---	---
MONTH	344	204	309	373	217	290	391	135	299	---	---	---
YEAR	468	135	352									

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

PH (UNITS), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.2	8.0	7.7	7.5	8.0	7.7	7.7	7.5	8.0	7.4	7.8	7.4
2	8.2	8.1	8.0	7.7	7.9	7.7	7.8	7.5	7.7	7.4	8.2	7.6
3	8.1	8.1	7.9	7.8	7.9	7.7	7.9	7.5	7.7	7.3	8.5	7.6
4	8.1	8.0	7.9	7.8	7.9	7.6	8.0	7.5	7.4	7.1	8.5	7.7
5	8.1	8.0	8.0	7.8	7.9	7.7	7.9	7.5	7.4	7.2	8.4	7.8
6	8.1	7.9	8.1	7.9	8.0	7.7	7.9	7.6	7.6	7.3	8.5	7.7
7	8.0	7.9	8.0	7.8	7.9	7.7	7.8	7.6	7.8	7.4	8.5	7.8
8	8.0	7.9	7.8	7.4	7.7	7.4	7.8	7.5	7.6	7.4	8.7	7.8
9	8.0	7.9	7.7	7.4	7.4	7.4	7.7	7.4	7.9	7.4	8.8	7.8
10	8.1	7.9	7.9	7.7	7.7	7.4	7.6	7.5	8.1	7.5	8.4	7.9
11	8.0	7.9	7.9	7.7	7.8	7.6	7.6	7.5	7.8	7.6	8.3	7.7
12	8.1	7.8	7.8	7.8	7.8	7.6	7.6	7.4	7.9	7.5	7.7	7.3
13	8.2	7.9	7.7	7.4	7.8	7.5	7.5	7.4	7.9	7.5	8.1	7.3
14	8.2	7.9	7.7	7.5	7.8	7.5	7.5	7.5	8.0	7.6	7.9	7.5
15	8.1	7.9	7.8	7.7	7.8	7.6	7.5	7.4	8.2	7.7	8.2	7.5
16	8.0	7.9	7.9	7.8	8.0	7.6	7.6	7.4	8.1	7.6	8.0	7.5
17	7.9	7.8	8.0	7.8	8.0	7.7	7.9	7.4	7.9	7.5	8.3	7.5
18	7.8	7.7	8.0	7.8	7.9	7.7	8.0	7.5	8.2	7.7	---	---
19	7.7	7.6	7.9	7.8	7.8	7.6	8.2	7.5	8.1	7.7	---	---
20	7.8	7.7	7.9	7.8	7.7	7.5	8.3	7.6	7.8	7.6	---	---
21	7.9	7.7	7.9	7.8	7.9	7.5	8.2	7.7	7.9	7.6	---	---
22	8.0	7.8	7.9	7.8	7.8	7.6	8.1	7.6	8.1	7.6	---	---
23	8.0	7.8	7.9	7.7	8.0	7.6	8.0	7.6	8.2	7.5	---	---
24	8.0	7.8	7.9	7.8	8.0	7.6	8.0	7.5	8.2	7.6	---	---
25	7.9	7.8	7.9	7.8	7.9	7.7	7.9	7.5	8.1	7.6	---	---
26	7.8	7.7	7.9	7.8	7.8	7.6	8.0	7.4	7.8	7.2	---	---
27	7.9	7.7	7.9	7.8	7.7	7.6	7.7	7.5	7.6	7.2	---	---
28	8.1	7.8	7.8	7.8	7.8	7.5	8.0	7.4	7.8	7.2	---	---
29	8.0	7.9	7.8	7.7	7.8	7.5	8.1	7.5	7.5	7.3	---	---
30	7.9	7.6	7.8	7.7	7.7	7.5	8.1	7.6	7.9	7.3	---	---
31	---	---	7.8	7.7	---	---	8.0	7.6	7.4	7.4	---	---
MONTH	8.2	7.6	8.1	7.4	8.0	7.4	8.3	7.4	8.2	7.1	---	---
YEAR	8.8	7.1										

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

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

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.5	24.5	26.0	32.5	29.5	31.0	31.0	27.5	29.0	22.5	21.5	22.0
2	26.5	25.0	26.0	32.0	29.0	30.0	31.0	27.5	29.0	22.5	21.0	22.0
3	26.0	24.5	25.5	32.0	28.5	30.0	30.5	24.5	27.5	23.5	21.5	22.5
4	26.0	24.0	25.0	31.5	28.5	30.0	25.5	24.5	25.0	24.0	22.5	23.0
5	27.0	24.0	25.5	31.5	28.0	29.5	25.0	24.0	24.5	24.5	23.0	23.5
6	27.0	24.5	25.5	31.5	28.0	29.5	24.5	23.5	24.0	25.0	23.5	24.0
7	25.5	25.0	25.5	31.5	28.5	30.0	25.5	24.0	24.5	25.5	24.0	25.0
8	26.5	24.5	25.0	31.5	28.5	29.5	25.0	24.5	24.5	26.0	24.0	25.0
9	24.0	23.0	23.5	31.5	28.0	29.0	25.5	24.0	25.0	26.5	24.5	25.5
10	25.0	22.5	23.5	29.0	27.5	28.0	26.5	24.5	26.0	26.5	25.0	25.5
11	26.0	23.0	25.0	27.5	27.0	27.5	26.5	25.5	26.0	27.0	25.0	26.0
12	27.5	25.0	26.0	29.5	25.5	27.5	26.5	25.0	26.0	26.5	25.5	26.0
13	27.0	25.0	26.0	28.0	26.5	27.0	27.5	25.5	26.5	26.5	25.0	25.5
14	26.0	24.5	25.0	27.5	26.0	26.5	28.0	25.5	26.5	25.5	25.0	25.5
15	27.0	24.0	25.0	27.0	25.5	26.0	29.0	26.0	27.5	27.0	24.5	25.5
16	27.5	24.5	26.0	26.5	24.5	25.5	29.5	27.0	27.5	26.0	25.0	25.5
17	28.5	25.5	27.0	27.0	25.5	26.0	28.5	26.0	27.5	27.0	25.0	26.0
18	29.5	26.0	27.5	28.0	25.5	27.0	29.5	27.5	28.5	---	---	---
19	28.0	26.5	27.0	29.0	26.5	27.5	31.0	28.5	29.5	---	---	---
20	28.0	26.0	27.0	30.0	27.5	28.5	29.5	28.0	29.0	---	---	---
21	28.5	26.5	27.5	30.5	28.0	29.5	29.0	27.0	28.0	---	---	---
22	28.5	27.0	27.5	31.5	28.5	30.0	29.0	27.0	28.0	---	---	---
23	28.5	26.5	27.5	32.0	29.0	30.5	29.5	27.0	28.5	---	---	---
24	30.0	26.5	28.0	32.0	29.0	30.5	30.5	26.5	28.5	---	---	---
25	30.5	27.5	29.0	29.5	28.0	29.0	31.0	27.5	29.0	---	---	---
26	31.5	28.5	30.0	31.0	27.0	29.0	26.5	24.5	25.5	---	---	---
27	32.0	29.0	30.5	29.0	28.0	28.5	26.5	24.5	25.5	---	---	---
28	32.0	29.0	30.5	30.5	27.0	28.5	26.5	25.5	26.0	---	---	---
29	32.0	29.5	30.5	31.5	27.5	29.5	26.5	26.0	26.0	---	---	---
30	32.5	29.0	30.5	32.0	28.0	29.5	26.5	24.5	25.5	---	---	---
31	---	---	---	31.0	28.5	29.5	24.0	22.5	23.0	---	---	---
MONTH	32.5	22.5	27.0	32.5	24.5	28.5	31.0	22.5	26.5	---	---	---

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

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

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.8	12.3	12.5	11.8	11.4	11.6	9.8	8.9	9.2	9.5	9.1	9.3
2	12.8	12.1	12.4	12.1	11.7	11.9	9.5	8.7	9.0	9.7	9.3	9.6
3	13.0	12.3	12.7	12.2	11.6	11.8	9.3	8.5	8.9	9.5	9.3	9.4
4	13.0	12.4	12.7	12.4	11.9	12.2	9.1	8.3	8.7	9.5	9.4	9.4
5	12.9	12.1	12.4	12.8	12.1	12.5	8.9	8.3	8.6	9.6	9.4	9.5
6	13.6	12.5	13.0	12.3	11.3	12.0	8.7	8.0	8.4	9.4	9.0	9.3
7	13.8	13.3	13.5	11.2	10.7	10.9	8.8	8.1	8.4	8.9	8.5	8.7
8	13.9	13.5	13.7	10.7	10.1	10.4	8.9	8.2	8.5	8.9	7.3	8.3
9	14.0	13.4	13.7	10.6	10.0	10.3	8.8	8.1	8.4	8.9	7.6	8.6
10	13.7	13.2	13.4	11.4	10.6	11.0	8.7	8.0	8.3	9.0	8.7	8.9
11	13.5	13.1	13.3	10.8	10.3	10.7	8.5	7.9	8.1	8.9	8.4	8.7
12	13.5	12.7	13.1	10.5	10.1	10.3	8.9	7.7	8.3	8.5	8.1	8.4
13	12.8	11.8	12.3	10.7	9.9	10.3	9.5	8.4	9.0	8.9	7.6	8.3
14	12.2	11.5	11.8	9.6	9.0	9.4	9.6	8.9	9.2	9.3	8.9	9.2
15	12.9	11.8	12.2	9.9	9.6	9.8	9.3	8.9	9.1	9.6	9.3	9.5
16	13.0	12.0	12.4	10.5	9.7	10.2	9.2	8.7	8.9	9.6	9.2	9.5
17	13.0	12.0	12.4	11.1	10.5	10.8	8.8	8.2	8.6	9.3	8.8	9.1
18	12.7	12.2	12.4	11.4	10.7	11.1	8.3	7.9	8.1	8.8	8.5	8.7
19	13.3	12.8	13.0	10.7	10.0	10.5	8.1	7.8	7.9	8.6	8.3	8.4
20	13.6	12.9	13.3	10.2	9.5	9.9	8.5	8.2	8.4	8.3	8.0	8.1
21	13.5	12.6	13.1	9.7	9.3	9.5	9.2	8.6	9.0	8.2	7.9	8.1
22	13.6	12.9	13.2	10.4	9.6	10.0	9.5	9.2	9.3	8.1	7.9	8.0
23	13.7	11.7	12.7	10.2	9.4	9.8	9.5	9.0	9.3	8.0	6.7	7.3
24	12.3	11.7	12.0	9.8	9.0	9.4	9.2	8.7	8.9	6.9	6.6	6.8
25	12.6	11.5	12.0	9.6	8.8	9.1	9.1	8.6	8.8	6.9	6.6	6.8
26	12.5	11.5	11.9	10.2	9.4	9.8	8.7	8.5	8.6	7.0	6.6	6.8
27	12.7	11.6	12.1	11.0	10.1	10.5	9.0	8.5	8.8	7.1	6.6	6.8
28	12.5	11.3	11.9	11.0	10.5	10.8	9.6	9.1	9.3	7.1	6.7	6.9
29	---	---	---	10.6	9.9	10.1	9.5	8.9	9.2	7.0	6.6	6.8
30	---	---	---	10.2	9.4	9.7	9.1	8.1	8.7	7.2	6.7	6.9
31	---	---	---	10.2	9.3	9.6	---	---	---	7.4	6.9	7.1
MONTH	14.0	11.3	12.7	12.8	8.8	10.5	9.8	7.7	8.7	9.7	6.6	8.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.9	7.1	7.4	7.3	4.8	5.9	8.0	5.3	6.4	7.6	7.3	7.5
2	8.0	7.0	7.5	7.2	4.9	5.9	7.6	4.7	5.9	7.7	7.5	7.6
3	7.7	6.7	7.2	7.0	5.3	6.2	7.3	4.6	6.1	7.6	7.4	7.5
4	8.0	6.8	7.4	7.8	5.0	6.1	6.6	6.2	6.4	7.6	7.3	7.4
5	8.3	7.2	7.7	8.1	5.1	6.3	7.1	6.3	7.0	7.5	7.2	7.3
6	8.5	7.3	7.8	7.7	5.2	6.2	7.2	7.0	7.1	7.6	7.2	7.4
7	8.0	7.2	7.6	7.6	5.1	6.2	7.3	6.9	7.1	7.8	7.2	7.4
8	7.7	6.8	7.2	7.5	5.1	6.1	7.1	6.9	7.0	8.0	7.2	7.5
9	7.2	6.8	7.0	7.1	5.0	5.8	7.3	6.9	7.0	8.6	7.3	7.8
10	7.7	7.0	7.4	6.5	5.8	6.1	7.4	7.0	7.1	8.6	7.4	7.8
11	7.9	7.2	7.6	6.8	5.8	6.2	7.4	6.8	7.0	8.9	7.1	7.8
12	7.7	6.7	7.2	7.5	5.8	6.5	7.3	6.6	6.9	8.5	6.9	7.6
13	7.5	6.6	7.0	7.5	6.0	6.5	7.3	6.7	6.9	8.8	6.4	7.2
14	7.5	6.8	7.1	6.8	6.0	6.4	7.7	6.8	7.2	7.5	6.1	6.6
15	7.4	6.8	7.1	6.8	6.1	6.3	7.8	6.7	7.2	7.6	6.1	6.7
16	7.8	6.8	7.3	7.0	6.2	6.8	8.1	6.0	7.0	8.1	6.2	6.7
17	8.1	6.7	7.3	7.2	6.8	7.0	6.4	6.2	6.3	8.8	6.3	7.1
18	7.8	6.6	7.1	7.6	7.0	7.2	6.9	6.2	6.5	---	---	---
19	7.5	6.7	7.0	8.0	6.9	7.3	7.5	6.2	6.7	---	---	---
20	7.3	6.3	6.7	8.2	6.8	7.4	6.9	5.9	6.3	---	---	---
21	7.1	6.2	6.6	8.3	6.7	7.4	7.1	5.7	6.2	---	---	---
22	7.3	6.2	6.7	8.1	6.5	7.2	7.3	5.6	6.2	---	---	---
23	7.4	6.1	6.7	7.9	6.1	7.0	7.6	5.7	6.5	---	---	---
24	7.5	6.2	6.7	7.6	6.3	6.8	7.5	5.9	6.6	---	---	---
25	7.3	6.1	6.7	7.2	5.6	6.5	7.4	5.7	6.4	---	---	---
26	7.2	5.8	6.5	7.4	5.8	6.4	6.5	5.5	6.2	---	---	---
27	7.1	5.6	6.3	7.3	5.8	6.3	6.2	5.9	6.1	---	---	---
28	7.0	5.3	6.1	7.8	5.8	6.6	6.2	6.0	6.1	---	---	---
29	7.1	5.3	6.0	7.7	5.8	6.6	6.1	6.0	6.0	---	---	---
30	7.3	5.1	6.0	8.2	5.8	6.8	6.7	5.9	6.2	---	---	---
31	---	---	---	8.0	5.5	6.4	7.3	6.8	7.2	---	---	---
MONTH	8.5	5.1	7.0	8.3	4.8	6.5	8.1	4.6	6.6	---	---	---
YEAR	14.0	4.6	9.2									

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 mi^2 (458 km^2), includes 17 mi^2 (44 km^2) 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.--6 years, 349 ft^3/s (9.884 m^3/s), 26.78 in/yr (680 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,000 ft^3/s (878 m^3/s) Mar. 13, 1975, gage height, 23.80 ft (7.254 m); minimum, 4.2 ft^3/s (0.119 m^3/s) Aug. 9, 10, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,700 ft^3/s (105 m^3/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)
Oct. 8	2000	3710	105	9.93	3.027	May 8	2345	*8590	243	16.19	4.935
Nov. 29	1615	4850	137	11.92	3.633	May 13	1100	5260	149	12.52	3.816
Mar. 14	1230	6360	180	14.03	4.276						

Minimum discharge, 9.3 ft^3/s (0.263 m^3/s) July 7, 8, gage height, 1.72 ft (0.524 m).

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	107	60	998	205	273	105	121	1370	56	13	15	403
2	99	53	696	165	254	128	111	635	60	12	14	254
3	92	48	556	126	219	555	100	414	56	21	260	178
4	75	54	1190	136	197	498	94	529	48	16	183	143
5	66	154	1750	143	187	381	90	492	42	12	518	115
6	55	563	924	165	173	308	83	355	38	11	208	97
7	47	443	606	227	152	254	76	503	35	11	136	83
8	1080	338	498	269	143	219	70	2860	65	13	100	72
9	1250	245	487	392	136	230	67	2760	132	34	81	63
10	456	187	429	277	128	1070	61	812	83	74	75	55
11	289	148	370	241	121	658	70	529	63	36	70	52
12	193	127	338	259	115	583	61	429	50	29	63	48
13	148	109	309	240	125	477	55	2500	48	30	53	45
14	121	106	307	212	147	2810	50	873	43	61	46	42
15	103	97	316	185	136	817	44	594	37	65	40	37
16	87	98	247	172	121	689	43	477	33	200	37	33
17	78	254	260	345	115	545	39	392	29	104	111	30
18	70	256	316	331	105	472	58	316	24	70	79	26
19	60	175	279	360	100	409	94	247	26	53	50	23
20	53	146	248	368	94	340	79	203	53	40	37	21
21	46	1060	208	342	92	300	63	187	42	33	32	19
22	39	1600	197	312	90	371	55	160	33	28	27	18
23	35	1110	224	289	83	300	51	143	29	24	24	17
24	32	619	208	475	83	247	50	128	24	20	20	16
25	67	467	545	510	83	241	44	108	20	32	19	15
26	153	378	420	345	81	254	47	97	18	25	756	16
27	129	708	355	398	79	213	46	85	16	19	213	15
28	100	1270	279	392	81	187	46	79	16	24	147	14
29	86	2190	241	387	---	164	40	85	14	17	92	14
30	74	1650	198	371	---	143	414	70	14	15	241	14
31	68	---	224	324	---	136	---	63	---	15	1390	---
TOTAL	5358	14713	14223	8963	3713	14104	2322	18495	1247	1157	5137	1978
MEAN	173	490	459	289	133	455	77.4	597	41.6	37.3	166	65.9
MAX	1250	2190	1750	510	273	2810	414	2860	132	200	1390	403
MIN	32	48	197	126	79	105	39	63	14	11	14	14
CFSM	.98	2.77	2.59	1.63	.75	2.57	.44	3.37	.24	.21	.94	.37
IN.	1.13	3.09	2.99	1.88	.78	2.96	.49	3.89	.26	.24	1.08	.42

CAL YR 1977 TOTAL 102854.6 MEAN 282 MAX 5630 MIN 5.0 CFSM 1.59 IN 21.62
WTR YR 1978 TOTAL 91410.0 MEAN 250 MAX 2860 MIN 11 CFSM 1.41 IN 19.21

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 mi^2 (614 km^2), includes 43 mi^2 (111 km^2) 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.--13 years, 443 ft^3/s (12.55 m^3/s), 25.38 in/yr (645 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 63,800 ft^3/s (1,810 m^3/s) Mar. 13, 1975, gage height, 19.18 ft (5.846 m) from rating curve extended above 14,000 ft^3/s (396 m^3/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 ft^3/s (0.062 m^3/s) Nov. 6-8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,200 ft^3/s (289 m^3/s) at 2330 hours May 8, gage height, 10.71 ft (3.264 m), no other peaks above base of 10,000 ft^3/s (283 m^3/s); minimum, 23 ft^3/s (0.65 m^3/s) July 7, 8, gage height, 3.83 ft (1.167 m).

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	154	112	1630	233	469	216	229	1720	110	33	33	527
2	141	100	1140	215	413	258	211	880	106	32	31	337
3	135	95	898	196	354	1480	196	545	105	41	137	251
4	117	102	1430	181	309	954	182	1060	91	38	337	204
5	100	255	2310	175	286	665	174	833	82	31	765	173
6	88	772	1390	195	259	537	164	558	76	28	370	149
7	78	596	951	256	229	450	156	810	72	26	227	130
8	1160	432	765	385	210	392	145	4530	76	80	175	114
9	1620	319	733	806	197	396	135	3690	194	104	143	103
10	659	250	648	503	184	2560	132	1240	137	139	120	91
11	392	206	522	383	174	1330	136	861	109	80	113	85
12	270	179	452	330	164	973	129	681	93	66	112	80
13	212	160	403	299	177	793	124	3290	88	60	122	75
14	179	147	388	264	239	4160	115	1330	80	110	121	83
15	155	135	391	233	238	1720	109	932	74	109	121	67
16	135	136	337	216	218	1290	105	751	68	306	97	59
17	120	362	315	731	208	1060	102	595	63	177	147	55
18	107	366	372	1140	195	870	119	472	57	134	133	52
19	95	250	352	745	183	739	154	383	56	100	96	48
20	87	210	308	600	173	621	142	321	79	82	78	48
21	80	1340	270	480	170	543	127	284	76	70	68	46
22	73	2060	243	412	163	617	112	250	64	62	61	44
23	69	1550	222	366	155	519	109	226	57	55	55	41
24	65	901	217	755	153	446	108	204	51	49	49	39
25	129	660	900	3440	154	446	107	184	46	56	47	35
26	346	490	563	3370	158	474	105	166	42	54	672	35
27	240	972	401	1430	156	404	107	150	40	50	233	35
28	186	2200	313	1030	164	350	105	136	37	48	191	37
29	155	4450	266	810	---	306	101	175	35	42	131	35
30	136	3100	248	664	---	271	196	145	34	36	203	35
31	123	---	250	551	---	248	---	124	---	35	1570	---
TOTAL	7606	22907	19628	21394	6152	26088	4136	27526	2298	2333	6758	3113
MEAN	245	764	633	690	220	842	138	888	76.6	75.3	218	104
MAX	1620	4450	2310	3440	469	4160	229	4530	194	306	1570	527
MIN	65	95	217	175	153	216	101	124	34	26	31	35
CFSM	1.03	3.22	2.67	2.91	.93	3.55	.58	3.75	.32	.32	.92	.44
IN.	1.19	3.60	3.08	3.36	.97	4.09	.65	4.32	.36	.37	1.06	.49

CAL YR 1977 TOTAL 151816 MEAN 416 MAX 7920 MIN 17 CFSM 1.76 IN 23.83
WTR YR 1978 TOTAL 149939 MEAN 411 MAX 4530 MIN 26 CFSM 1.73 IN 23.53

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 were due to malfunctions of the instrument.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1				---	---	---						
2				---	---	---						
3				---	---	---						
4				---	---	---						
5				---	---	---						
6				---	---	---						
7				---	---	---						
8				---	---	---						
9				---	---	---						
10				---	---	---						
11				480	476	478						
12				477	473	475						
13				479	473	475						
14				480	474	477						
15				506	434	474						
16				429	408	420						
17				419	410	414						
18				418	411	414						
19				---	---	---						
20				---	---	---						
21				---	---	---						
22				---	---	---						
23				---	---	---						
24				---	---	---						
25				---	---	---						
26				---	---	---						
27				---	---	---						
28				---	---	---						
29				---	---	---						
30				---	---	---						
31				---	---	---						
MONTH				---	---	---						

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	402	394	400	454	431	442	344	306	313
2	---	---	---	401	395	399	486	454	469	364	316	338
3	---	---	---	406	356	384	518	481	500	431	365	400
4	---	---	---	358	348	352	473	398	450	484	432	461
5	---	---	---	382	358	371	395	379	386	515	486	499
6	---	---	---	395	382	389	383	374	379	543	516	529
7	---	---	---	403	394	399	377	368	374	537	474	498
8	---	---	---	407	404	406	385	363	375	508	171	390
9	---	---	---	406	397	404	383	368	375	327	172	266
10	---	---	---	396	309	346	375	367	370	361	328	346
11	---	---	---	353	314	335	363	354	361	377	360	366
12	---	---	---	376	354	368	390	351	369	390	377	385
13	---	---	---	382	376	380	428	391	409	385	228	296
14	---	---	---	375	206	285	457	429	442	345	273	314
15	---	---	---	333	262	307	453	406	414	375	348	364
16	---	---	---	346	334	340	406	375	386	390	377	384
17	419	417	418	352	345	349	401	373	385	397	391	393
18	415	413	414	357	352	354	408	390	400	402	398	399
19	412	409	411	363	354	360	421	380	410	404	400	402
20	410	408	409	367	360	364	376	352	365	406	402	403
21	408	399	404	369	366	368	373	353	364	442	401	415
22	402	397	400	366	362	364	385	366	373	462	432	450
23	405	395	401	367	364	366	402	386	391	433	409	416
24	403	398	401	370	365	367	415	401	409	418	404	408
25	401	397	399	370	363	368	430	408	422	415	395	405
26	404	398	401	388	364	377	418	394	404	444	420	429
27	402	395	398	381	378	380	386	380	383	452	440	446
28	400	395	397	379	376	377	393	379	382	444	397	411
29	---	---	---	381	375	378	414	391	402	404	386	397
30	---	---	---	400	379	388	395	351	385	409	396	406
31	---	---	---	434	399	416	---	---	---	415	408	412
MONTH	---	---	---	434	206	369	518	351	399	543	171	398

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	410	402	405	433	427	430	409	405	407	355	285	317
2	405	398	402	429	427	428	409	405	407	383	332	355
3	407	401	403	429	423	427	417	367	406	425	377	392
4	406	400	404	428	421	423	321	234	257	465	400	426
5	415	406	410	436	428	432	312	283	296	562	471	511
6	418	411	415	438	432	435	379	315	350	506	452	478
7	417	411	414	445	438	441	392	382	387	506	485	494
8	429	415	419	457	193	403	415	385	398	567	508	538
9	415	348	395	334	201	264	420	398	412	573	448	556
10	398	360	383	381	319	360	398	369	385	445	415	424
11	414	387	396	378	370	374	434	372	405	422	415	419
12	418	392	407	384	371	377	435	372	407	429	421	425
13	437	414	421	397	384	389	423	366	388	422	419	420
14	433	407	422	412	397	402	416	385	399	430	425	428
15	420	404	413	422	389	414	418	389	394	440	425	428
16	415	402	409	366	315	333	401	392	397	482	438	452
17	411	402	406	373	342	355	430	401	413	475	451	463
18	416	406	410	386	374	380	437	392	427	486	456	469
19	428	412	422	402	383	392	410	391	399	511	466	483
20	437	422	430	406	394	399	421	410	416	573	486	535
21	418	398	409	403	397	400	437	425	432	602	507	534
22	409	401	405	409	396	402	442	425	431	559	532	547
23	411	400	405	419	403	411	430	413	421	594	529	551
24	412	405	408	413	406	409	441	430	435	560	466	516
25	440	411	422	409	400	407	439	419	432	508	431	472
26	428	407	416	402	391	396	419	241	340	469	438	449
27	447	414	423	410	377	390	284	251	266	472	431	450
28	448	415	424	391	373	384	340	276	309	481	458	468
29	429	416	422	391	383	387	414	341	380	484	466	473
30	435	422	428	393	384	388	537	420	470	475	425	445
31	---	---	---	407	388	397	461	250	285	---	---	---
MONTH	448	348	412	457	193	394	537	234	386	602	285	464

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1				---	---	---						
2				---	---	---						
3				---	---	---						
4				---	---	---						
5				---	---	---						
6				---	---	---						
7				---	---	---						
8				---	---	---						
9				---	---	---						
10				---	---	---						
11				13.5	12.5	13.0						
12				12.5	11.0	11.5						
13				11.0	10.0	10.5						
14				11.0	9.5	10.0						
15				12.0	9.0	10.5						
16				11.0	9.0	10.0						
17				10.5	9.5	10.0						
18				10.5	10.0	10.0						
19				12.5	10.5	11.5						
20				---	---	---						
21				---	---	---						
22				---	---	---						
23				---	---	---						
24				---	---	---						
25				---	---	---						
26				---	---	---						
27				---	---	---						
28				---	---	---						
29				---	---	---						
30				---	---	---						
31				---	---	---						
MONTH				---	---	---						

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

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

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 mi^2 (6.22 km^2).

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, 457 ft^3/s (12.94 m^3/s) revised, Mar. 12, 1977; gage height, 4.74 ft (1.445 m); minimum daily, 0.01 ft^3/s (0.000 m^3/s) Sept. 19-21, 23-30, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 87 ft^3/s (2.46 m^3/s) at 2230 Mar. 13, gage height 2.92 ft, (0.890 m), no peak above base of 100 ft^3/s (2.83 m^3/s); minimum daily discharge, .01 ft^3/s (0.000 m^3/s) Sept. 19-21, 23-30.

REVISIONS.--The peak discharges and annual maximums (*) for water years 1976-77 have been revised as shown in the following table. They supersede figures published in the reports for 1976-77.

Water year	Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
1976	Mar. 20, 1976	2240	222	6.29	3.64	1.109
	Mar. 29, 1976	1235	*291	8.24	3.96	1.207
	May 28, 1976	1840	184	5.21	3.45	1.052
1977	Mar. 12, 1977	0705	*457	12.94	4.74	1.445

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	.50	.56	15	1.3	4.0	4.7	2.3	3.6	.62	.09	.08	.04
2	.50	.50	9.8	1.2	3.5	4.9	2.4	3.3	.68	.21	.08	.04
3	.50	.50	7.7	1.0	3.2	8.2	2.1	3.6	.71	.28	.17	.03
4	.25	.47	6.7	.84	3.2	7.7	2.0	9.3	.58	.17	.15	.03
5	.23	.56	16	1.1	3.0	6.7	2.0	7.1	.55	.11	.11	.03
6	.21	.84	11	1.1	3.0	6.2	1.7	5.0	.54	.09	.11	.03
7	.21	1.1	8.2	1.5	2.8	6.4	1.5	6.3	.54	.08	.08	.03
8	7.2	1.0	6.4	20	2.8	8.2	1.5	26	1.7	.07	.06	.03
9	5.9	.84	7.4	15	2.6	8.6	2.3	13	.48	1.8	.06	.03
10	3.8	.56	5.7	10	2.6	7.2	2.0	9.0	.30	.53	.05	.03
11	2.5	.50	4.9	8.6	2.5	6.2	2.5	6.3	.26	.28	.06	.02
12	1.5	.44	4.2	8.0	3.0	5.7	2.3	9.0	.38	.19	.08	.03
13	.84	.41	3.8	7.7	7.5	7.7	1.8	11	.32	.47	.08	.02
14	.53	.36	3.8	6.7	4.5	28	1.7	10	.29	.64	.05	.02
15	.41	.31	3.2	5.5	4.0	12	1.4	9.4	.25	.77	.05	.02
16	.36	.36	2.8	10	3.8	10	1.2	9.4	.23	.77	.04	.02
17	.25	.36	3.2	15	3.5	8.8	1.2	5.5	.21	.36	.03	.02
18	.23	.31	5.5	8.0	3.2	6.9	2.1	4.0	.21	.23	.03	.02
19	.19	.25	5.2	6.0	3.0	4.4	3.6	3.0	.38	.13	.03	.01
20	.17	.44	4.7	4.0	2.9	4.0	3.3	2.4	.36	.11	.04	.01
21	.13	12	4.2	3.0	2.8	3.8	2.3	2.1	.31	.09	.04	.01
22	.12	10	3.6	2.5	2.7	3.6	2.0	1.8	.23	.09	.03	.02
23	.11	8.2	2.8	3.0	3.0	3.0	1.8	1.6	.21	.09	.03	.01
24	.13	5.5	2.7	7.0	3.4	2.7	1.8	1.3	.17	.31	.03	.01
25	6.4	4.4	2.4	25	3.2	5.9	2.1	1.2	.13	.59	.05	.01
26	7.7	3.4	2.0	20	4.0	6.2	2.4	1.0	.11	.44	.07	.01
27	4.7	3.4	1.7	10	4.0	5.9	2.0	.94	.09	.21	.04	.01
28	2.8	4.2	1.5	8.0	4.4	4.7	1.6	.90	.08	.13	.03	.01
29	1.7	14	1.4	6.5	---	3.8	1.5	.96	.08	.11	.03	.01
30	1.1	19	1.4	6.0	---	3.0	3.6	.78	.09	.09	.05	.01
31	.77	---	1.4	5.5	---	2.7	---	.66	---	.08	.05	---
TOTAL	51.94	94.77	160.3	229.04	96.1	207.8	62.0	169.44	11.09	9.61	1.89	.62
MEAN	1.68	3.16	5.17	7.39	3.43	6.70	2.07	5.47	.37	.31	.061	.021
MAX	7.7	19	16	25	7.5	28	3.6	26	1.7	1.8	.17	.04
MIN	.11	.25	1.4	.84	2.5	2.7	1.2	.66	.08	.07	.03	.01
CFSM	.70	1.32	2.15	3.08	1.43	2.79	.86	2.28	.15	.13	.03	.009
IN.	.80	1.47	2.48	3.55	1.49	3.22	.96	2.63	.17	.15	.03	.01

CAL YR 1977 TOTAL 830.63 MEAN 2.28 MAX 49 MIN .05 CFSM .95 IN 12.87
WTR YR 1978 TOTAL 1094.60 MEAN 3.00 MAX 28 MIN .01 CFSM 1.25 IN 16.96

NOTE.--No gage-height record Jan. 17 to Feb. 23.

CUMBERLAND RIVER BASIN

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 mi^2 (62.9 km^2).

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

AVERAGE DISCHARGE.--14 years, 33.7 ft^3/s (0.954 m^3/s), 18.83 in/yr (478 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,770 ft^3/s (192 m^3/s) Mar. 29, 1975, gage height, 13.34 ft (4.066 m); minimum daily, 0.14 ft^3/s (0.004 m^3/s) Sept. 16, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s (42.5 m^3/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. 5	0550	1690	47.9	6.65	2.027	May 8	1000	*3000	85.0	8.79	2.679
Mar. 14	0100	2350	66.6	7.80	2.377						

Minimum daily discharge, 0.28 ft^3/s (0.008 m^3/s) July 24.

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	5.5	11	160	9.5	40	27	12	59	3.4	.72	.66	3.7
2	17	9.5	108	8.8	36	71	10	36	3.5	15	.47	2.7
3	5.5	9.9	82	8.1	30	145	9.5	29	3.7	11	.41	2.3
4	4.1	16	189	7.8	27	85	8.8	166	3.0	2.1	.60	2.0
5	3.4	76	374	8.1	25	61	8.5	67	2.9	1.6	.78	1.7
6	2.9	52	149	12	20	51	7.8	43	2.8	1.1	.66	1.3
7	2.7	30	102	13	18	43	7.8	120	2.8	1.0	.72	1.1
8	127	16	78	189	16	38	8.5	487	17	.90	.41	1.1
9	78	12	108	102	14	44	8.5	166	4.3	.90	.96	.90
10	33	8.5	63	59	14	65	7.8	102	3.2	1.0	.78	.90
11	19	7.0	47	44	13	47	18	67	2.8	.96	8.0	1.4
12	13	5.7	43	38	15	43	7.8	71	3.7	.78	2.7	1.6
13	9.5	5.0	44	32	78	78	7.0	80	3.4	2.4	1.8	1.2
14	8.1	4.3	46	26	51	518	5.9	49	2.7	2.3	4.3	1.2
15	6.7	3.9	33	22	36	160	5.7	37	2.7	1.6	2.9	1.1
16	6.2	7.5	28	21	30	174	5.5	27	2.2	1.8	1.9	1.1
17	5.5	20	43	130	27	122	5.2	21	1.5	1.3	2.7	1.1
18	4.8	8.8	54	78	26	92	30	17	1.4	.84	1.8	.78
19	4.6	7.0	38	56	21	67	11	16	1.8	.60	2.1	.60
20	4.1	20	32	44	20	52	9.2	13	2.5	.54	1.8	.72
21	3.5	288	27	37	20	49	8.1	12	1.4	.78	1.4	.72
22	3.5	138	22	33	17	37	7.5	10	1.1	.54	1.1	.60
23	3.5	95	20	30	17	29	8.5	9.2	1.2	.47	.84	.54
24	3.2	69	20	149	18	23	7.2	7.8	1.0	.28	.78	.54
25	178	54	16	456	20	41	7.5	6.7	.90	3.5	1.8	.78
26	104	41	14	238	20	25	8.1	6.2	.96	3.4	31	.41
27	59	71	13	147	18	21	6.7	5.5	.84	1.0	2.8	.66
28	38	61	11	108	26	19	5.9	4.8	.78	.78	2.3	.72
29	26	313	10	78	---	16	5.9	5.0	.78	.72	1.4	.41
30	18	183	11	59	---	14	97	4.1	.90	.47	46	5.5
31	14	---	10	47	---	13	---	3.7	---	.72	6.7	---
TOTAL	811.3	1643.1	1995	2290.3	713	2270	356.9	1748.0	81.16	61.10	132.57	39.38
MEAN	26.2	54.8	64.4	73.9	25.5	73.2	11.9	56.4	2.71	1.97	4.28	1.31
MAX	178	313	374	456	78	518	97	487	17	15	46	5.5
MIN	2.7	3.9	10	7.8	13	13	5.2	3.7	.78	.28	.41	.41
CFSM	1.08	2.26	2.65	3.04	1.05	3.01	.49	2.32	.11	.08	.18	.05
IN.	1.24	2.52	3.05	3.51	1.09	3.47	.55	2.68	.12	.09	.20	.06

CAL YR 1977 TOTAL 12653.02 MEAN 34.7 MAX 910 MIN .54 CFSM 1.43 IN 19.37
WTR YR 1978 TOTAL 12141.81 MEAN 33.3 MAX 518 MIN .28 CFSM 1.37 IN 18.59

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 mi^2 (251.7 km^2).

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.--17 years, 140 ft^3/s (3.965 m^3/s), 19.56 in/yr (497 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,800 ft^3/s (476 m^3/s) Mar. 12, 1975, gage height, 13.20 ft (4.023 m); minimum, 8.3 ft^3/s (0.24 m^3/s) Oct. 6, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s (85.0 m^3/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)
Nov. 21	1400	3180	90.1	7.69	2.344	Jan. 25	2330	6040	171	9.45	2.880
Dec. 1	0345	3310	93.7	7.79	2.374	Mar. 14	0830	5420	153	9.13	2.783
Dec. 5	0700	*8090	229	10.39	3.167						

Minimum daily discharge, 13 ft^3/s (0.37 m^3/s) Sept. 20-23, 25-29.

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	45	56	1660	71	126	180	99	97	42	26	20	24
2	45	52	482	64	125	185	90	77	40	26	18	22
3	37	51	291	56	112	346	82	68	42	38	18	21
4	32	51	233	54	99	271	76	222	40	30	18	20
5	30	76	4390	59	93	218	72	187	38	26	42	18
6	29	136	637	81	84	206	70	124	37	24	42	18
7	27	146	320	83	76	235	65	176	44	24	27	17
8	402	105	226	1430	68	326	61	914	51	23	24	16
9	371	86	320	664	66	269	66	558	42	27	23	15
10	158	71	212	309	62	220	89	255	37	80	22	15
11	102	60	168	194	58	187	95	166	36	35	85	15
12	76	53	148	164	57	175	89	175	35	29	52	16
13	60	48	144	144	340	166	76	716	34	137	33	19
14	52	45	153	118	500	2490	66	377	31	97	27	22
15	46	44	158	100	320	567	60	274	31	49	24	18
16	42	51	142	94	200	358	56	216	31	65	22	17
17	39	53	141	304	170	244	54	168	30	40	24	16
18	36	45	424	286	160	187	73	132	34	32	21	15
19	35	42	255	214	150	161	76	108	99	28	20	14
20	33	43	189	180	135	139	65	95	56	26	20	13
21	32	1330	146	139	125	146	57	85	41	24	18	13
22	31	506	118	117	103	146	53	76	36	24	17	13
23	31	279	102	105	90	126	60	71	32	22	17	13
24	30	187	113	329	88	120	71	66	31	27	17	14
25	302	144	134	3260	110	312	126	61	31	28	36	13
26	383	111	101	3000	127	244	109	56	29	29	131	13
27	169	123	89	1250	161	189	90	53	28	34	37	13
28	115	181	73	380	166	154	75	51	26	25	26	13
29	89	1280	70	220	---	132	66	48	26	22	23	13
30	75	1640	76	170	---	114	83	46	27	21	24	15
31	65	---	75	151	---	105	---	44	---	21	24	---
TOTAL	3019	7095	11790	13790	3971	8918	2270	5762	1137	1139	952	484
MEAN	97.4	237	380	445	142	288	75.7	186	37.9	36.7	30.7	16.1
MAX	402	1640	4390	3260	500	2490	126	914	99	137	131	24
MIN	27	42	70	54	57	105	53	44	26	21	17	13
CFSM	1.00	2.44	3.91	4.58	1.46	2.96	.78	1.91	.39	.38	.32	.17
IN.	1.16	2.72	4.51	5.28	1.52	3.41	.87	2.21	.44	.44	.36	.19

CAL YR 1977 TOTAL 59084 MEAN 162 MAX 6170 MIN 14 CFSM 1.67 IN 22.61
WTR YR 1978 TOTAL 60327 MEAN 165 MAX 4390 MIN 13 CFSM 1.70 IN 23.09

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 mi^2 (495 km^2), includes 15 mi^2 (39 km^2) 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 temperatures and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft^3/s (572 m^3/s), Mar. 13, 1975, gage height, 33.65 ft (10.257 m); minimum, 1.2 ft^3/s (0.034 m^3/s) July 23, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,900 ft^3/s (82.1 m^3/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)
Nov. 30	0200	5610	159	20.13	6.136	Mar. 14	1245	5310	150	19.67	5.995
Dec. 5	1515	3100	87.8	14.65	4.465	May 9	0615	*6270	178	21.13	6.440
Jan. 26	unknown	unknown		unknown							

Minimum discharge, 1.2 ft^3/s (0.034 m^3/s) July 23.

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	44	65	1290	128	299	183	131	591	58	3.3	5.4	55
2	36	71	804	117	257	203	120	437	52	6.9	4.1	45
3	28	75	600	105	203	1190	111	287	52	20	7.8	23
4	24	94	746	99	178	679	103	1490	44	11	36	14
5	14	741	1830	98	170	471	97	800	36	5.4	152	11
6	11	613	946	117	146	383	93	480	30	4.0	88	8.1
7	9.2	411	640	154	124	301	88	848	27	4.7	52	6.6
8	118	299	510	278	114	261	83	2620	36	2.6	25	5.8
9	553	225	550	439	110	273	80	4790	36	2.2	22	4.9
10	236	173	455	292	103	1310	76	1150	33	2.2	20	4.3
11	154	139	340	225	100	817	81	725	27	1.9	67	3.8
12	120	118	290	203	98	604	80	555	23	1.7	99	4.3
13	96	102	280	189	158	497	72	1100	18	5.6	80	26
14	71	92	300	164	225	4080	66	820	14	4.9	95	44
15	58	84	295	144	160	1380	64	500	11	5.6	78	13
16	49	85	275	133	144	991	62	401	10	7.8	40	9.5
17	39	322	267	546	133	756	59	322	9.2	8.1	33	7.5
18	31	219	334	648	122	597	152	262	8.1	7.5	28	5.6
19	27	163	288	433	110	493	94	219	7.5	4.5	16	4.7
20	23	146	251	338	102	415	74	189	7.5	3.2	170	4.0
21	18	958	209	262	102	365	66	212	7.2	2.5	66	3.5
22	15	1050	176	227	94	359	62	167	6.9	1.7	40	3.0
23	17	708	160	196	94	281	60	139	7.8	1.3	23	2.9
24	475	478	218	454	91	239	60	118	5.6	1.3	16	2.9
25	342	365	256	2600	105	287	54	97	4.9	1.9	11	3.0
26	197	283	189	3350	111	264	49	84	4.5	1.6	115	3.2
27	141	646	157	1300	105	222	45	77	4.0	71	76	3.5
28	113	1190	134	600	121	194	43	69	3.3	62	48	4.7
29	94	2980	128	450	---	173	40	80	3.0	13	22	7.8
30	80	3160	130	380	---	154	160	76	2.9	6.1	19	8.5
31	71	---	134	352	---	141	---	66	---	10	26	---
TOTAL	3304.2	16055	13182	15021	3879	18563	2425	19771	589.4	285.5	1580.3	343.1
MEAN	107	535	425	485	139	599	80.8	638	19.6	9.21	51.0	11.4
MAX	553	3160	1830	3350	299	4080	160	4790	58	71	170	55
MIN	9.2	65	128	98	91	141	40	66	2.9	1.3	4.1	2.9
CFSM	.56	2.80	2.23	2.54	.73	3.14	.42	3.34	.10	.05	.27	.06
IN.	.64	3.13	2.57	2.93	.76	3.62	.47	3.85	.11	.06	.31	.07

CAL YR 1977 TOTAL 127877.3 MEAN 350 MAX 7770 MIN 2.2 CFSM 1.83 IN 24.91
WTR YR 1978 TOTAL 94998.5 MEAN 260 MAX 4790 MIN 1.3 CFSM 1.36 IN 18.50

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 mi^2 (1,057 km^2), includes 15 mi^2 (39 km^2) 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, nonrecording 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.--58 years, 570 ft^3/s (16.14 m^3/s), 18.97 in/yr (482 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft^3/s (1,130 m^3/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 ft^3/s (212 m^3/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)
Nov. 30	0215	8070	229	12.70	3.871	Mar. 14	2115	10600	300	14.88	4.535
Jan. 25	1515	*15800	447	18.07	5.508	May 9	0900	11000	312	15.22	4.639

Minimum discharge, 9.8 ft^3/s (0.277 m^3/s) Sept. 29, 30.

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	123	277	3250	293	623	427	277	1370	118	21	49	63
2	104	239	1980	273	555	517	250	1080	115	23	35	71
3	92	215	1440	257	470	2170	228	659	110	77	35	56
4	81	246	1440	250	422	1630	215	2620	100	73	59	43
5	71	1990	3620	243	399	1090	202	1990	90	45	88	34
6	65	1820	2520	243	360	888	190	1120	87	34	187	30
7	63	1060	1410	305	313	753	175	1620	90	27	104	26
8	330	793	1090	753	281	659	163	5980	101	26	65	22
9	1180	623	1280	1120	277	629	155	9550	116	24	50	19
10	653	496	1040	799	297	1680	149	2680	94	22	49	17
11	395	404	857	623	313	1550	158	1460	83	19	65	15
12	293	338	764	544	309	1120	166	1080	77	19	225	15
13	239	297	696	506	511	943	147	1580	71	22	160	16
14	190	269	764	441	671	8300	138	1310	65	28	149	17
15	147	250	753	390	517	4690	128	851	56	43	131	57
16	118	235	641	355	446	2280	118	689	52	35	92	49
17	99	566	594	876	413	1670	113	560	49	32	69	32
18	88	572	775	1410	386	1280	246	465	47	28	75	26
19	79	422	714	968	351	1020	285	395	43	27	59	21
20	75	413	635	799	318	840	190	351	42	24	116	18
21	73	1980	549	653	309	725	155	360	43	19	138	16
22	69	2570	485	555	289	683	144	297	40	17	71	13
23	69	1600	432	501	277	572	136	261	37	16	50	12
24	67	1140	404	793	269	490	128	221	37	13	40	11
25	876	882	460	5130	281	538	123	193	34	13	34	11
26	1680	719	475	7820	305	533	118	163	31	19	54	11
27	822	799	395	2600	297	465	116	152	28	22	141	11
28	555	2310	343	1570	313	408	106	144	26	113	75	11
29	427	3990	309	1140	---	368	101	239	23	75	52	11
30	351	6750	297	888	---	330	422	166	22	37	57	11
31	305	---	301	736	---	297	---	141	---	27	73	---
TOTAL	9779	34265	30713	33834	10572	39545	5242	39747	1927	1020	2647	765
MEAN	315	1142	991	1091	378	1276	175	1282	64.2	32.9	85.4	25.5
MAX	1680	6750	3620	7820	671	8300	422	9550	118	113	225	71
MIN	63	215	297	243	269	297	101	141	22	13	34	11
CFSM	.77	2.80	2.43	2.67	.93	3.13	.43	3.14	.16	.08	.21	.06
IN.	.89	3.12	2.80	3.08	.96	3.61	.48	3.62	.18	.09	.24	.07

CAL YR 1977 TOTAL 251593 MEAN 689 MAX 13800 MIN 28 CFSM 1.69 IN 22.94
WTR YR 1978 TOTAL 210056 MEAN 575 MAX 9550 MIN 11 CFSM 1.41 IN 19.15

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 mi^2 (1,764 km^2), includes 15 mi^2 (39 km^2) without surface drainage.

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

AVERAGE DISCHARGE.--54 years, 965 ft^3/s (27.33 m^3/s), 19.25 in/yr (489 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,000 ft^3/s (1,700 m^3/s) Jan. 7, 1946, gage height, 32.20 ft (9.815 m) from high-water mark in gage house; minimum, 12 ft^3/s (0.34 m^3/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 ft^3/s (283 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Nov. 30	0415	11400	323	14.15	4.313	Mar. 14	1045	13900	394	16.31	4.971
Dec. 5	1400	10300	292	13.20	4.023	May 8	2000	15100	428	17.27	5.264
Jan. 26	0230	*15500	439	17.60	5.364						

Minimum discharge 57 ft^3/s (1.61 m^3/s) Sept. 30.

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	301	441	7380	561	1330	791	659	3850	311	120	112	158
2	283	389	4070	526	1190	966	613	3150	295	158	103	152
3	252	378	2820	481	1040	3350	573	1850	298	557	110	149
4	217	492	2560	452	905	3430	538	4140	266	232	97	136
5	198	2740	7380	452	834	2160	515	4230	250	190	132	118
6	180	4010	5580	485	762	1670	488	2330	234	154	170	103
7	168	2030	3080	530	680	1410	463	3000	234	136	222	99
8	743	1410	2250	3020	625	1230	438	9300	317	124	166	94
9	2170	1080	2570	3160	597	1130	427	10900	289	118	138	83
10	1420	841	2260	1950	573	1960	427	5910	255	122	120	79
11	791	689	1710	1360	545	2830	518	2950	227	114	124	78
12	593	593	1450	1150	534	2000	507	2290	212	112	178	73
13	477	522	1310	1040	797	1650	452	2510	210	130	269	86
14	396	466	1270	892	1350	10800	402	2740	192	176	229	108
15	333	427	1360	771	1050	8470	375	1780	182	144	204	92
16	283	420	1160	707	866	4320	355	1450	172	160	190	101
17	250	797	1090	1780	791	3370	339	1200	164	134	184	118
18	227	1010	1710	2780	743	2670	518	1000	166	120	154	99
19	210	752	1530	2000	685	2140	730	841	289	114	147	85
20	200	672	1290	1570	638	1770	553	739	180	108	174	78
21	192	3750	1090	1250	633	1550	459	743	164	103	202	73
22	184	4870	945	1060	585	1440	406	676	180	96	196	69
23	176	3100	822	939	569	1260	389	593	166	89	149	68
24	168	2120	776	1510	553	1110	372	534	158	88	130	67
25	879	1540	803	7540	609	1190	365	477	152	96	116	64
26	3260	1220	828	12400	646	1220	355	430	146	114	190	60
27	1670	1120	734	6040	625	1080	333	392	138	97	158	58
28	1020	2740	646	3310	659	952	308	365	132	94	208	58
29	739	5980	593	2410	---	847	289	365	126	160	160	58
30	605	10700	581	1870	---	762	1260	455	122	146	147	60
31	515	---	581	1550	---	703	---	355	---	108	147	---
TOTAL	19100	57299	62229	65546	21414	70231	14426	71545	6227	4414	5026	2724
MEAN	616	1910	2007	2114	765	2266	481	2308	208	142	162	90.8
MAX	3260	10700	7380	12400	1350	10800	1260	10900	317	557	269	158
MIN	168	378	581	452	534	703	289	355	122	88	97	58
CFSM	.91	2.81	2.95	3.10	1.12	3.33	.71	3.39	.31	.21	.24	.13
IN.	1.04	3.13	3.40	3.58	1.17	3.84	.79	3.91	.34	.24	.27	.15

CAL YR 1977 TOTAL 417763 MEAN 1145 MAX 20900 MIN 59 CFSM 1.68 IN 22.82
WTR YR 1978 TOTAL 400181 MEAN 1096 MAX 12400 MIN 58 CFSM 1.61 IN 21.86

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 mi^2 (36,682 km^2).

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.123).

AVERAGE DISCHARGE.--24 years 23,620 ft ^{3}/s (668.9 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 204,000 ft^3/s (5,780 m^3/s) Mar. 15, 1975; maximum gage height, 48.39 ft (14.749 m) Mar. 1, 1962; minimum daily discharge, 700 ft^3/s (19.8 m^3/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 ft^3/s (5,660 m^3/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 ft^3/s (5,810 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 110,000 ft^3/s (3,120 m^3/s) Jan. 26;maximum gage height, 33.09 ft (10.086 m) Jan. 27; minimum daily, 1,350 ft^3/s (38.23 m^3/s) Sept. 3; minimum gage height, 3.61 ft (1.100 m) Nov. 3.

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	12500	11300	78300	17600	49100	27500	3510	9330	19500	23200	8740	21900
2	10000	9310	57300	19200	50800	33200	6160	19100	30000	16800	12800	13100
3	8470	8470	50800	28800	47900	39000	8800	24800	31700	14000	14200	1350
4	16800	12800	53000	41500	38000	48900	15300	22100	26200	11600	13400	4490
5	15300	14800	76600	36200	34100	47700	15800	25700	20600	11200	6160	10500
6	20100	13200	71000	29200	44500	43000	15000	22300	12200	10100	5180	16000
7	12600	19100	59300	34400	37100	32700	18200	9340	16400	6870	9320	18100
8	16300	24300	58200	41500	40000	26200	22100	28700	20400	8910	15700	16200
9	28500	10100	60000	48800	42200	24400	11800	63900	19500	16700	16600	15900
10	26600	12300	59300	54100	40100	30500	7660	48600	15700	19700	15500	14000
11	25600	24600	58400	55000	26700	34800	12900	27700	3100	17800	14200	22100
12	21500	21700	53200	56200	32100	31900	11100	27000	16100	9120	17500	18800
13	21800	14900	50200	51800	40400	13600	5950	25800	23600	3530	18500	16800
14	23200	30100	41400	36400	35400	57700	3550	33100	24100	7360	16300	10600
15	22200	14700	36700	39700	39600	79900	3340	43500	22700	16300	19800	12500
16	25000	14800	38300	41600	46800	45300	1820	43800	12200	4530	22400	9280
17	24300	19300	39000	45000	40300	31700	6580	39700	22700	1830	21500	11600
18	24400	24900	33300	43900	30400	34200	14300	28900	26200	8330	21600	16400
19	28400	30100	35000	52200	39000	24900	13000	26200	17400	13900	28400	23400
20	30900	27600	33200	52500	28500	14700	10200	28900	14700	17900	23900	22600
21	36500	31300	30800	46600	27400	11400	11300	28100	14600	16000	19600	18900
22	32600	41200	32100	33800	30500	21500	11200	23200	13100	18200	18000	16500
23	34500	43400	35000	34600	37000	23400	9560	20800	16000	15000	18500	13000
24	20700	30000	34100	43000	34200	16800	6730	20900	9700	5820	18800	6670
25	19300	23400	29100	63400	31400	15100	3610	21000	2850	5840	20700	3310
26	24000	32400	14200	103000	21500	8860	4050	24600	7150	13100	20900	3860
27	24500	46800	23400	104000	23100	10200	11800	28500	13100	12100	20900	9310
28	22300	50400	25700	71500	24300	23600	13500	31400	16500	14000	10800	4600
29	22800	54500	32100	52900	---	25300	5150	25000	24300	12100	15000	5500
30	11800	68500	38900	55600	---	20400	5050	19700	20000	5360	17600	7330
31	14100	---	26600	49700	---	18000	---	14400	---	4780	15900	---
TOTAL	677570	780280	1364500	1483700	1012400	916360	289020	856070	532300	361980	518400	384600
MEAN	21860	26010	44020	47860	36160	29560	9634	27620	17740	11680	16720	12820
MAX	36500	68500	78300	104000	50800	79900	22100	63900	31700	23200	28400	23400
MIN	8470	8470	14200	17600	21500	8860	1820	9330	2850	1830	5180	1350

CAL YR 1977 TOTAL 8167610 MEAN 22380 MAX 102000 MIN 1400
WTR YR 1978 TOTAL 9177180 MEAN 25140 MAX 104000 MIN 1350

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 mi^2 (169.9 km^2), includes 9.0 mi^2 (23.3 km^2) without surface drainage.

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. 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, 4,800 ft^3/s (136 m^3/s) Mar. 21, 1976, gage height, 12.89 ft (3.929 m); minimum, 3.1 ft^3/s (0.088 m^3/s) Sept. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft^3/s (51.0 m^3/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. 5	0600	*3520	99.7	11.41	3.478	Mar. 14	0530	1980	56.1	8.71	2.655
Jan. 25	2300	2380	67.4	9.57	2.917						

Minimum discharge, 4.0 ft^3/s (0.113 m^3/s) Sept. 21, 22.

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	24	37	736	66	131	143	85	66	31	7.1	10	16
2	21	34	337	57	121	140	77	46	29	7.8	8.5	14
3	16	32	228	50	101	238	70	42	29	26	7.1	10
4	12	32	192	47	88	196	64	133	28	10	6.5	9.2
5	9.2	40	1960	47	83	167	57	105	26	7.8	14	8.5
6	8.5	48	511	59	72	170	53	74	25	5.9	19	7.8
7	7.8	50	289	63	64	202	48	78	32	5.9	12	6.5
8	92	45	224	632	55	238	46	399	29	6.5	10	5.9
9	119	42	267	335	53	202	45	284	26	7.8	9.2	5.9
10	55	38	189	206	50	176	50	163	24	24	9.2	4.9
11	41	33	162	156	47	151	51	117	22	12	248	4.9
12	33	29	148	141	47	141	46	148	22	9.2	53	21
13	29	27	146	128	240	127	43	472	23	191	34	10
14	25	26	165	114	309	971	41	246	20	57	20	21
15	23	26	148	98	185	385	39	204	20	238	12	9.2
16	20	28	138	88	167	265	37	169	20	133	23	7.1
17	19	28	156	138	165	204	36	136	16	45	31	6.5
18	14	25	291	165	148	167	48	111	16	36	34	5.9
19	12	22	204	147	128	150	44	90	29	29	27	5.4
20	9.2	23	167	137	115	131	39	77	24	26	20	4.4
21	9.2	547	140	117	111	131	37	69	22	23	17	4.0
22	7.8	296	119	100	92	125	35	59	16	22	15	9.2
23	7.1	189	105	91	90	109	38	53	14	20	13	5.9
24	6.5	138	107	312	83	103	39	51	10	19	12	4.9
25	216	107	121	1520	113	202	57	47	10	26	11	4.9
26	232	82	96	1010	153	162	55	43	9.2	27	37	4.4
27	107	85	87	450	136	140	46	41	7.8	22	23	4.4
28	72	115	72	287	141	123	43	38	6.5	19	16	4.4
29	51	537	69	214	---	109	41	37	5.9	12	11	4.4
30	45	723	70	170	---	97	64	36	14	10	11	5.4
31	41	---	70	150	---	88	---	33	---	10	14	---
TOTAL	1384.3	3484	7714	7295	3288	5953	1474	3667	606.4	1095.0	787.5	236.0
MEAN	44.7	116	249	235	117	192	49.1	118	20.2	35.3	25.4	7.87
MAX	232	723	1960	1520	309	971	85	472	32	238	248	21
MIN	6.5	22	69	47	47	88	35	33	5.9	5.9	6.5	4.0
CFSM	.68	1.77	3.80	3.58	1.78	2.93	.75	1.80	.31	.54	.39	.12
IN.	.78	1.98	4.37	4.14	1.86	3.38	.84	2.08	.34	.62	.45	.13

CAL YR 1977 TOTAL 34536.0 MEAN 94.6 MAX 2220 MIN 3.5 CFSM 1.44 IN 19.58
WTR YR 1978 TOTAL 36984.2 MEAN 101 MAX 1960 MIN 4.0 CFSM 1.54 IN 20.97

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) southwest of Cedar Hill, 4.6 mi (7.4 km) south of Adams, and at mile 10.2 (16.4 km).

DRAINAGE AREA.--186 mi^2 (482 km^2) includes 21 mi^2 (54 km^2) without surface drainage.

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

AVERAGE DISCHARGE.--40 years, 243 ft^3/s (6.882 m^3/s), 17.74 in/yr (451 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 35,400 ft^3/s (1,000 m^3/s) Mar. 12, 1975, gage height, 30.86 ft (9.406 m), from floodmarks; minimum, 1.8 ft^3/s (0.051 m^3/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 ft^3/s (96.3 m^3/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. 1	0515	3730	106	11.08	3.377	Jan. 26	0100	6350	180	14.89	4.538
Dec. 5	1230	*8750	248	17.73	5.404	Mar. 14	1015	3780	107	11.15	3.400

Minimum discharge, 14 ft^3/s (0.396 m^3/s) Sept. 29.

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	75	105	2620	185	549	390	213	154	93	39	30	41
2	63	85	1060	173	512	376	187	115	90	34	28	36
3	49	81	720	159	460	567	173	132	87	81	26	31
4	42	76	575	151	419	528	159	289	81	55	24	29
5	36	100	6350	149	390	449	160	269	73	38	97	27
6	34	161	1740	155	356	445	155	178	76	34	52	26
7	32	185	999	166	320	504	150	183	131	31	36	24
8	127	159	808	1210	303	584	140	770	109	29	31	23
9	359	136	869	1100	294	524	138	702	88	159	29	23
10	185	118	715	686	275	452	135	427	72	151	257	21
11	128	102	620	532	263	394	135	317	66	63	808	20
12	102	87	562	468	254	363	130	336	64	44	173	20
13	82	76	537	426	488	320	124	818	76	705	116	26
14	76	71	597	373	1010	2190	117	550	48	394	87	33
15	75	71	571	323	671	993	112	476	55	353	69	28
16	67	73	475	291	584	681	106	420	50	520	69	24
17	60	78	423	460	575	528	102	348	49	169	88	21
18	56	71	789	545	528	430	105	278	56	119	176	19
19	52	71	634	484	468	376	110	232	119	93	92	17
20	47	69	528	449	423	330	105	206	98	73	85	17
21	43	1370	445	387	408	317	99	185	71	61	65	16
22	40	928	380	333	346	310	94	163	54	54	48	15
23	39	593	330	303	294	266	93	150	52	47	40	16
24	35	445	307	496	234	251	95	142	47	45	36	18
25	180	353	340	3760	291	584	93	154	40	46	34	17
26	652	281	275	3590	419	492	93	128	40	63	363	16
27	330	254	243	1470	376	408	90	119	37	51	102	15
28	213	336	207	1030	376	349	87	119	34	43	59	15
29	162	1080	192	822	---	303	84	112	33	36	48	14
30	136	2120	195	700	---	257	84	106	36	33	46	16
31	118	---	195	620	---	232	---	102	---	31	43	---
TOTAL	3695	9735	25301	21996	11886	15193	3668	8680	2025	3694	3257	664
MEAN	119	325	816	710	425	490	122	280	67.5	119	105	22.1
MAX	652	2120	6350	3760	1010	2190	213	818	131	705	808	41
MIN	32	69	192	149	234	232	84	102	33	29	24	14
CFSM	.64	1.75	4.39	3.82	2.29	2.63	.66	1.51	.36	.64	.57	.12
IN.	.74	1.95	5.06	4.40	2.38	3.04	.73	1.74	.40	.74	.65	.13

CAL YR 1977 TOTAL 101271 MEAN 277 MAX 7270 MIN 12 CFSM 1.49 IN 20.25
WTR YR 1978 TOTAL 109794 MEAN 301 MAX 6350 MIN 14 CFSM 1.62 IN 21.96

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 mi^2 (2,422 km^2), includes 437 mi^2 (1,132 km^2) without surface drainage.

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

AVERAGE DISCHARGE.--17 years, 1,272 ft^3/s (36.02 m^3/s), 18.48 in/yr (469 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 60,300 ft^3/s (1,710 m^3/s) Mar. 13, 1975, gage height, 48.26 ft (14.710 m); minimum,54 ft^3/s (1.53 m^3/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 ft^3/s (312 m^3/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. 5	2145	*20100	569	31.71	9.665	Jan. 26	1100	18200	515	30.38	9.260

Minimum daily discharge, 121 ft^3/s (3.43 m^3/s) Sept. 29.

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	500	444	8780	1040	2430	2060	1620	684	506	334	220	246
2	410	410	6110	993	2240	2120	1520	650	475	291	206	225
3	320	388	3800	930	2010	2520	1410	608	471	343	196	210
4	260	374	2940	875	1810	2950	1310	748	446	394	187	200
5	235	402	13200	845	1680	2510	1250	949	428	318	235	192
6	215	535	15700	838	1560	2330	1170	858	417	277	268	184
7	200	781	6020	845	1440	2670	1120	774	876	260	222	178
8	310	866	3950	3330	1350	4150	1050	1410	896	243	196	172
9	644	665	3790	6810	1280	4350	1010	2480	604	337	177	168
10	569	572	3390	4480	1210	3550	1000	1840	520	586	177	162
11	479	517	2770	2800	1150	3340	989	1400	471	318	1710	157
12	399	469	2470	2370	1100	3030	961	1220	442	265	1990	154
13	348	430	2300	2140	1320	2760	909	2470	438	1350	735	220
14	312	403	2390	1910	3490	5640	861	3300	407	2840	490	300
15	286	390	2590	1700	3000	6380	824	2530	388	1560	394	230
16	265	393	2230	1540	2330	4210	783	2200	369	2940	343	200
17	250	400	2100	1670	2280	3390	763	1900	357	1500	446	190
18	243	386	2910	2040	2240	2860	774	1600	346	915	490	180
19	225	385	3200	1910	2050	2520	806	1370	449	671	513	170
20	215	367	2670	1770	1860	2260	782	1190	554	558	366	160
21	218	1960	2280	1600	1760	2110	733	1060	561	479	324	146
22	210	3550	1990	1450	1610	2120	699	964	527	421	277	142
23	203	2240	1770	1340	1480	1950	688	876	421	375	249	249
24	195	1660	1640	1510	1420	1790	705	834	378	340	230	164
25	284	1340	1600	6870	1440	2920	691	802	354	381	222	146
26	1310	1110	1490	16900	1840	3540	681	726	334	337	639	135
27	1310	985	1350	10100	1990	2700	675	647	315	343	331	127
28	836	1050	1230	5410	1980	2320	650	600	306	303	249	125
29	641	1980	1130	4010	---	2070	623	627	300	277	230	121
30	554	5680	1100	3250	---	1870	629	615	334	246	257	125
31	494	---	1070	2780	---	1720	---	547	---	235	265	---
TOTAL	12940	31132	109960	96056	51350	90710	27686	38479	13690	20037	12834	5378
MEAN	417	1038	3547	3099	1834	2926	923	1241	456	646	414	179
MAX	1310	5680	15700	16900	3490	6380	1620	3300	896	2940	1990	300
MIN	195	367	1070	838	1100	1720	623	547	300	235	177	121
CFSM	.45	1.11	3.79	3.31	1.96	3.13	.99	1.33	.49	.69	.44	.19
IN.	.51	1.24	4.37	3.82	2.04	3.61	1.10	1.53	.54	.80	.51	.21

CAL YR 1977 TOTAL 419976 MEAN 1151 MAX 17900 MIN 125 CFSM 1.23 IN 16.71
WTR YR 1978 TOTAL 510252 MEAN 1398 MAX 16900 MIN 121 CFSM 1.50 IN 20.30

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 mi^2 (321 km^2).

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

AVERAGE DISCHARGE.--21 years, 181 ft^3/s (5.126 m^3/s), 19.82 in/yr (503 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,200 ft^3/s (317 m^3/s) Jan. 10, 1975, gage height, 15.68 ft (4.779 m); minimum, 16 ft^3/s (0.45 m^3/s) Aug. 21, 1962.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft^3/s (62.3 m^3/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)
Nov. 21	1345	2420	68.5	8.86	2.701	Dec. 5	0630	*10200	289	15.27	4.654
Nov. 30	2000	4620	131	11.38	3.469	Jan. 25	2300	3910	110	10.67	3.252

Minimum discharge, 28 ft^3/s (0.79 m^3/s) Sept. 28, 29, 30.

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	100	214	2240	197	281	241	229	358	95	50	42	37
2	200	212	830	195	261	249	212	375	90	52	41	35
3	157	235	515	193	247	700	199	325	86	72	40	33
4	134	353	405	187	243	520	188	337	84	61	40	33
5	112	551	5810	186	241	420	179	334	81	55	40	32
6	106	618	1230	186	243	380	174	294	80	52	40	32
7	94	492	699	186	243	350	168	479	99	52	39	32
8	152	243	560	801	243	330	160	790	89	51	42	31
9	327	202	560	821	243	327	157	536	82	74	42	31
10	248	171	488	542	243	335	157	389	77	86	39	31
11	199	148	438	416	241	315	160	318	75	63	44	34
12	164	133	397	356	237	300	156	296	72	56	45	32
13	142	121	371	314	249	310	150	309	73	118	41	33
14	128	110	366	271	341	1120	146	279	68	122	47	35
15	121	105	349	235	303	660	140	245	66	88	42	35
16	116	109	337	218	277	480	138	222	64	85	38	33
17	112	109	334	311	267	390	136	198	63	70	38	33
18	114	107	371	376	261	350	150	179	61	62	41	31
19	114	104	361	356	247	320	148	163	64	58	38	31
20	114	104	337	327	237	295	144	151	61	55	36	30
21	114	1400	303	279	225	275	139	142	60	52	35	31
22	115	859	275	245	215	255	134	133	62	51	35	30
23	115	479	255	225	205	240	134	125	60	49	34	29
24	115	341	245	344	196	241	138	117	58	48	33	29
25	194	273	233	2540	206	318	138	112	56	48	33	29
26	351	227	224	1950	224	345	134	108	55	48	34	29
27	329	212	212	794	227	325	133	139	54	46	33	29
28	285	231	204	564	235	298	130	118	53	45	32	29
29	252	586	200	438	---	274	128	112	52	44	33	29
30	237	2650	198	361	---	250	182	107	51	42	38	28
31	224	---	197	318	---	235	---	98	---	42	42	---
TOTAL	5285	11699	19544	14732	6881	11448	4681	7888	2091	1897	1197	946
MEAN	170	390	630	475	246	369	156	254	69.7	61.2	38.6	31.5
MAX	351	2650	5810	2540	341	1120	229	790	99	122	47	37
MIN	94	104	197	186	196	235	128	98	51	42	32	28
CFSM	1.37	3.15	5.08	3.83	1.98	2.98	1.26	2.05	.56	.49	.31	.25
IN.	1.59	3.51	5.86	4.42	2.06	3.43	1.40	2.37	.63	.57	.36	.28

CAL YR 1977 TOTAL 76016 MEAN 208 MAX 5810 MIN 26 CFSM 1.68 IN 22.80
WTR YR 1978 TOTAL 88289 MEAN 242 MAX 5810 MIN 28 CFSM 1.95 IN 26.49

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 mi^2 (14,994 km^2). 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 hm^3), of which 1,056,000 cfs-days (2,584 hm^3) above elevation 723.00 ft (220.370 m), crest of spillway, are reserved for flood control and 1,080,000 cfs-days (2,643 hm^3) 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 hm^3) 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 hm^3) Apr. 15, 1962, elevation, 747.12 ft (227.722 m); minimum, after first filling, 934,400 cfs-days (2,286 hm^3) Jan. 1, 1956, elevation, 673.01 ft (205.133 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 2,062,300 cfs-days (5,046 hm^3) May 27, elevation, 724.90 ft (220.950 m); minimum, 1,168,500 cfs-days (2,859 hm^3) Oct. 1, elevation, 685.40 ft (208.910 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 mi^2 (2,424 km^2). 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 hm^3) of which 177,500 cfs-days (434.3 hm^3) 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 hm^3) 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 hm^3) 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 hm^3) Mar. 15, 1975, elevation, 660.98 ft (201.467 m); minimum, after first filling, 428,000 cfs-days (1,047 hm^3) Sept. 11, 1944, elevation, 630.63 ft (192.216 m)

EXTREMES FOR CURRENT YEAR: Maximum contents, 642,300 cfs-days (1,572 hm^3) May 30, elevation, 648.09 ft (197.538 m); minimum, 465,300 cfs-days (1,139 hm^3) Sept. 29, elevation, 633.95 ft (193.228 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 mi^2 (20,966 km^2). 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 hm^3), of which 53,400 cfs-days (130.7 hm^3) 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 hm^3) 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 hm^3) above 500.0 ft (152.40 m) is available for flood control during the winter, and 26,100 cfs-days (63.87 hm^3) above 504.0 ft (153.62m), 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 hm^3) 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 hm^3) Mar. 13, 1975, elevation, 508.00 ft (154.838 m); minimum, after first filling to ordinary minimum pool, 96,700 cfs-days (236.6 hm^3) Apr. 18, 1974, elevation, 497.65 ft (151.684 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 134,900 cfs-days (330.1 hm^3) Sept. 3, elevation, 504.70 ft (153.833 m); minimum, 103,300 cfs-days (252.8 hm^3) Dec. 3, 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 mi^2 (4,343 km^2). 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 hm^3), of which 23,900 cfs-days (58.48 hm^3) are controlled storage above elevation 762.0 ft (232.26 m), minimum pool. Contents of 1,500 cfs-days (3.671 hm^3) 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 hm^3) Aug. 19, 1918, elevation, 756.3 ft (230.52 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 26,800 cfs-days (65.58 hm^3) Jan. 11, elevation, 806.10 ft (245.699 m); minimum, 9,700 cfs-days (23.74 hm^3) Oct. 25, elevation, 784.85 ft (239.222 m).

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 mi^2 (5,631 km^2). 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 hm^3), of which 384,500 cfs-days (940.9 hm^3) 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 hm^3) 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 hm^3) 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 hm^3) Feb. 10, 1950, elevation, 680.6 ft (207.45 m); minimum, after first filling, 171,000 cfs-days (418.4 hm^3) Dec. 1, 2, 1949, elevation 576.1 ft (175.60 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 714,700 cfs-days (1,749 hm^3), Dec. 5, elevation, 652.75 ft (198.958 m); minimum, 480,000 cfs-days (1,175 hm^3) Mar. 5, elevation, 625.60 ft (190.683 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 mi^2 (30,233 km^2). 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 hm^3) of which 63,000 cfs-days (154.2 hm^3) 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 hm^3) 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 hm^3) below elevation 442.0 ft (134.722 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 hm^3) Mar. 13, 1975; elevation, 450.11 ft (137.194 m); minimum, after first filling to ordinary minimum pool, 179,400 cfs-days (439.0 hm^3) Oct. 22, 1957, Oct. 28, 1969, elevation, 441.96 ft (134.709 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 223,000 cfs-days (545.7 hm^3), Mar.14,elevation, 445.98 ft (135.935 m); minimum, 180,500 cfs-days (441.7 hm^3) Nov. 1, elevation, 442.07 ft (134.743 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 6.81 mi (10.9 km) above mouth. DRAINAGE AREA, 892 mi^2 (2,310 km^2). 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 hm^3) of which 193,600 cfs-days (473.7 hm^3) 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 hm^3) 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 hm^3) above 483.0 ft (147.22 m) is available for flood control during the winter, and 131,100 cfs-days (320.8 hm^3) 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 hm^3) 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 hm^3) Mar. 15, 1975, elevation, 503.41 ft (153.439 m); minimum, after first filling to ordinary minimum pool, 109,500 cfs-days (267.9 hm^3) Dec. 5, 1968, elevation, 474.75 ft (144.704 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 215,300 cfs-days (526.8 hm^3) May 10, elevation, 492.39 ft (150.080 m); minimum,140,100 cfs-days (342.8 hm^3) Feb. 9, elevation, 480.91 ft (146.581 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 mi^2 (36,672 km^2).

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 hm^3), of which 9,800 cfs-days (23.98 hm^3) 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 mi^2 (45,579 km^2). 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 hm^3), of which 742,000 cfs-days (1,816 hm^3) is controlled storage above 354.0 ft (107.90 m), ordinary minimum pool. Contents of 130,500 cfs-days (319.3 hm^3) 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 hm^3). 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 (?.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 hm^3) 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 hm^3) Dec. 20, 1976, elevation, 353.20 ft (107.655 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 493,200 cfs-days (1,207 hm^3) May 14; maximum elevation, 360.25 ft (109.804 m) May 14; minimum contents, 307,900 cfs-days (753.4 hm^3) Nov. 2; minimum elevation, 353.52 ft (107.753 m) Jan. 2.

RESERVOIRS IN CUMBERLAND RIVER BASIN, TN--CONTINUED

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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)
	03413500 LAKE CUMBERLAND			03416500 DALE HOLLOW LAKE			03418400 CORDELL HULL RESERVOIR		
Sept. 30.....	685.60	1172400	-	636.91	500000	-	503.90	130000	-
Oct. 31.....	687.60	1212200	+39800	635.03	477800	-22200	501.40	115700	-14300
Nov. 30.....	704.55	1572800	+360600	637.88	511600	+33800	500.20	109400	-6300
Dec. 31.....	706.50	1617000	+44200	636.75	498100	-13500	500.20	109400	0
CAL YR 1977	-	-	+491600	-	-	+15800	-	-	+4400
Jan. 31.....	711.50	1732900	+115900	637.85	511200	+13100	499.80	107300	-2100
Feb. 29.....	696.70	1400500	-332400	636.56	495800	-15400	500.00	108300	+1000
Mar. 31.....	714.45	1803000	+402500	642.43	568000	+72200	500.60	111400	+3100
Apr. 30.....	717.15	1868400	+65400	644.33	592400	+24400	504.20	131900	+20500
May 31.....	723.50	2026600	+158200	648.04	641600	+49200	504.20	131900	0
June 30.....	712.20	1749400	-277200	645.83	612000	-29600	504.10	131200	-700
July 31.....	707.60	1642200	-107200	643.50	581600	-30400	503.80	129400	-1800
Aug. 31.....	701.20	1498200	-144000	639.06	525900	-55700	504.00	130600	+1200
Sept. 30.....	691.65	1294500	-203700	634.02	466100	-59800	503.50	127600	-3000
WTR YR 1978	-	-	+122100	-	-	-33900	-	-	-2400
	03422000 GREAT FALLS LAKE			03424000 CENTER HILL LAKE			03426300 OLD HICKORY LAKE		
Sept. 30.....	804.43	24900	-	637.80	579800	-	443.95	200000	-
Oct. 31.....	790.14	13000	-11900	637.05	573400	-6400	442.55	185300	-14700
Nov. 30.....	805.30	25900	+12900	651.60	703800	+130400	444.93	210800	+25500
Dec. 31.....	805.43	26000	+100	643.90	633100	-70700	443.98	200300	-10500
CAL YR 1977	-	-	+14600	-	-	+128600	-	-	-4600
Jan. 31.....	805.70	26300	+300	639.70	596200	-36900	444.24	203100	+2800
Feb. 29.....	792.72	14900	-11400	626.20	484700	-111500	444.78	209100	+6000
Mar. 31.....	802.29	22800	+7900	641.40	611000	+126300	444.66	207800	-1300
Apr. 30.....	794.66	16300	-6500	641.30	610100	-900	444.50	206000	-1800
May 31.....	789.75	12800	-3500	645.30	645700	+35600	444.58	206900	+900
June 30.....	792.60	14800	+2000	641.20	609300	-36400	444.45	205400	-1500
July 31.....	799.93	20700	+5900	637.50	577200	-32100	444.40	204900	-500
Aug. 31.....	798.53	19500	-1200	635.20	557800	-19400	444.70	208200	+3300
Sept. 30.....	795.30	16800	-2700	629.70	512500	-45300	444.28	203600	-4600
WTR YR 1978	-	-	-8100	-	-	-67300	-	-	+3600
	03430050 J. PERCY PRIEST LAKE			03438210 LAKE BARKLEY‡					
Sept. 30.....	490.05	198000	-	356.75	380800	-			
Oct. 31.....	487.30	179000	-19000	354.10	314700	-66100			
Nov. 30.....	488.12	184500	+5500	355.04	396500	+81800			
Dec. 31.....	481.20	141800	-42700	354.08	318000	-78500			
CAL YR 1977	-	-	-5000	-	-	+9500			
Jan. 31.....	483.06	152600	+10800	354.70	358700	+40700			
Feb. 29.....	481.53	143700	-8900	354.28	323800	-34900			
Mar. 31.....	485.01	164400	+20700	356.15	366100	+42300			
Apr. 30.....	486.71	175200	+10800	358.59	424500	+58400			
May 31.....	490.06	198100	+22900	359.36	448700	+24200			
June 30.....	489.76	195900	-2200	358.16	417600	-31100			
July 31.....	490.03	197800	+1900	356.82	374900	-42700			
Aug. 31.....	490.50	201300	+3500	356.00	359000	-15900			
Sept. 30.....	489.87	196700	-4600	355.31	341500	-17500			
WTR YR 1978	-	-	-1300	-	-	-39300			

‡ 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 mi^2 (4,812 km^2).

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

AVERAGE DISCHARGE.--60 years (water years 1904-05, 1921-78), 2,981 ft^3/s (84.42 m^3/s), 21.79 in/yr (553 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge,76,300 ft^3/s (2,160 m^3/s) Aug. 30, 1940, gage height, 19.25 ft (5.867 m); minimum, 208 ft^3/s (5.89 m^3/s) Oct. 23, 1952, gage height, 0.97 ft (0.296 m); minimum daily, 240 ft^3/s (6.80 m^3/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 ft^3/s (3,120 m^3/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 ft^3/s (2,860 m^3/s); and July 17, 1916, gage height, 22.5 ft (6.86 m), present datum, discharge, estimated, 97,000 ft^3/s (2,750 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 16,000 ft^3/s (453 m^3/s) and maximum (*):

		Discharge		Gage height				Discharge		Gage height	
Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)	Date	Time	(ft^3/s)	(m^3/s)	(ft)	(m)
Nov. 6	1400	*66700	1890	18.36	5.596	Mar. 10	1800	24900	705	10.68	3.255
Jan. 26	0730	46000	1300	15.14	4.615						

Minimum discharge, 691 ft^3/s (19.6 m^3/s) Sept. 30, gage height, 1.35 ft (0.411 m); minimum daily, 866 ft^3/s (24.5 m^3/s) Sept. 29.

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	1870	2520	3730	3210	5340	2580	4100	3850	2850	1370	1250	1450
2	1980	2370	4670	3090	5070	2600	3820	3540	2500	1370	1350	1360
3	2040	2220	4240	2800	4640	2650	3600	3230	2380	1680	1330	1310
4	2070	2540	4280	2650	4270	2810	3400	3140	2310	1810	1560	1460
5	1950	3110	4680	2660	4090	2740	3280	5080	2170	1430	1620	1290
6	1910	38600	6520	2680	3840	2730	3160	5050	2020	1320	2110	1200
7	1930	29600	6280	2670	3570	2790	3060	4110	2030	1250	4980	1100
8	1910	15900	4930	2730	3590	3000	2910	4280	2660	1250	9590	1170
9	2500	10900	4510	9360	3350	3600	2840	7030	3140	1350	7910	1090
10	3320	6940	4220	9700	3200	14200	2780	6830	2970	1400	6710	1060
11	3050	5320	3810	8090	3120	14300	2710	5290	2570	1350	5100	1040
12	2500	4490	3540	6700	3080	9510	2820	4390	2220	1250	3520	1060
13	2160	4020	3370	4980	3190	7680	2650	4130	2260	1200	3770	1230
14	1900	3660	3300	4460	3120	7290	2590	5690	2280	1200	3330	1160
15	1700	3420	3440	3990	2980	8300	2490	6950	2120	1300	3150	2720
16	1650	3240	3600	3470	2940	6920	2400	6220	1920	1400	3670	2570
17	1650	3880	3310	3530	2890	5750	2390	5040	1870	1500	3360	1510
18	1600	4820	3430	5130	2890	5040	2450	4250	1850	1400	2820	1360
19	1560	4170	3730	5250	2890	4590	2830	3770	1860	1300	2300	1260
20	1450	3580	3540	6610	2830	4330	3120	3430	2060	1200	2110	1240
21	1400	3300	3360	6870	2750	4120	3020	3160	2160	1100	2130	1180
22	1350	3180	3180	5400	2710	4110	2780	2970	2180	1050	2170	1150
23	1320	3290	2980	4510	2540	3900	2640	2830	1970	1100	1870	1100
24	1280	3680	2900	4160	2710	3690	2550	3090	1800	1100	1740	1160
25	1270	3630	4690	5890	2680	4060	2890	3530	1690	1150	1670	1040
26	7440	3480	4890	33800	2770	7890	7100	3000	1660	1150	1730	1010
27	8650	3280	4100	20800	2610	8800	8630	2720	1610	1100	1610	1010
28	7410	3080	3480	15900	2540	7030	5950	2580	1630	1200	1510	918
29	5320	3160	3090	11300	---	5670	4570	2990	1520	1300	1520	866
30	3370	3490	3120	8180	---	4930	4020	2950	1420	1200	1500	951
31	2840	---	3100	6240	---	4430	---	3150	---	1150	1480	---
TOTAL	82350	188870	122020	216810	92200	172040	103550	128270	63680	39930	90470	38025
MEAN	2656	6296	3936	6994	3293	5550	3452	4138	2123	1288	2918	1268
MAX	8650	38600	6520	33800	5340	14300	8630	7030	3140	1810	9590	2720
MIN	1270	2220	2900	2650	2540	2580	2390	2580	1420	1050	1250	866
CFSM	1.43	3.39	2.12	3.76	1.77	2.99	1.86	2.23	1.14	.69	1.57	.68
IN.	1.65	3.78	2.44	4.34	1.85	3.44	2.07	2.57	1.27	.80	1.81	.76

CAL YR 1977 TOTAL 1322900 MEAN 3624 MAX 41500 MIN 891 CFSM 1.95 IN 26.49
WTR YR 1978 TOTAL 1338215 MEAN 3666 MAX 38600 MIN 866 CFSM 1.97 IN 26.79

03461000 PIGEON RIVER AT HARTFORD, TN

LOCATION.--Lat 35°48'52", long 83°03'42", Cocke County, Hydrologic Unit 06010106, 600 ft (183 m) downstream from highway bridge at Hartford, 4.5 mi (7.2 km) downstream from Big Creek, and at mile 21.3 (34.3 km).

DRAINAGE AREA.--547 mi^2 (1,417 km^2).

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

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)
OCT										
11...	1040	30	1.0	940	530	7.4	16.1	80	8.9	32
JAN										
11...	1000	50	1.0	2720	180	6.9	3.5	36	12.6	19
APR										
11...	1015	70	1.0	--	130	--	15.2	15	9.9	19
JUL										
12...	1015	30	1.0	--	210	7.3	23.0	15	8.4	10

DATE	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	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)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT										
11...	4.6	13000	1300	60	2.6	50	3.7	54	29	96
JAN										
11...	1.7	--	--	14	1.2	17	1.7	34	10	30
APR										
11...	1.0	1000	20	11	1.1	11	.8	--	8.0	23
JUL										
12...	<1.0	20000	<10	22	1.3	17	1.8	26	11	38

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT									
11...	330	.45	838	.84	.56	.15	200	<1	10
JAN									
11...	120	.16	881	.49	.08	.08	820	<1	30
APR									
11...	90	.12	--	.29	<.01	.04	150	<1	43
JUL									
12...	120	.16	--	.36	.03	.03	80	<1	40

DATE	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)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
11...	940	490	<10	300	160	.6	<50	50	5.2
JAN									
11...	910	120	<10	66	53	<.2	<50	<10	6.8
APR									
11...	250	92	<10	27	17	<.2	<10	110	3.3
JUL									
12...	230	60	<10	40	22	<.2	<10	130	3.5

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 mi^2 (26.2 km^2).

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 fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--12 years, 28.7 ft^3/s (0.813 m^3/s), 38.21 in/yr (971 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,720 ft^3/s (48.7 m^3/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 ft^3/s (0.040 m^3/s), Sept. 30, Oct. 1, 2, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft^3/s (7.08 m^3/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. 8	2030	308	8.72	15.06	4.590	Mar. 14	0900	381	10.8	15.18	4.627
Jan. 25	1245	*479	13.6	15.46	4.712	May 23	1945	252	7.14	14.71	4.484

Minimum discharge, 3.7 ft^3/s (0.10 m^3/s) Sept. 30.

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	19	27	24	27	33	13	29	69	35	9.0	16	8.7
2	20	25	24	26	29	12	27	58	30	13	9.5	8.4
3	18	24	23	24	26	16	25	48	30	13	8.1	9.0
4	17	22	64	23	24	14	23	52	26	9.5	11	7.9
5	17	22	57	23	22	13	22	60	22	8.7	12	7.2
6	17	33	50	22	22	13	21	51	22	7.9	11	6.9
7	16	32	41	22	23	13	19	44	22	7.6	78	6.5
8	19	30	36	75	18	16	18	47	41	7.2	67	6.3
9	28	28	38	93	17	30	17	51	55	7.4	50	6.3
10	25	26	34	79	16	136	17	44	46	8.2	37	12
11	23	24	32	79	15	89	17	38	39	7.2	35	11
12	21	22	31	54	15	94	16	34	45	6.5	28	8.7
13	20	21	29	33	18	93	15	34	78	6.3	30	7.6
14	19	20	30	30	15	167	14	42	56	6.1	25	7.2
15	18	20	30	28	14	107	13	50	44	8.2	79	7.4
16	25	19	28	26	14	80	13	42	35	10	64	6.9
17	22	29	28	33	14	63	13	41	30	7.4	43	6.7
18	21	27	40	30	14	53	16	35	25	6.5	31	6.5
19	22	25	35	31	13	48	16	30	25	6.7	24	6.3
20	22	23	32	34	13	57	18	27	23	11	20	5.9
21	21	21	30	32	12	71	16	23	19	7.6	17	5.7
22	20	21	28	31	13	77	15	21	18	6.7	15	15
23	19	21	26	29	12	58	16	69	16	6.1	14	11
24	19	21	27	29	12	52	16	118	15	6.3	13	6.3
25	26	21	79	170	12	48	44	94	13	14	12	5.1
26	60	20	49	122	12	54	93	66	12	10	13	4.6
27	49	20	41	81	11	47	94	51	11	7.6	11	4.3
28	42	21	36	63	11	40	87	51	10	7.2	11	4.1
29	36	21	32	52	---	37	76	54	9.8	6.5	10	4.0
30	32	22	31	43	---	34	81	52	9.5	5.9	10	3.9
31	28	---	29	36	---	31	---	43	---	12	9.2	---
TOTAL	761	708	1114	1480	470	1676	907	1539	862.3	257.3	813.8	217.4
MEAN	24.5	23.6	35.9	47.7	16.8	54.1	30.2	49.6	28.7	8.30	26.3	7.25
MAX	60	33	79	170	33	167	94	118	78	14	79	15
MIN	16	19	23	22	11	12	13	21	9.5	5.9	8.1	3.9
CFSM	2.43	2.34	3.55	4.72	1.66	5.36	2.99	4.91	2.84	.82	2.60	.72
IN.	2.80	2.61	4.10	5.45	1.73	6.17	3.34	5.67	3.18	.95	3.00	.80

CAL YR 1977 TOTAL 9194.7 MEAN 25.2 MAX 337 MIN 5.2 CFSM 2.50 IN 33.86
WTR YR 1978 TOTAL 10805.8 MEAN 29.6 MAX 170 MIN 3.9 CFSM 2.93 IN 39.80

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 mi^2 (1,725 km^2).

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 hm^3). The largest of these, Lake Walters, usable capacity, 10,400 cfs-days (25.45 hm^3), was completed in 1929. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--61 years, 1,253 ft^3/s (35.48 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,000 ft^3/s (1,420 m^3/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 ft^3/s (1.08 m^3/s) Oct. 5, 1952, Sept. 13, 1954; minimum daily, 48 ft^3/s (1.36 m^3/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 ft^3/s (1,360 m^3/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 ft^3/s (1,020 m^3/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,500 ft^3/s (212 m^3/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)
Nov. 6	1530	11800	334	9.51	2.899	Aug. 8	0145	7400	210	7.68	2.341
Jan. 26	1000	*20800	589	12.72	3.877						

Minimum discharge, 93 ft^3/s (2.63 m^3/s) Sept. 20, gage height, 1.94 ft (0.591 m); minimum daily, 140 ft^3/s (3.96 m^3/s) Sept. 3.

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	356	729	1270	1100	2600	1050	1370	2210	1470	208	989	692
2	321	928	657	1170	2560	1150	1220	1880	1330	293	444	321
3	678	729	862	1210	2170	837	1180	1880	980	326	254	140
4	937	2120	1530	1310	2000	821	1550	2340	671	806	609	316
5	806	2390	2250	1170	1630	707	1310	2060	336	609	474	692
6	1190	5790	2060	1260	1600	821	1310	798	404	250	298	615
7	636	4080	2020	1110	1880	1430	980	1650	806	556	3290	998
8	242	2990	1820	1090	1470	1640	1210	2120	1530	312	4400	1030
9	331	2520	1640	3660	1340	1210	1190	2250	1610	219	3070	671
10	1100	2250	1870	2480	1100	3760	937	1070	700	870	2650	267
11	1050	2000	1670	2120	1200	3740	474	920	678	636	1880	356
12	744	1640	1930	1870	821	2480	543	1570	1470	152	878	622
13	870	1660	1810	1660	1380	2680	1230	2040	1700	415	1530	629
14	1010	1280	998	1950	1250	3920	1210	1540	1170	790	1190	829
15	845	998	1040	1860	1310	3520	438	1950	963	421	1340	450
16	361	1090	1200	1710	1260	3040	474	2280	1020	582	1490	537
17	895	1490	813	1740	821	2590	928	1660	752	456	1240	629
18	774	1580	629	1550	1020	2520	1200	1290	556	692	1070	279
19	438	1370	1290	1790	862	2060	1120	1020	729	798	736	238
20	456	1500	1590	2540	937	2020	1180	685	954	367	288	288
21	450	1270	1450	2170	806	2390	928	1010	980	404	759	356
22	336	1210	1630	1810	589	2860	556	1330	1020	219	1160	643
23	223	1290	1570	1670	1120	2640	246	1580	937	184	963	480
24	316	920	813	1810	657	2500	636	2750	700	307	1010	377
25	744	671	2520	3230	657	2350	1150	1540	752	336	1070	331
26	2080	1200	2640	13200	356	2780	3400	1370	678	829	474	336
27	1130	1500	1900	5530	650	2610	2820	813	1330	714	258	316
28	862	1310	1580	3790	1440	2160	1760	576	1200	312	685	279
29	774	1320	1420	3040	---	1990	1420	946	954	421	937	267
30	636	1270	1530	2750	---	1490	1540	1940	410	223	829	271
31	854	---	1320	2670	---	1520	---	1570	---	543	1030	---
TOTAL	22445	51095	47322	76020	35486	67286	35510	48638	28790	14250	37295	14255
MEAN	724	1703	1527	2452	1267	2171	1184	1569	960	460	1203	475
MAX	2080	5790	2640	13200	2600	3920	3400	2750	1700	870	4400	1030
MIN	223	671	629	1090	356	707	246	576	336	152	254	140

CAL YR 1977 TOTAL 500458 MEAN 1371 MAX 26200 MIN 105
WTR YR 1978 TOTAL 478392 MEAN 1311 MAX 13200 MIN 140

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, 2,000 ft (600 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 mi^2 (2,085 km^2).

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

AVERAGE DISCHARGE.--59 years (water years 1920-78), 1,360 ft^3/s (38.52 m^3/s), 22.94 in/yr (583 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 110,000 ft^3/s (3,120 m^3/s) Nov. 6, 1977, gage height, 21.52 ft (6.559 m), from rating curve extended above 48,000 ft^3/s (1,360 m^3/s) on basis of contracted-opening and slope-area measurements of peak flow; minimum, 85 ft^3/s (2.41 m^3/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 ft^3/s (3,400 m^3/s), present site and datum, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,500 ft^3/s (269 m^3/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)
Oct. 26	0930	12800	362	5.97	1.820	Mar. 10	1600	15100	428	6.36	1.939
Nov. 6	1200	*110000	3120	21.52	6.559	Aug. 7	1800	11700	331	5.57	1.698
Jan. 26	0600	31100	881	9.68	2.950						

Minimum discharge, 382 ft^3/s (10.8 m^3/s) July 31, gage height, 1.16 ft (0.354 m).

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	615	1240	2090	1420	2020	1090	2000	2350	1450	710	992	585
2	800	1140	2020	1340	1980	1040	1870	2090	1280	731	690	594
3	762	1270	1760	1130	1780	1090	1730	1800	1190	908	680	784
4	638	2160	2020	1070	1630	1120	1640	1820	1170	752	968	1000
5	587	3730	2290	1150	1560	956	1550	2820	1070	660	2870	641
6	567	50800	3220	1190	1470	1080	1480	2190	1000	622	2110	567
7	559	22400	2520	1170	1200	1240	1400	1940	1080	603	5650	524
8	595	8360	2110	1280	1270	1420	1330	2410	1830	594	5240	490
9	1500	5650	2020	4860	1430	2000	1280	3220	2270	576	3250	466
10	1710	4320	1800	2800	1310	9320	1260	2800	1760	549	2070	442
11	1090	3360	1630	2040	1230	6670	1260	2310	1390	515	1480	442
12	892	2760	1560	1960	1190	4130	1310	2040	1200	490	1300	541
13	787	2370	1510	1940	1230	4100	1210	2190	1160	474	2090	576
14	734	2130	1560	1760	1270	5210	1120	2890	1080	490	1680	2020
15	705	1940	1830	1560	1150	6090	1070	3550	920	507	1480	1640
16	756	1820	1590	1330	1130	4050	1060	3620	908	541	1200	968
17	821	2500	1480	1530	1130	3180	1110	2920	885	585	1030	773
18	760	2540	1690	1980	1160	2620	1130	2410	851	515	885	660
19	732	2040	1780	1710	1170	2290	1310	2090	908	458	817	603
20	716	1830	1630	2020	1110	2150	1330	1850	1270	442	763	549
21	681	1710	1550	1870	1060	2070	1240	1690	1340	426	710	515
22	655	1640	1430	1580	1030	2190	1160	1560	1070	404	690	498
23	637	1760	1340	1480	932	2020	1090	1470	920	396	632	490
24	625	1760	1330	1470	1120	1870	1080	2190	828	515	603	532
25	633	1680	2000	4260	1090	3250	1340	2520	763	731	585	524
26	6920	1920	2070	19800	1210	5180	5840	1890	731	622	784	490
27	3930	1750	1630	6630	1090	4750	5560	1610	710	498	670	450
28	2730	1630	1500	4100	1060	3460	3700	1590	670	458	670	442
29	2070	1710	1340	2960	---	2800	2890	2870	660	442	632	426
30	1680	1690	1430	2500	---	2430	2500	2050	632	404	567	411
31	1420	---	1400	2290	---	2170	---	1710	---	434	532	---
TOTAL	38307	141610	55130	84180	36012	93036	53850	70460	32996	17052	44320	19643
MEAN	1236	4720	1778	2715	1286	3001	1795	2273	1100	550	1430	655
MAX	6920	50800	3220	19800	2020	9320	5840	3620	2270	908	5650	2020
MIN	559	1140	1330	1070	932	956	1060	1470	632	396	532	411
CFSM	1.54	5.86	2.21	3.37	1.60	3.73	2.23	2.82	1.37	.68	1.78	.81
IN.	1.77	6.54	2.55	3.89	1.66	4.30	2.49	3.26	1.52	.79	2.05	.91

CAL YR 1977 TOTAL 683488 MEAN 1873 MAX 50800 MIN 502 CFSM 2.33 IN 31.58
WTR YR 1978 TOTAL 686596 MEAN 1881 MAX 50800 MIN 396 CFSM 2.34 IN 31.73

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 mi^2 (35.5 km^2).

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 CURRENT PERIOD.--July 1977 to September 1978: Peak discharges above base of 180 ft^3/s (5.10 m^3/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)
Nov. 6, 1977	0800	257	7.28	3.71	1.131	Jan. 26, 1978	Unknown	*467	13.2	a4.70	1.433
Nov. 17, 1977	1100	190	5.38	3.31	1.009	Mar. 10, 1978	1030	186	5.27	3.29	1.003

a From floodmark.

Minimum daily discharge, 3.5 ft^3/s (0.10 m^3/s) several days in September 1978.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										---	6.9	5.8
2										---	6.6	5.2
3										---	6.6	5.2
4										---	6.6	5.2
5										---	6.3	5.4
6										---	6.3	5.2
7										---	6.3	5.9
8										---	6.3	8.3
9										---	7.3	5.8
10										---	6.6	24
11										---	6.9	12
12										---	6.3	6.8
13										---	6.3	6.3
14										---	6.0	5.9
15										---	5.8	5.7
16										---	5.8	7.5
17										---	10	11
18										---	50	7.2
19										7.6	10	6.5
20										7.5	7.5	6.1
21										7.3	7.0	6.0
22										7.8	6.4	5.7
23										7.4	6.0	5.3
24										6.9	12	5.3
25										8.0	9.9	5.0
26										12	7.6	5.7
27										7.8	7.0	5.7
28										7.5	6.9	6.0
29										7.2	6.5	5.3
30										7.8	6.5	5.1
31										7.1	6.1	---
TOTAL										---	262.3	206.1
MEAN										---	8.46	6.87
MAX										---	50	24
MIN										---	5.8	5.0
CFSM										---	.62	.50
IN.										---	.71	.56

03466228 SINKING CREEK AT AFTON, TN--Continued

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	6.3	7.2	14	18	22	12	15	11	9.2	7.9	5.1	4.0
2	13	7.2	13	18	20	12	15	11	8.8	7.9	5.0	3.8
3	6.6	6.9	13	14	19	18	15	10	8.7	8.6	5.0	4.2
4	6.0	6.6	29	14	20	21	14	13	8.8	7.9	5.4	3.9
5	5.7	6.3	64	14	20	17	13	17	8.2	7.8	6.0	3.8
6	5.5	145	30	14	20	16	13	12	8.2	7.5	5.2	3.7
7	5.4	95	18	14	19	15	13	11	8.8	7.5	7.9	3.5
8	5.9	41	17	17	18	16	13	14	74	7.3	7.8	3.5
9	22	26	27	60	17	18	12	17	42	7.6	7.0	3.5
10	11	22	21	76	16	115	12	12	19	7.2	6.1	3.5
11	8.7	19	15	44	16	42	12	11	15	6.9	5.5	3.8
12	7.9	17	17	18	16	33	12	11	14	6.7	5.6	3.8
13	7.4	16	18	15	16	30	12	13	13	6.5	5.7	3.8
14	6.9	15	18	15	17	36	11	14	13	6.7	5.8	3.8
15	6.4	15	18	14	16	30	11	15	12	6.7	5.8	4.0
16	5.8	16	16	13	15	26	11	15	11	7.0	5.5	4.2
17	5.8	97	15	14	15	24	11	13	11	6.3	5.0	4.0
18	5.8	27	17	19	15	22	11	12	10	6.3	5.0	3.8
19	5.7	22	17	25	15	21	12	11	9.9	6.3	5.0	3.7
20	5.5	19	16	59	14	20	11	11	9.9	6.2	5.0	3.5
21	5.2	18	15	33	13	19	11	10	9.8	6.0	4.7	3.7
22	5.2	17	15	27	13	19	11	10	9.5	5.7	4.7	5.1
23	5.2	17	14	25	13	18	10	10	9.4	5.8	4.7	4.2
24	5.0	16	15	22	13	18	9.9	16	8.9	5.8	4.6	4.0
25	7.1	15	77	52	13	17	14	14	8.9	6.0	4.2	4.0
26	33	15	26	200	12	20	24	12	8.9	6.2	5.0	4.0
27	13	14	22	64	12	19	16	11	8.5	6.1	4.7	3.6
28	11	14	19	48	11	19	13	11	8.6	6.0	4.5	3.6
29	9.2	14	18	40	---	17	11	10	8.2	5.8	4.4	3.6
30	8.0	14	18	32	---	16	11	11	8.2	5.8	4.2	3.6
31	7.6	---	18	26	---	16	---	9.5	---	5.4	4.2	---
TOTAL	262.8	780.2	670	1064	446	742	379.9	378.5	403.4	207.4	164.3	115.2
MEAN	8.48	26.0	21.6	34.3	15.9	23.9	12.7	12.2	13.4	6.69	5.30	3.84
MAX	33	145	77	200	22	115	24	17	74	8.6	7.9	5.1
MIN	5.0	6.3	13	13	11	12	9.9	9.5	8.2	5.4	4.2	3.5
CFSM	.62	1.90	1.58	2.50	1.16	1.75	.93	.89	.98	.49	.39	.28
IN.	.71	2.12	1.82	2.89	1.21	2.01	1.03	1.03	1.10	.56	.45	.31

WTR YR 1978 TOTAL 5613.7 MEAN 15.4 MAX 200 MIN 3.5 CFSM 1.12 IN 15.24

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 mi^2 (3,067 km^2).

PERIOD OF RECORD.--Water years 1973 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)
OCT										
11...	1245	99	1.0	1758	98	7.2	14.0	11	10.5	6
JAN										
11...	1200	99	1.0	2120	93	6.7	.2	12	15.2	6
APR										
11...	1225	99	1.0	--	120	--	19.3	5	9.8	19
JUL										
12...	1250	99	1.0	--	150	8.0	26.0	8	8.4	6

DATE	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	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)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT										
11...	2.4	4800	1400	15	2.9	3.2	1.5	46	21	3.0
JAN										
11...	<1.0	--	--	12	2.5	1.8	1.2	33	5.0	2.0
APR										
11...	1.3	3200	90	17	3.1	2.2	.5	--	4.0	2.0
JUL										
12...	<1.0	20000	170	23	4.2	2.6	1.8	66	4.0	3.0

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT									
11...	70	.10	332	.48	.08	.07	800	<1	20
JAN									
11...	60	.08	343	.86	.13	.08	1300	<1	<10
APR									
11...	80	.11	--	.39	.03	.03	130	2	29
JUL									
12...	80	.11	--	.43	.04	.06	590	<1	100

DATE	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)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
11...	1000	150	<10	50	20	.4	<50	10	5.8
JAN									
11...	1600	120	<10	72	39	<.2	<50	<10	2.0
APR									
11...	250	61	<10	37	29	<.2	<10	20	1.4
JUL									
12...	1100	80	<10	97	39	<.2	<10	50	1.2

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 mi^2 (11,761 km^2).

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	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)
NOV											
14...	0820	17640	160	6.9	15.0	27	6.7	8	15	2.9	8.1
MAR											
06...	0845	12200	150	7.1	4.0	18	10.3	7	16	3.2	7.7
MAY											
22...	0825	4200	150	7.2	15.0	12	5.4	6	17	3.0	7.2
AUG											
22...	0936	16100	180	6.3	24.0	7	.4	8	17	2.4	13

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
NOV										
14...	1.2	36	13	13	110	.15	5240	.52	.06	.04
MAR										
06...	1.0	44	16	11	80	.11	2640	.63	.12	.06
MAY										
22...	2.1	38	14	9.0	90	.12	1020	.63	.01	.10
AUG										
22...	2.0	34	18	17	110	.15	4780	.51	.18	.03

DATE	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)	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)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV										
14...	410	<1	<10	780	<10	40	<.2	<50	60	4.4
MAR										
06...	480	<1	30	1600	<10	350	<.2	<10	230	1.6
MAY										
22...	620	2	20	600	<10	160	<.2	<10	30	3.2
AUG										
22...	890	<1	<10	660	<10	220	.3	<10	80	3.5

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 mi^2 (914 km^2).

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

AVERAGE DISCHARGE.--58 years, 572 ft^3/s (16.20 m^3/s), 22.00 in/yr (559 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,000 ft^3/s (1,160 m^3/s) Mar. 26, 1965, gage height, 16.09 ft (4.904 m), site and datum then in use; minimum, 2.8 ft^3/s (0.079 m^3/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 ft^3/s (0.24 m^3/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 ft^3/s (1,560 m^3/s); that of Apr. 1, 1896, 16.8 ft (5.12 m), discharge, 46,000 ft^3/s (1,300 m^3/s); and that of Mar. 7, 1867, 16.5 ft (5.03 m), discharge, 43,000 ft^3/s (1,220 m^3/s) all at site 0.1 mi (0.2 km) upstream, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,400 ft^3/s (408 m^3/s), at 0130 hrs Jan. 26, gage height, 8.40 ft (2.560 m), no other peak above base of 7,000 ft^3/s (198 m^3/s); minimum discharge, 72 ft^3/s (2.04 m^3/s) Sept. 21.

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	390	451	726	511	665	305	535	1210	296	146	1330	123
2	403	409	616	458	645	316	503	1080	284	225	384	131
3	358	377	473	403	573	544	466	863	330	260	266	300
4	322	352	1230	370	527	626	437	858	319	205	316	166
5	294	340	1560	364	496	488	416	1100	268	165	424	137
6	273	1060	1360	390	466	430	390	817	248	148	438	129
7	258	1200	897	383	390	390	358	696	311	143	1170	121
8	316	997	737	1140	437	416	334	978	974	140	1340	110
9	1300	748	885	3310	423	607	316	1540	1080	141	811	102
10	803	645	748	1440	383	4350	311	1010	564	131	522	130
11	527	535	645	1030	364	2360	322	758	419	124	536	122
12	430	458	570	922	352	1580	364	630	374	118	671	109
13	364	409	519	726	364	1470	311	650	1230	112	1010	101
14	328	377	579	635	403	2750	282	859	631	110	629	102
15	305	358	737	544	346	2080	264	1110	444	129	1030	102
16	588	364	535	466	328	1390	252	995	362	338	723	101
17	570	1180	473	655	328	1030	247	765	311	224	473	94
18	430	885	885	1010	317	861	417	620	284	159	368	90
19	383	645	781	1030	316	792	639	528	373	137	298	85
20	358	544	665	1580	300	814	463	461	381	134	256	80
21	328	496	579	1150	294	947	391	412	380	149	223	78
22	305	458	503	873	289	1300	346	379	295	129	200	364
23	289	503	444	737	268	947	326	352	246	117	181	182
24	273	511	466	705	289	849	319	657	223	142	167	145
25	403	466	2610	2470	284	861	842	607	206	904	156	110
26	2270	444	1530	6900	284	1240	2840	514	193	708	171	96
27	1300	396	1020	2240	263	1020	2710	418	181	299	149	90
28	997	423	769	1440	273	826	1580	382	169	219	175	85
29	769	503	635	1100	---	726	1110	381	164	184	156	85
30	616	561	588	885	---	635	1140	382	155	160	155	83
31	527	---	552	770	---	561	---	331	---	389	135	---
TOTAL	17077	17095	25317	36637	10667	33511	19231	22343	11695	6689	14863	3753
MEAN	551	570	817	1182	381	1081	641	721	390	216	479	125
MAX	2270	1200	2610	6900	665	4350	2840	1540	1230	904	1340	364
MIN	258	340	444	364	263	305	247	331	155	110	135	78
CFSM	1.56	1.62	2.31	3.35	1.08	3.06	1.82	2.04	1.11	.61	1.36	.35
IN.	1.80	1.80	2.67	3.86	1.12	3.53	2.03	2.35	1.23	.70	1.57	.40

CAL YR 1977 TOTAL 237501 MEAN 651 MAX 14100 MIN 134 CFSM 1.84 IN 25.03
WTR YR 1978 TOTAL 218878 MEAN 600 MAX 6900 MIN 78 CFSM 1.70 IN 23.07

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 mi^2 (13,212 km^2).

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.--33 years, 7,886 ft^3/s (223.3 m^3/s), 20.99 in/yr (533 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,300 ft^3/s (1,820 m^3/s) Mar. 12, 1963, elevation, 832.20 ft (253.655 m), from rating curve extended above 36,000 ft^3/s (1,020 m^3/s); minimum, 67 ft^3/s (1.90 m^3/s) Oct. 25, 1953, elevation, 813.38 ft (247.918 m); minimum daily, 68 ft^3/s (1.93 m^3/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 ft^3/s (4,530 m^3/s), from investigations by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 30,800 ft^3/s (872 m^3/s) Jan. 26; elevation, 825.11 ft (251.494 m); minimum recorded, 565 ft^3/s (16.0 m^3/s) July 17, elevation, 814.76 ft (248.339 m), but may have been less during period of no gage height record May 30 to June 20; minimum daily, 700 ft^3/s (19.8 m^3/s) June 5, 19.

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	9360	7850	5070	5550	22600	9040	11500	5550	6200	8480	11000	11400
2	4030	8050	9640	6580	20300	8400	10800	4820	6800	4860	10300	8460
3	4470	8820	18200	9480	17500	7700	10100	2530	10800	5140	10200	7540
4	14600	6410	19600	14200	17200	4800	9640	2910	3800	4220	8390	5090
5	11000	3600	18900	11500	17100	3370	9650	3050	700	5930	4990	9380
6	9040	3240	20100	7790	17100	2440	10500	2160	7600	9170	5280	11400
7	9050	4810	19400	6590	17100	1620	9170	2060	7600	8380	4230	10600
8	4770	5870	19500	2400	17100	5650	6970	1700	7900	7900	9550	11100
9	4060	10500	19700	14300	15100	9330	6730	2680	1600	4280	6040	8140
10	6500	18300	19400	13500	9540	10700	6520	1610	1700	7770	6670	6750
11	2540	18300	19200	13000	7880	4800	6900	2150	900	8580	4560	11300
12	3960	14800	19000	16500	6590	2380	7560	2200	2900	7670	8640	6820
13	6170	14500	18800	16700	10800	2840	8160	2520	6200	8530	5400	6890
14	7850	14500	18600	8900	12800	4220	7430	2320	5400	8430	8790	6950
15	6250	13800	18700	8700	12700	8930	6610	2870	4200	6540	9840	7200
16	7280	14200	18300	8600	13000	10200	6930	2440	4000	2690	10500	6700
17	11200	16000	18100	14400	11200	9970	7050	3430	5800	3690	9340	5540
18	9940	16000	18300	10800	6290	11900	6830	2860	6200	7520	10400	6410
19	9270	15500	18100	12100	4800	9770	7710	4240	700	9040	10200	11000
20	9970	16000	17800	9300	8490	10900	6760	3540	6800	9750	6290	10700
21	11400	14900	17600	10000	10600	10800	7250	4220	7120	9360	8920	3920
22	9820	15400	17300	9400	5780	11100	5370	4100	6690	8040	10300	9290
23	5290	16200	12400	8450	4650	10400	5640	4170	6720	4080	10300	4610
24	5880	16700	9810	12900	4700	10000	6530	5300	4910	5700	11600	4240
25	9150	18400	11400	15500	4100	10900	4770	8160	2950	6860	10800	5570
26	5160	18800	11400	26200	3980	10500	7950	8090	6760	5650	9230	7030
27	7020	18800	13400	18300	8340	13400	8450	4690	9270	5460	5790	5790
28	4290	18700	13300	19800	8720	14200	6140	2070	10900	7020	9600	5100
29	3790	8970	14100	19300	---	13100	5410	4140	11700	5080	10800	5680
30	1760	5070	17100	21000	---	12100	5780	5500	10600	4150	10100	4820
31	5650	---	10600	22900	---	12900	---	6200	---	6550	11800	---
TOTAL	220520	382990	502820	394640	316060	268360	226810	114280	175420	206520	269850	225620
MEAN	7114	12770	16220	12730	11290	8657	7560	3686	5847	6662	8705	7521
MAX	14600	18800	20100	26200	22600	14200	11500	8160	11700	9750	11800	11400
MIN	1760	3240	5070	2400	3980	1620	4770	1610	700	2690	4230	3920
(†)	-41400	+60900	-198500	+98300	-102200	+177300	+25400	+187200	+3000	-110400	-71900	-134300
MEAN‡	5778	14800	9817	15900	7638	14380	8407	9725	5947	3101	6385	3044
CFSM‡	1.13	2.90	1.92	3.12	1.50	2.82	1.65	1.91	1.17	.61	1.25	.60
IN.‡	1.31	3.24	2.22	3.59	1.56	3.25	1.84	2.20	1.30	.70	1.44	.67

CAL YR 1977 TOTAL 3215490 MEAN 8810 MAX 21800 MIN 1320 MEAN‡ 8846 CFSM‡ 1.73 IN.‡ 23.54
WTR YR 1978 TOTAL 3303890 MEAN 9052 MAX 26200 MIN 700 MEAN‡ 8760 CFSM‡ 1.72 IN.‡ 23.31

† 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.

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 record Oct. 8-17, Nov. 7-10 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, 71 micromhos Apr. 5, 1977.
WATER TEMPERATURES: Maximum, 33.0°C Aug. 11, 12, 1977; minimum, 0.0°C Jan. 19, 1977.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 303 micromhos June 25; minimum, 91 micromhos Mar. 11.
WATER TEMPERATURES: Maximum, 32.0°C Aug. 19, 27; minimum, 0.5°C Feb. 7, 8.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	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)
OCT											
18...	1100	2300	170	--	18.0	10	--	--	--	--	56
NOV											
14...	1245	15700	160	--	14.5	30	--	--	--	--	51
JAN											
24...	1115	14100	150	7.6	1.5	30	--	--	59	310	55
FEB											
09...	1145	14500	115	6.9	1.0	60	--	--	94	80	43
MAR											
07...	1145	1150	160	7.2	5.0	9	--	11.2	K6	K6	66
21...	1100	10900	160	6.6	--	160	--	9.6	K14	23	56
APR											
04...	1000	2690	140	7.8	11.0	15	--	9.0	K8	K2	51
MAY											
02...	1200	2340	140	7.6	14.0	6	--	7.4	76	K11	51
JUN											
20...	1430	1370	150	7.0	19.0	--	10	6.2	108	31	55
JUL											
17...	1030	590	150	7.0	24.5	--	3.0	4.4	2000	190	52
AUG											
01...	1100	3410	140	7.1	22.0	--	5.0	5.8	51	44	58
14...	1100	3500	--	--	--	--	--	--	--	--	--
SEP											
12...	1215	1840	175	6.9	26.0	--	4.0	--	19	16	54

DATE	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)	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)
OCT											
18...	20	18	2.7	8.0	.5	2.1	44	--	36	16	13
NOV											
14...	6	16	2.7	11	.7	2.1	55	--	45	15	12
JAN											
24...	17	17	3.0	7.5	.4	1.5	46	0	38	14	7.9
FEB											
09...	10	13	2.6	4.2	.3	1.5	41	0	34	11	4.8
MAR											
07...	11	20	3.8	7.2	.4	1.3	66	0	54	15	7.7
21...	13	17	3.3	9.6	.6	1.7	52	0	43	19	10
APR											
04...	13	16	2.8	6.5	.4	1.6	47	0	39	15	8.5
MAY											
02...	10	16	2.8	6.2	.4	1.4	50	0	41	13	7.2
JUN											
20...	14	17	--	7.2	.4	1.5	--	--	41	13	--
JUL											
17...	4	16	2.9	7.8	.5	1.6	--	--	48	12	8.0
AUG											
01...	7	18	3.1	8.2	.5	1.7	--	--	51	13	8.7
14...	--	--	--	--	--	--	--	--	--	--	--
SEP											
12...	13	17	2.8	12	.7	2.0	--	--	41	18	14

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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)	SOLIDS, DISSOLVED (TONS PER DAY)	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)	PHOSPHORUS, DISSOLVED (MG/L AS P)
OCT											
18...	.1	7.4	89	89	.12	553	.41	.01	--	.03	.01
NOV											
14...	.1	7.6	112	94	.15	4750	.48	.02	--	.05	.01
JAN											
24...	.0	8.2	98	82	.13	3730	.62	.15	.25	.04	.01
FEB											
09...	.1	7.3	75	65	.10	2940	.61	.13	.32	.06	.02
MAR											
07...	.0	8.3	103	96	.14	320	.60	.06	.24	.04	.01
21...	.1	8.0	105	94	.14	3090	.61	.08	.30	.05	.02
APR											
04...	.1	7.7	90	81	.12	654	.69	.04	.54	.03	.01
MAY											
02...	.1	7.1	87	78	.12	550	.48	.03	.11	.01	.00
JUN											
20...	.1	7.6	91	--	.12	418	.52	.02	.12	.02	.01
JUL											
17...	.1	7.7	109	85	.15	174	.48	.00	.22	.01	.00
AUG											
01...	.1	8.0	89	92	.12	819	.30	.08	.33	.03	.00
14...	--	--	--	--	--	--	--	--	--	--	--
SEP											
12...	.1	7.4	110	98	.15	546	.19	.02	.06	.01	.02

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	PHYTOPLANKTON, TOTAL (CELLS PER ML)	CHLOR-A PERIPHYTON CHROMOGRAPHIC FLUOROM (MG/M2)	CHLOR-B PERIPHYTON CHROMOGRAPHIC FLUOROM (MG/M2)	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
18...	--	--	--	--	--	--	--	20	124	96
NOV										
14...	14	--	1300	--	--	--	--	31	1310	92
JAN										
24...	--	7.4	--	--	--	--	--	34	1290	75
FEB										
09...	2.6	--	--	--	--	--	--	49	1920	97
MAR										
07...	2.4	--	130	--	--	--	--	23	71	53
21...	1.1	--	--	--	--	--	--	12	194	89
APR										
04...	--	--	--	--	--	--	--	10	73	97
MAY										
02...	--	2.8	630	88.3	.000	106	126	9	57	88
JUN										
20...	.9	--	910	--	--	--	--	71	263	100
JUL										
17...	--	--	1700	.290	.000	.315	.472	6	9.6	81
AUG										
01...	3.7	--	2000	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	5	47	85
SEP										
12...	1.9	--	2000	--	--	--	--	5	25	100

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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)	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)
OCT												
18...	2	2	100	100	0	0	<10	1	36	25	1000	60
JAN												
24...	0	0	0	0	2	3	10	0	7	4	2100	60
MAY												
02...	1	1	0	0	1	2	<10	0	3	2	340	20
AUG												
01...	1	0	0	0	0	1	10	0	3	3	550	10

DATE	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)	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...	7	7	70	30	<.5	<.5	0	0	0	0	20	10
JAN												
24...	53	8	120	70	<.5	<.5	0	0	0	0	40	30
MAY												
02...	4	3	20	10	<.5	<.5	0	0	0	0	10	0
AUG												
01...	3	2	130	100	.5	.5	0	0	0	0	30	10

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	176	160	168	192	171	185	173	139	154	159	141	151
2	175	160	168	189	167	180	160	141	153	160	143	154
3	179	160	170	190	166	180	163	150	155	162	160	160
4	180	152	166	189	162	175	172	163	167	161	159	160
5	181	163	172	196	166	174	171	145	160	163	160	161
6	178	164	171	193	154	174	145	131	137	168	163	165
7	179	165	172	---	---	---	131	129	130	171	152	165
8	---	---	---	---	---	---	131	129	130	169	151	156
9	---	---	---	---	---	---	135	131	132	168	146	157
10	---	---	---	---	---	---	133	131	132	151	149	150
11	---	---	---	169	164	166	133	131	132	152	150	151
12	---	---	---	167	164	166	134	132	133	155	152	153
13	---	---	---	172	162	166	137	134	135	160	155	157
14	---	---	---	163	161	163	143	137	140	161	143	155
15	---	---	---	158	156	157	141	139	139	165	145	159
16	---	---	---	158	152	154	142	140	141	162	159	160
17	---	---	---	152	145	149	144	141	143	163	145	159
18	187	170	182	144	136	139	144	140	142	161	154	157
19	187	168	183	139	135	137	142	139	140	157	152	154
20	187	170	182	140	137	139	142	140	140	151	147	150
21	187	171	184	143	138	141	140	139	139	150	134	146
22	189	171	184	143	138	140	140	140	140	151	135	148
23	189	169	178	137	126	131	144	128	141	151	136	149
24	195	173	182	130	125	127	151	131	146	156	149	152
25	188	169	182	138	131	134	150	142	146	158	152	156
26	190	172	181	137	125	130	141	128	138	149	143	145
27	186	143	164	125	122	123	144	128	141	149	144	148
28	187	162	173	128	124	127	145	129	143	151	149	150
29	212	160	181	141	119	127	145	143	144	150	148	149
30	192	159	181	153	129	142	150	144	148	147	144	146
31	193	175	186	---	---	---	157	137	152	144	142	144
MONTH	---	---	---	196	119	151	173	128	142	171	134	154
		FEBRUARY			MARCH			APRIL			MAY	
1	141	139	140	161	146	158	171	154	164	156	133	147
2	139	134	136	161	146	158	179	157	167	160	141	152
3	134	127	130	164	144	159	177	156	166	165	132	144
4	126	119	123	162	145	153	173	157	167	214	125	162
5	118	115	116	167	150	157	185	163	172	231	185	205
6	114	112	113	172	154	159	177	163	171	223	200	209
7	113	111	112	162	159	160	183	159	170	211	171	187
8	117	104	112	176	154	166	176	151	165	189	178	184
9	117	114	116	177	158	171	177	152	165	195	172	179
10	121	108	117	169	131	156	169	152	162	204	173	188
11	124	109	119	125	91	103	166	150	159	218	175	185
12	128	113	122	107	92	102	159	143	154	242	176	203
13	135	117	129	132	107	116	164	146	155	250	213	232
14	132	119	131	163	117	130	170	145	159	258	221	235
15	132	119	130	161	98	136	173	145	160	249	190	215
16	136	130	133	169	141	162	173	152	162	212	168	191
17	136	120	132	177	158	173	183	150	168	197	172	185
18	138	122	132	184	171	180	195	165	181	206	181	193
19	143	127	136	184	178	182	199	183	192	210	184	198
20	145	132	141	184	175	181	201	178	194	236	190	207
21	147	132	143	179	176	178	205	161	183	251	204	222
22	150	134	142	179	163	174	171	142	156	293	253	267
23	154	137	147	172	159	170	169	145	159	250	213	227
24	158	141	150	170	155	165	160	132	146	216	187	200
25	163	146	155	171	154	167	161	138	151	197	175	183
26	166	151	158	171	155	166	157	142	151	181	164	174
27	165	151	159	169	162	166	145	125	133	192	165	176
28	161	157	160	165	163	164	139	115	130	212	174	187
29	---	---	---	164	161	163	142	126	136	216	187	200
30	---	---	---	163	159	162	152	133	143	207	181	190
31	---	---	---	165	159	163	---	---	---	187	159	172
MONTH	166	104	133	184	91	158	205	115	161	293	125	194

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	195	163	177	200	163	175	176	141	163	186	167	177
2	175	153	163	188	163	174	172	149	160	189	164	175
3	175	152	163	179	159	168	177	157	166	192	165	177
4	191	155	171	159	147	154	169	154	163	196	166	177
5	226	177	204	178	151	160	177	155	163	187	166	177
6	183	159	170	163	150	158	171	157	165	183	164	176
7	180	154	164	162	144	153	189	162	173	183	164	176
8	182	151	166	169	143	154	167	135	157	184	163	176
9	193	174	182	158	144	150	180	153	163	190	166	177
10	227	188	209	162	150	155	184	153	165	194	168	180
11	232	177	191	155	140	148	193	163	172	188	169	181
12	197	143	159	157	139	146	194	168	175	183	167	176
13	199	154	168	152	138	145	199	170	179	183	168	176
14	188	138	156	161	138	148	190	161	177	185	172	180
15	193	150	165	152	137	145	210	184	194	190	178	185
16	194	150	165	151	135	143	209	184	195	209	190	197
17	190	150	162	162	145	151	214	186	197	203	192	197
18	170	141	154	158	142	150	210	187	197	210	195	199
19	228	152	189	159	141	150	210	184	195	206	192	199
20	176	139	150	162	144	155	214	181	194	201	190	196
21	209	163	178	166	146	157	207	184	195	202	193	199
22	219	167	188	184	154	167	198	175	184	213	200	205
23	242	183	205	201	166	177	195	172	182	222	206	211
24	265	196	220	203	179	189	194	174	184	218	194	205
25	303	209	243	193	171	182	193	171	182	209	189	201
26	251	189	218	192	165	177	194	170	181	208	196	202
27	209	179	191	190	165	176	196	169	179	208	199	205
28	192	173	179	185	160	170	193	170	181	215	204	210
29	190	169	175	187	156	167	190	169	179	217	204	210
30	192	165	173	189	159	170	193	169	180	213	201	208
31	---	---	---	190	169	176	188	167	179	---	---	---
MONTH	303	138	180	203	135	161	214	135	178	222	163	190
YEAR	303	91	165									

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.0	16.5	19.5	23.5	16.0	19.5	28.0	23.0	26.0	30.0	25.5	28.5
2	21.5	16.5	19.0	24.5	17.0	20.5	29.0	23.0	26.5	31.5	25.5	28.5
3	20.5	16.0	18.0	27.5	18.5	22.0	29.5	23.0	26.5	31.5	25.5	28.5
4	21.5	17.0	19.5	21.5	17.0	20.0	27.5	23.5	26.5	31.0	25.0	28.0
5	26.0	18.0	21.0	28.0	18.5	22.5	29.0	24.0	26.0	30.5	25.0	28.5
6	22.0	16.5	19.0	24.5	18.0	21.0	27.5	24.5	26.5	30.5	25.5	29.0
7	21.0	16.5	18.5	24.5	18.0	20.5	30.0	25.0	26.5	31.0	26.0	29.0
8	20.5	16.5	18.5	25.5	18.5	21.5	28.5	24.5	26.5	31.0	26.0	29.0
9	21.0	18.5	19.5	22.5	18.5	21.0	28.0	24.5	26.0	31.5	26.5	29.0
10	23.5	19.0	21.0	27.0	20.0	23.0	30.0	24.0	26.5	31.0	26.0	28.5
11	27.0	21.5	23.5	25.0	19.5	22.0	30.0	25.0	27.0	31.0	26.5	29.0
12	28.0	21.5	24.0	26.0	19.0	22.0	31.0	25.0	27.5	30.0	25.5	27.5
13	23.0	18.0	20.0	25.0	19.5	22.0	30.5	25.0	27.5	29.0	25.0	27.0
14	23.0	18.0	20.5	27.0	20.0	23.0	30.0	25.0	27.5	28.0	25.0	26.5
15	24.0	19.0	21.0	23.5	20.5	22.0	31.0	25.0	28.0	28.0	25.0	26.5
16	24.0	18.5	21.0	24.0	20.0	22.5	31.5	25.0	28.0	28.0	25.0	26.5
17	24.5	18.0	20.5	28.5	22.0	25.0	31.5	25.0	28.0	28.5	25.0	27.0
18	23.0	17.0	20.0	27.5	20.5	24.0	31.0	25.0	28.0	29.5	25.5	27.0
19	26.0	20.0	23.0	27.5	20.5	23.5	32.0	25.0	28.5	29.0	25.5	27.5
20	21.0	17.5	18.5	26.5	21.0	24.0	31.5	25.0	28.0	29.5	25.5	27.5
21	21.5	14.0	17.5	27.5	21.0	24.5	30.5	25.0	28.5	29.5	25.5	27.5
22	21.5	14.0	17.5	28.5	21.0	25.0	30.5	25.0	28.0	28.5	25.5	27.5
23	22.0	14.5	18.0	28.5	21.5	25.0	31.0	25.0	28.0	28.5	25.5	27.0
24	23.5	14.5	18.5	30.5	22.5	26.0	30.5	25.0	28.5	28.0	25.5	26.5
25	24.5	17.0	20.0	25.5	21.5	23.5	30.5	25.0	28.5	27.5	25.0	26.5
26	26.0	17.0	20.5	28.0	21.5	24.5	30.0	25.0	27.5	28.5	25.0	27.0
27	23.0	15.0	19.0	29.0	23.5	25.5	32.0	25.0	28.0	28.0	25.0	27.0
28	22.5	15.0	18.5	29.0	22.0	25.5	31.0	25.0	28.5	27.5	25.0	26.5
29	22.5	16.0	19.5	29.5	22.5	25.5	31.0	25.0	28.5	28.0	25.0	26.5
30	22.5	15.5	19.5	29.0	23.0	26.0	31.0	25.0	28.5	27.5	25.0	26.5
31	---	---	---	31.5	23.0	26.0	31.0	26.0	29.0	---	---	---
MONTH	28.0	14.0	20.0	31.5	16.0	23.0	32.0	23.0	27.5	31.5	25.0	27.5
YEAR	32.0	.5	16.0									

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	NOV 14,77	MAR 7,78	MAY 2,78	JUN 20,78
TIME	1245	1145	1200	1430
TOTAL CELLS/ML	1300	130	630	910
DIVERSITY: DIVISION	1.2	0.3	1.0	0.8
.CLASS	1.2	0.3	1.0	0.8
..ORDER	1.7	1.2	1.7	1.3
...FAMILY	1.9	2.7	2.7	1.7
....GENUS	2.1	2.8	2.7	1.9

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	--	-
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	180#	19
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	15	2
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	--	-	130#	21	--	-
....CHODATELLA	9	1	--	-	--	-	--	-
....CLOSTERIOPSIS	9	1	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
....NEPHROCYTIUM	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	--	-
....SELENASTRUM	9	1	--	-	--	-	--	-
....TETRAEDRON	9	1	--	-	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	--	-	--	-	19	3	29	3
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	36	3	42#	32	190#	29	44	5
....MELOSIRA	210#	16	--	-	--	-	530#	58
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	36	3	--	-	--	-	--	-
....COCCONEIS	--	-	7	5	--	-	--	-
....RHOICOSPHENIA	*	0	7	5	--	-	--	-
...CYMBELLACEAE								
....CYMBELLA	*	0	14	11	93	15	44	5
...DIATOMACEAE								
....DIATOMA	--	-	7	5	--	-	--	-
...FRAGILARIACEAE								
....FRAGILARIA	*	0	--	-	--	-	--	-
....SYNEDRA	--	-	14	11	75	12	--	-
...GOMPHONEMATACEAE								
....GOMPHONEMA	9	1	--	-	--	-	--	-
...NAVICULACEAE								
....NAVICULA	54	4	7	5	56	9	59	6
....PINNULARIA	27	2	--	-	--	-	--	-
...NITZSCHIACEAE								
....NITZSCHIA	36	3	28#	21	56	9	15	2
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	830#	62	--	-	--	-	--	-
..HORMOGONALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	36	3	--	-	--	-	--	-
...RIVULARIACEAE								
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 14,77 1245		MAR 7,78 1145		MAY 2,78 1200		JUN 20,78 1430	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	7	5	19	3	--	-
....PHACUS	9	1	--	-	--	-	--	-
....TRACHELOMONAS	9	1	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	9	1	--	-	--	-	--	-

03470500 FRENCH BROAD RIVER NEAR KNOXIVLLE, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	JUL 17,78	AUG 1,78	SEP 12,78
TIME	1030	1100	1215
TOTAL CELLS/ML	1700	2000	2000
DIVERSITY: DIVISION	1.5	1.1	0.9
.CLASS	1.5	1.1	0.9
..ORDER	1.8	1.7	0.9
...FAMILY	2.4	1.9	1.7
....GENUS	2.4	2.1	1.8

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	14	1	--	-	--	-
...COELASTRACEAE						
....COELASTRUM	800#	46	--	-	--	-
...MICRACTINIACEAE						
....GOLENKINIA	--	-	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	14	1	22	1	260	13
....CHODATELLA	--	-	--	-	--	-
....CLOSTERIOPSIS	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	66	3	22	1
....NEPHROCYTIUM	--	-	--	-	11	1
....OOCYSTIS	--	-	88	4	--	-
....SELENASTRUM	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	16	1
...SCENEDESMACEAE						
....SCENEDESMUS	29	2	130	7	65	3
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	86	5	--	-	--	-
....MELOSIRA	29	2	--	-	11	1
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	220	12	--	-	--	-
....COCCONEIS	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	--	-	--	-
...CYMBELLACEAE						
....CYMBELLA	14	1	--	-	--	-
...DIATOMACEAE						
....DIATOMA	--	-	--	-	--	-
...FRAGILARIACEAE						
....FRAGILARIA	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	16	1
...GOMPHONEMATACEAE						
....GOMPHONEMA	14	1	22	1	--	-
...NAVICULACEAE						
....NAVICULA	57	3	44	2	*	0
....PINNULARIA	--	-	--	-	--	-
...NITZSCHIACEAE						
....NITZSCHIA	100	6	150	8	43	2
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	--	-	350#	17	--	-
..HORMOGONALES						
...OSCILLATORIACEAE						
....OSCILLATORIA	360#	20	1200#	57	380#	19
...RIVULARIACEAE						
....RAPHIDIOPSIS	--	-	--	-	1200#	59

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03470500 FRENCH BROAD RIVER NEAR KNOXVILLE, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	JUL 17,78 1030		AUG 1,78 1100		SEP 12,78 1215	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	--	-	--	-
....PHACUS	--	-	--	-	--	-
....TRACHELOMONAS	14	1	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	--	-	--	-

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 mi^2 (1,821 km^2).

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
OCT											
18...	1020	3098	170	7.3	16.5	6	4	4.6	4	--	--
NOV											
14...	0900	3300	160	7.5	13.0	9	21	5.3	9	90	.12
DEC											
20...	0730	3028	170	7.4	10.0	6	5	7.9	4	--	--
JAN											
17...	0900	2400	190	7.0	7.0	21	18	8.6	35	--	--
FEB											
21...	0845	3000	--	6.4	2.5	8	10	9.6	6	70	.10
MAR											
28...	1100	--	--	--	--	--	--	--	--	--	--
APR											
25...	0730	--	180	7.3	--	7	23	--	4	--	--
JUN											
06...	1110	--	180	7.9	6.0	4	2	6.8	5	--	--
20...	1030	2500	180	7.9	7.0	4	<1	6.9	1	--	--
JUL											
24...	1010	2700	180	7.4	12.0	7	1	6.0	5	--	--
AUG											
19...	0900	2560	170	7.6	11.0	6	2	--	3	100	.14

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)	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)
OCT											
18...	--	--	--	--	--	70	--	--	.38	.05	.05
NOV											
14...	802	19	6.5	1.7	2.2	21	8.0	3.0	.44	.12	.08
DEC											
20...	--	--	--	--	--	68	--	--	.85	.03	.09
JAN											
17...	--	--	--	--	--	78	--	--	.85	1.7	.42
FEB											
21...	567	21	6.4	1.0	.9	38	8.0	3.0	1.0	.03	.09
MAR											
28...	--	--	--	--	--	--	--	--	1.1	.01	.09
APR											
25...	--	--	--	--	--	67	--	--	1.1	<.01	.17
JUN											
06...	--	23	6.1	2.2	1.7	72	8.0	4.0	1.0	.02	.06
20...	--	--	--	--	--	69	--	--	.88	.05	.04
JUL											
24...	--	--	--	--	--	72	--	--	1.1	.06	.18
AUG											
19...	691	24	5.5	2.0	1.3	70	8.0	3.0	.86	<.01	.06

03476010 SOUTH FORK HOLSTON RIVER AT SOUTH HOLSTON DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOSPHORUS, TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT											
18...	.01	--	--	--	220	50	--	--	--	--	--
NOV											
14...	.03	350	<1	10	820	150	<10	<.2	1200	60	2.7
DEC											
20...	.02	--	--	--	320	40	--	--	--	--	--
JAN											
17...	.07	--	--	--	2400	450	--	--	--	--	--
FEB											
21...	.02	400	<1	140	400	10	<10	<.2	<10	<10	1.1
MAR											
28...	.01	--	--	--	200	9	--	--	--	--	--
APR											
25...	.01	--	--	--	170	<10	--	--	--	--	--
JUN											
06...	<.01	50	<1	40	60	10	<10	<.2	<10	30	2.3
20...	<.01	--	--	--	70	10	--	--	--	--	--
JUL											
24...	.01	--	--	--	110	<10	--	--	--	--	--
AUG											
19...	.01	<100	5	20	70	<10	<10	<.2	100	20	1.1

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 mi^2 (1,212 km^2).

PERIOD OF RECORD.--Water years 1973, 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
OCT											
17...	0900	2740	82	6.8	9.0	5	2	5.1	6	--	--
NOV											
14...	1000	2650	81	6.7	12.0	7	2	4.8	3	40	.05
DEC											
19...	0930	1260	78	--	--	--	--	--	4	--	--
JAN											
30...	0830	2800	72	7.4	8.0	7	7	10.3	4	--	--
FEB											
21...	1330	2200	73	7.1	5.0	7	3	10.8	6	--	--
MAR											
22...	1100	--	77	7.4	7.0	9	7	--	--	--	--
MAY											
01...	0900	--	76	7.6	7.0	7	2	--	--	--	--
15...	0930	2800	80	7.1	7.0	6	2	9.3	<1	60	.08
23...	0951	--	81	7.0	--	6	3	--	2	40	.05
JUN											
19...	1750	2800	73	6.6	8.0	5	2	8.2	1	--	--
JUL											
24...	1700	2700	77	6.7	8.0	6	2	7.6	4	--	--
AUG											
22...	1100	2650	--	--	10.0	--	--	6.9	4	--	--
SEP											
11...	0930	1300	73	6.6	12.0	7	<1	6.2	3	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)	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)
OCT											
17...	--	--	--	--	--	24	--	--	.62	.01	.01
NOV											
14...	286	7.5	3.4	1.7	.8	33	5.0	3.0	.53	.01	.06
DEC											
19...	--	--	--	--	--	--	--	--	.52	.08	.12
JAN											
30...	--	--	--	--	--	22	--	--	.54	.03	.03
FEB											
21...	--	8.0	3.1	1.0	.8	16	7.0	2.0	.51	.02	.10
MAR											
22...	--	--	--	--	--	25	--	--	.53	.02	.10
MAY											
01...	--	--	--	--	--	24	--	--	.53	.01	.15
15...	454	6.2	2.7	1.3	1.1	26	5.0	3.0	.61	.05	.05
23...	--	--	--	--	--	24	6.0	2.0	--	--	--
JUN											
19...	--	--	--	--	--	24	--	--	.62	.01	.07
JUL											
24...	--	--	--	--	--	24	--	--	.65	<.01	.10
AUG											
22...	--	8.2	2.8	2.3	1.2	--	--	--	.63	.03	.06
SEP											
11...	--	--	--	--	--	25	--	--	.51	.03	.03

03483950 WATAUGA RIVER BELOW WATAUGA DAM, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOS-PHORUS, 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)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	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											
17...	.06	--	--	--	110	30	--	--	--	--	--
NOV											
14...	.01	<60	<1	10	80	90	<10	<.2	<50	60	1.9
DEC											
19...	--	--	--	--	--	--	--	--	--	--	--
JAN											
30...	.01	--	--	--	80	10	--	--	--	--	--
FEB											
21...	.01	500	<1	120	160	10	<10	<.2	<10	<10	1.0
MAR											
22...	.01	--	--	--	300	30	--	--	--	--	--
MAY											
01...	.01	--	--	--	<50	20	--	--	--	--	--
15...	.01	60	<1	40	70	<10	<10	.2	<10	20	.3
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
19...	.01	--	--	--	100	10	--	--	--	--	--
JUL											
24...	.01	--	--	--	570	10	--	--	--	--	--
AUG											
22...	<.01	520	<1	<10	70	40	<10	.2	<10	90	1.1
SEP											
11...	<.01	--	--	--	50	10	--	--	--	--	--

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 mi^2 (1,220 km^2).

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.--36 years, 744 ft^3/s (21.07 m^3/s), 21.45 in/yr (545 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 21,500 ft^3/s (609 m^3/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 ft^3/s (70.8 m^3/s); minimum, 2.3 ft^3/s (0.065 m^3/s) July 11, 1953; minimum daily, 2.4 ft^3/s (0.068 m^3/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 ft^3/s (191 m^3/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, 3,470 ft^3/s (98.3 m^3/s) Nov. 8, gage height, 35.82 ft (10.918 m); minimum recorded, 25 ft^3/s (0.71 m^3/s) Sept. 2, gage height, 31.28 ft (9.534 m) but may have been less during period of no gage-height record; minimum daily, 29 ft^3/s (0.82 m^3/s) Sept. 3.

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	509	386	1250	820	2120	1180	60	790	1410	1100	1630	867
2	49	416	1350	840	1630	1220	60	1000	1710	70	1570	31
3	186	165	1550	2250	1050	1300	60	480	746	506	1620	29
4	1830	46	1700	1520	580	887	60	60	161	72	1150	66
5	753	202	1310	1330	740	1160	390	720	1300	1290	148	837
6	77	41	1910	1460	1550	540	870	60	1190	1230	65	882
7	46	40	2660	1330	2200	650	650	60	1240	1170	1460	837
8	38	1230	2440	1280	1850	520	60	60	1270	1320	1310	686
9	40	730	2370	2270	1350	450	60	430	416	67	1500	850
10	652	670	2360	2820	890	60	60	110	68	971	1470	1030
11	430	2750	1980	2910	1300	60	60	55	66	83	1510	766
12	627	1500	1760	2850	990	60	60	1010	1330	162	998	359
13	1900	1020	720	2790	1650	60	60	63	1290	958	66	937
14	1170	1540	490	2760	1700	60	60	61	1210	985	1450	854
15	926	1920	650	1680	1850	60	60	871	1100	67	1550	695
16	1130	1550	960	2750	2000	770	60	911	1320	64	1490	819
17	1930	1380	1340	1900	1800	300	370	598	1100	1070	1590	667
18	1720	2180	530	2900	930	180	60	1070	66	1260	1710	1000
19	1430	1620	470	2650	650	40	60	1650	1070	1670	1680	1000
20	1270	1480	580	2300	1300	520	560	1160	1300	1600	966	1060
21	1110	1400	1580	2050	1550	50	1480	95	1150	1570	1680	921
22	975	1790	1580	1950	1450	260	300	1420	1250	1490	1630	505
23	703	1170	1060	1850	1150	60	240	1010	1220	66	1290	179
24	824	1400	380	1800	1500	60	670	994	527	1140	1760	163
25	917	1310	880	1910	520	60	820	1770	66	1180	1450	919
26	380	2060	520	1740	640	60	820	1520	1180	448	1610	390
27	443	2070	1060	2580	880	320	770	1550	1410	909	65	669
28	52	2470	1160	2880	1220	480	730	195	1680	864	1620	747
29	324	2090	620	2830	---	60	60	736	1390	276	990	575
30	231	1570	840	2700	---	60	60	1830	1400	69	754	290
31	468	---	1180	2080	---	60	---	1640	---	1520	741	---
TOTAL	23140	38196	39240	65780	37040	11607	9690	23979	30636	25247	38523	19630
MEAN	746	1273	1266	2122	1323	374	323	774	1021	814	1243	654
MAX	1930	2750	2660	2910	2200	1300	1480	1830	1710	1670	1760	1060
MIN	38	40	380	820	520	40	60	55	66	64	65	29
(†)	+9900	+21300	-10100	-22400	-19700	+39400	+13600	+13000	-14300	-15300	-20300	-12600
MEAN‡	1066	1983	940	1399	619	1645	776	1193	545	321	588	234
CFSM‡	2.26	4.21	2.00	2.97	1.31	3.49	1.65	2.53	1.16	.68	1.25	.50
IN.‡	2.61	4.70	2.30	3.43	1.37	4.03	1.84	2.92	1.29	.79	1.44	.56

CAL YR 1977 TOTAL 307271 MEAN 842 MAX 2900 MIN 20 MEAN‡ 968 CFSM‡ 2.06 IN.‡ 27.89
WTR YR 1978 TOTAL 362708 MEAN 994 MAX 2910 MIN 29 MEAN‡ 946 CFSM‡ 2.01 IN.‡ 27.26

† 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

NOTE.--No gage-height record Mar. 5 to May 10.

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 mi^2 (355 km^2).

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

AVERAGE DISCHARGE.--63 years (water years 1912-16, 1921-78), 224 ft^3/s (6.344 m^3/s), 22.20 in/yr (564 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft^3/s (416 m^3/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 ft^3/s (0.48 m^3/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 ft^3/s (708 m^3/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft^3/s (48.1 m^3/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)
Nov. 6	1200	*14700	416	a9.34	2.847	Mar. 10	1145	2460	69.7	4.14	1.262
Jan. 26	0300	5150	146	6.00	1.829	July 31	2145	1960	55.5	3.67	1.119

a From floodmarks.

Minimum discharge, 56 ft^3/s (1.59 m^3/s) Sept. 29, 30, gage height, 0.46 ft (0.140 m).

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	91	192	301	232	323	184	319	372	225	108	418	90
2	126	177	248	217	323	171	297	314	203	115	154	90
3	103	169	232	168	284	210	272	280	200	146	157	100
4	91	166	354	168	260	196	256	297	207	133	184	89
5	87	182	418	193	252	168	240	314	177	113	314	81
6	85	4270	478	193	225	187	229	260	165	102	210	78
7	81	1780	395	196	190	200	217	248	203	96	649	74
8	89	1040	332	236	210	276	203	340	473	94	585	72
9	271	686	336	530	221	458	196	525	525	101	349	70
10	183	520	280	354	203	1670	190	414	345	198	236	68
11	142	385	252	591	190	1180	193	340	264	112	184	71
12	128	323	248	345	184	769	207	297	225	100	168	88
13	115	284	244	305	210	667	180	404	248	92	210	77
14	111	256	272	268	240	1010	168	458	196	90	162	77
15	107	240	297	236	193	933	162	655	180	94	190	76
16	157	225	260	207	187	673	160	704	164	110	157	81
17	189	399	244	332	190	520	160	546	156	107	135	73
18	154	314	301	428	193	423	165	433	149	88	128	70
19	148	276	272	340	200	376	187	358	166	82	118	66
20	136	252	260	362	180	349	196	310	254	80	256	64
21	127	236	248	305	180	340	180	276	219	77	180	63
22	120	229	225	276	162	362	168	248	174	78	140	62
23	115	236	210	256	160	314	160	244	154	86	120	71
24	111	252	217	256	187	301	157	602	135	126	111	62
25	114	244	399	891	187	608	264	541	129	130	109	62
26	933	288	310	2770	217	679	829	395	123	126	157	62
27	587	244	276	1060	180	619	723	319	119	92	111	60
28	445	248	244	661	184	520	568	293	116	85	116	61
29	334	256	229	473	---	448	453	336	124	80	98	60
30	256	268	248	399	---	381	409	284	109	75	100	59
31	217	---	240	354	---	345	---	252	---	245	90	---
TOTAL	5953	14637	8870	13602	5915	15537	8108	11659	6127	3361	6296	2177
MEAN	192	488	286	439	211	501	270	376	204	108	203	72.6
MAX	933	4270	478	2770	323	1670	829	704	525	245	649	100
MIN	81	166	210	168	160	168	157	244	109	75	90	59
CFSM	1.40	3.56	2.09	3.20	1.54	3.66	1.97	2.75	1.49	.79	1.48	.53
IN.	1.62	3.97	2.41	3.69	1.61	4.22	2.20	3.17	1.66	.91	1.71	.59

CAL YR 1977 TOTAL 101554 MEAN 278 MAX 4270 MIN 74 CFSM 2.03 IN 27.58
WTR YR 1978 TOTAL 102242 MEAN 280 MAX 4270 MIN 59 CFSM 2.04 IN 27.76

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 mi^2 (1,792 km^2).

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.--48 years (water years 1926-48, 1954-78), 1,092 ft^3/s (30.93 m^3/s), 21.43 in/yr (544 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,100 ft^3/s (2,130 m^3/s) Aug. 14, 1940, gage height, 20.87 ft (6.361 m), from rating curve extended above 29,000 ft^3/s (821 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 42 ft^3/s (1.19 m^3/s) Sept. 20, 1932; minimum daily, 85 ft^3/s (2.41 m^3/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 ft^3/s (411 m^3/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 ft^3/s (2,150 m^3/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,200 ft^3/s (402 m^3/s) Nov. 6, gage height, 10.64 ft (3.243 m); minimum, 119 ft^3/s (3.37 m^3/s) Sept. 30, gage height, 1.98 ft (0.604 m); minimum daily, 145 ft^3/s (4.11 m^3/s) Sept. 4.

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	633	630	1710	1210	2600	1330	472	1200	1710	1260	1910	873
2	1250	648	1740	906	2100	1430	435	1490	1900	306	1750	299
3	577	436	1850	2500	1550	1540	400	974	1120	672	1680	155
4	1970	320	2220	1720	1040	1280	379	453	440	272	1430	145
5	1180	375	2390	1550	1080	1850	436	1120	1450	1200	554	794
6	276	5390	2760	1680	1900	870	1350	483	1330	1360	375	968
7	240	2670	3320	1720	2500	803	864	409	1450	1300	2010	782
8	223	2560	3010	1290	2200	1070	476	514	1900	1370	1990	817
9	492	1730	2900	2840	1700	1330	318	1110	1130	376	1860	889
10	880	1310	2770	3230	1200	3370	308	744	673	925	1710	968
11	811	3290	2340	3220	1600	2070	311	595	429	440	1690	843
12	836	2050	2260	3200	1300	1320	324	1290	1400	244	1360	555
13	1830	1370	1070	3200	2000	1140	295	714	1700	955	347	839
14	1610	1770	1110	3130	2100	1570	282	1020	1430	1150	1420	921
15	1120	2170	867	2130	2150	1420	274	2210	1430	221	1680	719
16	1220	1810	1460	2810	2230	1650	271	1980	1460	205	1620	846
17	2070	1900	1600	2260	2090	1120	592	1470	1380	979	1690	697
18	2010	2630	800	3380	1490	822	277	1700	356	1280	1810	1030
19	1640	1880	1130	3130	770	555	295	2290	1060	1770	1830	1050
20	1490	2020	680	2860	1460	984	780	1410	1620	1590	1160	1100
21	1370	1530	1930	2730	2040	529	1700	676	1390	1620	1800	979
22	1100	2120	1900	2520	1430	775	494	1530	1430	1650	1640	502
23	922	1440	1570	2230	1280	448	514	1300	1430	276	1550	387
24	1030	1630	771	2230	2040	422	687	1740	823	1130	1710	221
25	1040	1640	1190	3180	752	724	1220	2510	269	1250	1530	845
26	1660	2320	1290	6390	775	870	1870	1990	1100	754	1770	489
27	1290	2390	1250	4150	1140	1140	1820	1960	1530	952	367	683
28	799	2620	1690	3940	1550	1050	1580	766	1800	979	1490	746
29	843	2380	1080	3550	---	836	877	966	1570	369	1100	688
30	624	2020	1190	3300	---	576	595	2110	1500	181	677	346
31	793	---	1430	2600	---	514	---	1910	---	1510	928	---
TOTAL	33829	57049	53278	84786	46067	35408	20496	40634	38210	28546	44438	21176
MEAN	1091	1902	1719	2735	1645	1142	683	1311	1274	921	1433	706
MAX	2070	5390	3320	6390	2600	3370	1870	2510	1900	1770	2010	1100
MIN	223	320	680	906	752	422	271	409	269	181	347	145
(†)	+9900	+21300	-10100	-22400	-19700	+39400	+13600	+13000	-14300	-15300	-20300	-12600
MEAN‡	1411	2612	1393	2012	942	2413	1137	1730	797	427	779	286
CFSM‡	2.04	3.77	2.01	2.91	1.36	3.49	1.64	2.50	1.15	.62	1.13	.41
IN.‡	2.35	4.21	2.32	3.35	1.42	4.02	1.83	2.88	1.28	.71	1.30	.46

CAL YR 1977 TOTAL 458483 MEAN 1256 MAX 6750 MIN 153 MEAN‡ 1382 CFSM‡ 2.00 IN.‡ 27.11
WTR YR 1978 TOTAL 503917 MEAN 1381 MAX 6390 MIN 145 MEAN‡ 1333 CFSM‡ 1.93 IN.‡ 26.14

† 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.

03486810 SOUTH FORK HOLSTON RIVER AT BOONE DAM (TAILWATER), TN

LOCATION.--Lat 36°26'26", long 82°26'17", Washington County, Hydrologic Unit 06010102, at downstream side of dam, 2.5 mi (4.0 km) northeast of Gray, 3.8 mi (6.1 km) southwest of Holston, 4.0 mi (6.4 km) northwest of Flourville, and at mile 18.6 (29.9 km).

DRAINAGE AREA.--1,840 mi^2 (4,766 km^2).

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Flow regulated by Boone Lake (station 03486800), Watauga Lake (station 03483500), and South Holston Lake (station 03476000) above site.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
OCT											
18...	0925	9150	200	7.5	16.0	8	4	--	4	--	--
NOV											
14...	0930	10250	180	6.6	14.0	7	12	6.3	9	140	.19
DEC											
27...	0745	9060	180	7.0	6.0	6	7	--	4	--	--
JAN											
16...	0800	3600	140	7.4	5.0	7	6	9.8	3	--	--
FEB											
21...	0900	3400	210	7.8	5.0	7	5	8.8	7	110	.15
MAR											
20...	0815	--	140	7.0	6.0	7	14	11.0	5	--	--
APR											
24...	0830	4100	180	7.3	8.0	9	4	8.2	4	--	--
MAY											
15...	0845	--	--	--	11.0	6	1	--	5	100	.14
JUL											
24...	1100	6000	190	7.1	8.0	8	2	3.8	4	--	--
AUG											
22...	1140	10200	170	7.3	15.0	8	2	6.1	6	100	.14
SEP											
11...	0830	6600	180	7.5	18.0	6	3	5.2	5	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)	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)
OCT											
18...	--	--	--	--	--	78	--	--	.41	.09	.11
NOV											
14...	3870	27	6.1	3.1	2.2	--	11	3.0	.52	.07	.11
DEC											
27...	--	--	--	--	--	70	--	--	.81	.10	.15
JAN											
16...	--	--	--	--	--	44	--	--	.65	.09	.06
FEB											
21...	1010	23	6.1	2.4	.3	80	11	4.0	.96	.11	.07
MAR											
20...	--	--	--	--	--	54	--	--	.74	.09	.06
APR											
24...	--	--	--	--	--	71	--	--	.91	.02	.20
MAY											
15...	--	22	4.5	4.9	1.5	--	16	3.0	.80	.09	.27
JUL											
24...	--	--	--	--	--	74	--	--	1.1	.04	.12
AUG											
22...	2750	25	5.4	4.0	1.8	69	10	4.0	.71	.06	.12
SEP											
11...	--	--	--	--	--	76	--	--	.78	.02	.16

03486810 SOUTH FORK HOLSTON RIVER AT BOONE DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOSPHORUS, TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 18...	.03	--	--	--	120	20	--	--	--	--	--
NOV 14...	.03	250	<1	<10	390	30	<10	<.2	<50	160	2.9
DEC 27...	.05	--	--	--	270	70	--	--	--	--	--
JAN 16...	.04	--	--	--	280	50	--	--	--	--	--
FEB 21...	.03	510	3	20	290	20	<10	<.2	<10	230	.9
MAR 20...	.04	--	--	--	190	20	--	--	--	--	--
APR 24...	.05	--	--	--	170	24	--	--	--	--	--
MAY 15...	.04	90	1	150	240	30	<10	<.2	<10	30	2.2
JUL 24...	.04	--	--	--	160	90	--	--	--	--	--
AUG 22...	.04	420	<1	30	340	40	52	.2	40	90	2.9
SEP 11...	.03	--	--	--	780	80	--	--	--	--	--

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 mi^2 (4,929 km^2), at Fort Patrick Henry Dam.

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Flow regulated by four reservoirs above site (see p. 327).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)
OCT											
18...	1200	9510	200	7.5	15.0	8	8	5.3	8	--	--
NOV											
15...	1245	7480	200	7.5	16.0	11	14	6.8	4	110	.15
DEC											
16...	1100	6560	160	6.8	8.0	6	7	--	4	--	--
JAN											
17...	0830	3300	150	7.5	6.0	6	11	--	9	--	--
FEB											
21...	0945	4100	210	7.7	--	7	5	--	<1	110	.15
MAR											
21...	0820	--	190	7.7	6.0	12	10	--	3	--	--
MAY											
02...	0845	3608	220	7.4	12.0	6	1	8.3	5	--	--
16...	0900	4200	220	7.4	12.0	6	4	6.0	5	130	.18
JUN											
20...	1250	3300	160	7.1	10.0	5	--	5.6	1	--	--
JUL											
25...	1000	3150	180	7.7	11.0	6	14	--	4	--	--
AUG											
21...	1200	3250	200	7.1	12.0	6	--	4.0	3	--	--
SEP											
11...	1230	6600	180	7.5	16.0	7	14	5.2	4	--	--

DATE	SOLIDS, DIS-SOLVED (TONS PER DAY)	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)	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)
OCT											
18...	--	--	--	--	--	74	--	--	.54	.11	.09
NOV											
15...	2220	30	6.7	3.1	1.2	46	12	3.0	.55	.18	.01
DEC											
16...	--	--	--	--	--	62	--	--	.83	.15	<.01
JAN											
17...	--	--	--	--	--	60	--	--	.75	.08	.04
FEB											
21...	1220	25	6.3	2.1	1.0	80	12	3.0	1.0	.08	.10
MAR											
21...	--	--	--	--	--	73	--	--	.85	.10	.08
MAY											
02...	--	--	--	--	--	78	--	--	.76	.03	.23
16...	1470	28	5.9	4.5	2.2	81	16	4.0	.93	.05	.16
JUN											
20...	--	--	--	--	--	70	--	--	.80	.02	.11
JUL											
25...	--	--	--	--	--	72	--	--	.84	.03	.07
AUG											
21...	--	24	5.2	4.5	1.7	69	--	4.0	--	--	--
SEP											
11...	--	--	--	--	--	73	--	--	.76	<.01	.12

03487010 SOUTH FORK HOLSTON RIVER AT FORT PATRICK HENRY DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	PHOS-PHORUS, 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)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	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											
18...	.04	--	--	--	390	60	--	--	--	--	--
NOV											
15...	.04	460	<1	90	1200	80	14	<.2	100	100	4.4
DEC											
16...	.05	--	--	--	250	30	--	--	--	--	--
JAN											
17...	.03	--	--	--	250	40	--	--	--	--	--
FEB											
21...	.04	310	3	50	920	40	13	<.2	<10	120	1.1
MAR											
21...	.03	--	--	--	100	30	--	--	--	--	--
MAY											
02...	.01	--	--	--	350	30	--	--	--	--	--
16...	.03	190	<1	70	260	50	<10	<.2	<10	60	2.1
JUN											
20...	.03	--	--	--	280	40	--	--	--	--	--
JUL											
25...	.01	--	--	--	220	60	--	--	--	--	--
AUG											
21...	--	760	<1	10	440	60	<10	<.2	<10	20	--
SEP											
11...	.02	--	--	--	210	60	--	--	--	--	--

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 mi^2 (94.0 km^2).

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 ft^3/s (0.017 m^3/s) for water supply, 0.8 mi (1.3 km) upstream from the gage. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--15 years, 47.1 ft^3/s (1.334 m^3/s), 17.62 in/yr (448 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,940 ft^3/s (140 m^3/s) Oct. 2, 1977, gage height, 11.61 ft (3.539 m), from rating curve extended above 1,300 ft^3/s (36.8 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 2.9 ft^3/s (0.082 m^3/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 ft^3/s (312 m^3/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 750 ft^3/s (212 m^3/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)
Oct. 2	0815	*4940	140	11.61	3.539	Jan. 26	0600	2000	56.6	9.32	2.841
Nov. 6	1430	1260	35.7	8.21	2.502						

Minimum discharge, 2.9 ft^3/s (0.082 m^3/s) Sept. 14, gage height, 1.00 ft (0.305 m), result of upstream pumpage.

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	187	32	97	59	86	48	47	47	32	34	15	11
2	1710	30	79	55	79	49	44	41	29	34	14	12
3	112	28	70	50	69	56	41	37	29	45	14	39
4	65	26	70	47	63	54	39	46	28	83	32	13
5	48	25	128	46	58	52	37	78	25	44	27	12
6	39	532	123	48	51	58	35	56	24	34	20	11
7	34	374	86	48	46	64	34	48	29	30	49	10
8	39	256	69	61	45	94	32	67	117	27	42	8.7
9	158	147	77	150	44	125	31	98	117	25	27	8.7
10	79	107	67	88	43	363	31	70	67	24	23	9.7
11	55	85	61	81	40	174	33	56	50	33	20	11
12	43	72	60	70	39	121	32	49	42	24	20	9.6
13	35	63	55	69	43	96	29	92	51	22	18	9.0
14	32	58	63	65	55	109	27	84	37	21	22	8.1
15	29	53	62	60	46	98	26	78	32	20	26	9.9
16	35	58	57	56	44	84	26	76	30	22	19	7.9
17	31	216	55	57	45	73	26	65	28	24	17	8.9
18	27	116	61	63	45	65	28	56	27	19	15	8.2
19	25	85	58	77	45	60	29	49	55	18	14	7.8
20	23	72	62	189	42	56	29	45	69	17	14	7.7
21	21	65	60	123	41	54	27	41	53	16	13	7.6
22	20	61	58	100	39	51	25	38	45	15	12	7.5
23	19	59	53	90	37	47	24	36	43	15	12	7.5
24	19	55	58	88	37	44	23	91	35	39	12	7.6
25	32	53	168	291	41	43	52	75	31	45	12	7.4
26	268	50	106	970	51	57	150	53	28	32	16	7.2
27	84	47	84	240	45	75	123	44	26	23	12	7.2
28	59	50	71	160	44	78	77	39	24	23	12	6.7
29	48	157	63	125	---	65	60	36	23	20	9.5	6.7
30	40	118	63	108	---	57	52	35	29	18	10	6.8
31	35	---	60	97	---	52	---	46	---	16	13	---
TOTAL	3451	3150	2304	3831	1363	2522	1269	1772	1255	862	581.5	295.4
MEAN	111	105	74.3	124	48.7	81.4	42.3	57.2	41.8	27.8	18.8	9.85
MAX	1710	532	168	970	86	363	150	98	117	83	49	39
MIN	19	25	53	46	37	43	23	35	23	15	9.5	6.7
CFSM	3.06	2.89	2.05	3.42	1.34	2.24	1.17	1.58	1.15	.77	.52	.27
IN.	3.54	3.23	2.36	3.93	1.40	2.58	1.30	1.82	1.29	.88	.60	.30

CAL YR 1977 TOTAL 19269.4 MEAN 52.8 MAX 1710 MIN 6.7 CFSM 1.46 IN 19.75
WTR YR 1978 TOTAL 22655.9 MEAN 62.1 MAX 1710 MIN 6.7 CFSM 1.71 IN 23.22

03490350 HOLSTON RIVER AT CHURCH HILL, TN

LOCATION.--Lat 36°31'00", long 82°43'24", Hawkins County, Hydrologic Unit 06010104, at county road bridge, 0.4 mi (0.6 km) downstream from Alexander Creek, 0.8 mi (1.3 km) southwest of Church Hill, 3.1 mi (5.0 km) southwest of Block City, and at mile 131.5 (211.6 km).

DRAINAGE AREA.--2,819 mi^2 (7,301 km^2).

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

REMARKS.--Flow regulated by four reservoirs above site (see p. 327).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)
OCT											
11...	1330	25	1.0	8440	240	7.6	17.8	16	18	6.8	3.1
11...	1405	75	1.0	8440	260	7.5	16.6	11	32	7.1	3.7
NOV											
15...	1530	25	1.0	7450	220	7.6	13.9	10	12	8.5	<1.0
15...	1540	75	1.0	7450	230	7.5	13.9	8	6	9.4	1.0
DEC											
06...	1245	25	1.0	6400	220	7.6	8.9	11	20	9.3	1.9
06...	1300	75	1.0	6400	220	7.5	8.9	12	19	9.6	2.1
JAN											
24...	1330	25	1.0	4800	300	7.4	6.1	12	14	10.3	4.3
24...	1340	75	1.0	4800	310	7.2	6.1	12	16	10.3	4.4
FEB											
14...	1340	25	1.0	2610	280	7.5	5.0	12	18	11.2	2.2
14...	1350	75	1.0	2610	330	7.4	6.1	12	11	11.7	4.1
MAR											
07...	1417	25	1.0	3330	340	7.7	8.9	14	5	9.7	2.7
07...	1430	75	1.0	3330	350	7.8	8.9	17	5	9.6	3.6
APR											
11...	1055	25	1.0	--	370	7.6	19.4	15	4	6.8	2.9
11...	1110	75	1.0	--	400	7.4	19.4	10	4	6.7	3.1
MAY											
09...	1040	25	1.0	--	300	7.6	17.0	11	35	8.3	4.4
09...	1200	75	1.0	--	290	7.8	16.0	11	19	8.7	2.0
JUN											
06...	1415	25	1.0	--	240	9.0	21.1	8	1	12.5	1.4
06...	1510	75	1.0	--	260	9.1	20.6	7	2	12.4	2.3
JUL											
11...	1105	25	1.0	--	220	7.9	18.9	8	2	8.9	1.4
11...	1120	75	1.0	--	230	7.9	18.9	4	4	8.8	1.8
AUG											
09...	1330	25	1.0	--	310	7.4	20.6	9	7	8.8	<1.0
09...	1345	75	1.0	--	340	7.5	20.6	11	12	9.0	<1.0
SEP											
06...	1320	25	1.0	--	190	8.5	20.6	10	3	12.1	1.5
06...	1340	75	1.0	--	200	7.5	20.6	10	3	12.2	1.8

03490350 HOLSTON RIVER AT CHURCH HILL, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	ALKALINITY (MG/L AS CACO3)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT										
11...	20000	60	78	.72	.17	.12	720	<50	90	20
11...	>20000	540	81	.76	.16	.17	1200	<50	140	10
NOV										
15...	1800	360	85	.60	.05	.13	430	<50	50	10
15...	--	--	83	.72	.11	.13	560	70	70	70
DEC										
06...	4800	1000	83	.96	.03	.11	290	<50	70	<10
06...	800	100	83	.84	.04	.14	370	<50	50	<10
JAN										
24...	1300	<10	93	.87	.46	.22	310	40	65	51
24...	1800	<10	90	.89	.32	.27	360	30	54	46
FEB										
14...	2500	370	91	.96	.14	.08	400	<50	30	30
14...	1700	590	89	1.0	.14	.14	210	<50	40	40
MAR										
07...	3400	740	110	.78	.13	.23	250	<50	100	80
07...	2000	400	100	.79	.07	.27	140	<50	60	50
APR										
11...	12000	100	100	.49	.27	.23	120	56	100	90
11...	10000	20	97	.48	.28	.38	110	49	69	69
MAY										
09...	14000	1400	86	.64	.08	.27	260	<50	40	<10
09...	12000	720	90	.57	.09	.17	360	60	50	<10
JUN										
06...	--	--	79	.66	.04	.18	80	50	20	20
06...	--	--	82	.67	.06	.20	120	30	20	20
JUL										
11...	1500	80	78	.94	.04	.12	130	30	30	30
11...	3600	70	78	.95	.04	.11	180	20	30	20
AUG										
09...	8500	30	82	.82	.06	.15	540	<50	30	10
09...	16000	70	86	.79	.09	.16	420	<50	40	10
SEP										
06...	500	<10	74	.59	.02	.14	80	80	20	10
06...	800	<10	70	.62	.01	.17	200	50	30	30

DATE	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)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)
OCT											
11...	21	38	7.1	10	2.1	42	8.0	150	.20	3420	600
11...	22	39	7.2	12	2.0	32	12	150	.20	3420	600
JAN											
24...	11	36	8.0	14	1.7	35	19	170	.23	2200	200
24...	8	35	7.7	13	1.7	33	22	170	.23	2200	220
APR											
11...	18	42	8.7	20	1.9	42	29	220	.30	--	120
11...	3	41	9.1	22	1.8	34	40	230	.31	--	140
JUL											
11...	4	27	6.3	6.2	1.8	22	3.0	120	.16	--	100
11...	4	27	6.5	6.7	1.8	19	9.0	120	.16	--	160

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	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)
OCT										
11...	<2	<1	<5	40	<10	.8	<50	<1	20	1.8
11...	<2	<1	<5	30	<10	.5	<50	<1	20	2.4
JAN										
24...	<2	<1	<5	20	<10	<.2	<50	<1	20	4.3
24...	<2	<1	<5	<10	<10	<.2	<50	<1	30	4.0
APR										
11...	<2	<1	<5	29	<10	<.2	<10	<1	40	3.9
11...	<2	<1	<5	35	<10	<.2	<10	<1	30	4.1
JUL										
11...	<2	<1	<5	<10	<10	<.2	<10	<1	<10	2.7
11...	<2	<1	<5	<10	<10	<.2	<10	<1	<10	2.8

TENNESSEE RIVER BASIN

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 mi^2 (7,444 km^2), 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. 327).

AVERAGE DISCHARGE.--38 years, 3,780 ft^3/s (107.0 m^3/s), 17.86 in/yr (454 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,600 ft^3/s (1,690 m^3/s) Feb. 18, 1944, gage height, 17.48 ft (5.328 m); minimum, 470 ft^3/s (13.3 m^3/s), Oct. 21, 1941; minimum daily, 528 ft^3/s (15.0 m^3/s) Oct. 21, 1941. Maximum discharge since closure of Watauga Dam on Dec. 1, 1948, 59,300 ft^3/s (1,680 m^3/s) Mar. 13, 1963, gage height, 17.13 ft (5.221 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34,000 ft^3/s (963 m^3/s) Jan. 26, gage height, 11.79 ft (3.594 m); minimum, 511 ft^3/s (14.5 m^3/s) Oct. 1.

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	1970	5900	12100	5890	7430	3860	2370	2610	5980	2610	3030	3130
2	9190	5340	9730	4520	5760	2650	2140	3130	5740	1240	3560	2310
3	10300	5870	9050	5270	5340	2680	2040	2970	5290	1200	3800	2510
4	9610	5320	9530	6570	5470	3780	2080	2450	4130	2980	3700	1110
5	8390	5370	9000	2560	3770	3250	1980	3460	2180	1570	3240	2160
6	2180	8930	9330	3050	4730	1940	1990	3220	3800	2040	2200	4990
7	6020	22000	10800	2800	6230	3300	2020	2720	3650	2850	2720	3130
8	4370	24300	11500	2740	3440	3730	1610	2840	4770	3910	4470	3590
9	5700	16300	11600	7800	4300	5530	1500	4600	7420	4120	5760	4570
10	9770	14200	10400	10300	2910	8810	1550	5020	5450	960	7070	4270
11	8520	12700	10800	7650	3990	14600	1400	3580	4520	4100	5510	6480
12	6800	11900	9780	6410	1530	9800	1430	2990	2240	1660	5340	2850
13	5990	7430	6510	6020	1530	7490	1360	3650	3430	2590	3660	1910
14	5680	5860	7090	8600	2990	8100	1330	3030	4840	1320	2830	3330
15	5510	7740	5800	7550	2160	9640	1640	3700	4920	999	4890	2490
16	5590	8190	6750	1920	5100	8560	1350	5910	3860	850	5450	2310
17	7580	10600	6470	1670	4390	6900	1230	4910	4460	948	5820	4270
18	7920	11600	6520	3570	2210	5310	1230	5950	4170	2180	5870	5930
19	5430	10200	7610	4880	1790	4360	1320	5960	1890	4080	4890	4370
20	5990	7770	6820	7360	2380	3690	1320	4380	3420	5320	2330	4140
21	6510	8180	7940	7890	2930	2610	1920	4970	4340	5010	1150	3610
22	5480	8940	7210	6120	3870	2370	1450	3320	4720	3800	3630	3280
23	4990	7800	6560	5830	2280	2120	1300	3390	4510	1070	4860	1090
24	4650	7620	7080	3970	2230	2190	1280	3620	4120	948	5020	838
25	4550	8080	7320	5540	1580	2220	1350	8060	3250	2300	5760	1640
26	8580	8990	9640	27500	1560	2180	2530	8790	2110	3080	4630	1760
27	9970	7850	7460	25800	1680	3130	5610	6370	3690	1570	3310	1010
28	9190	7370	8750	12900	2500	4990	6750	4300	4480	3150	973	815
29	9510	8620	6820	9400	---	4480	4360	2240	5330	2720	2620	923
30	6710	13100	6920	9090	---	3440	3220	3540	2590	2570	2830	1110
31	7130	---	6390	6960	---	3610	---	4160	---	1540	2590	---
TOTAL	209780	294070	259280	228130	96080	151320	62660	129840	125300	75285	123513	85926
MEAN	6767	9802	8364	7359	3431	4881	2089	4188	4177	2429	3984	2864
MAX	10300	24300	12100	27500	7430	14600	6750	8790	7420	5320	7070	6480
MIN	1970	5320	5800	1670	1530	1940	1230	2240	1890	850	973	815

CAL YR 1977 TOTAL 1858741 MEAN 5092 MAX 47100 MIN 842 MEAN‡ 4804 CFSM‡ 1.67 IN.‡ 22.69
WTR YR 1978 TOTAL 1841184 MEAN 5044 MAX 27500 MIN 815 MEAN‡ 5082 CFSM‡ 1.77 IN.‡ 24.00

‡ Adjusted for change in contents in South Holston, Watauga, Boone, and Fort Patrick Henry Lakes.

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.--Missing record Mar. 5 to Apr. 5 (range in temperature 3.0 to 21.5°C); July 5-7 (range in temperature 21.5 to 29.0°C); Aug. 22, 23; Sept. 18-30 (range in temperature 20.0 to 23.5°C). Flow partly regulated by four reservoirs (see p. 327).

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, 29.5°C July 24; minimum, 0.0°C Jan. 30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)
OCT											
11...	1110	25	1.0	4290	240	7.9	16.7	10	13	7.4	1.7
11...	1130	75	1.0	4090	250	7.9	16.7	11	15	7.6	2.2
NOV											
15...	1315	25	1.0	6250	240	7.7	12.8	9	7	9.3	<1.0
15...	1330	75	1.0	6710	240	7.7	12.8	8	7	9.4	1.3
DEC											
06...	1530	25	1.0	12100	190	7.8	8.9	15	22	9.8	1.4
06...	1550	75	1.0	12100	250	7.7	8.9	14	22	9.7	2.3
JAN											
24...	1052	25	1.0	2510	240	7.4	3.3	7	4	12.6	2.4
24...	1105	75	1.0	2510	230	7.5	3.3	7	4	12.9	1.9
FEB											
14...	1206	25	1.0	2160	290	7.4	6.1	15	17	9.5	2.8
14...	1216	75	1.0	2280	310	7.3	6.7	16	15	9.7	3.1
MAR											
07...	1205	25	1.0	1980	340	8.5	7.8	12	3	13.1	2.0
07...	1215	75	1.0	1980	360	8.5	7.8	14	3	13.4	1.5
APR											
11...	1322	25	1.0	1390	350	7.6	20.0	13	4	9.7	3.0
11...	1340	75	1.0	1410	370	7.6	20.0	12	3	9.8	1.9
MAY											
09...	1145	--	--	--	--	--	--	--	--	--	--
09...	1415	25	1.0	--	280	7.8	18.0	11	12	8.0	3.6
09...	1430	75	1.0	--	290	7.9	18.0	11	20	8.0	3.2
JUN											
06...	1050	25	1.0	--	210	7.9	17.8	8	3	8.9	2.0
06...	1145	75	1.0	--	220	8.2	19.4	9	4	9.4	2.5
JUL											
11...	0905	25	1.0	--	260	7.7	22.8	8	11	5.5	1.8
11...	0915	75	1.0	--	280	7.6	23.9	10	7	5.4	1.8
AUG											
09...	1125	25	1.0	--	260	7.3	19.4	10	12	6.9	1.0
09...	1135	75	1.0	--	--	7.2	19.4	9	18	7.2	1.5
SEP											
06...	1112	25	1.0	--	200	7.7	18.9	8	9	8.0	2.2
06...	1125	75	1.0	--	200	7.5	19.4	11	11	8.2	2.0

03490500 HOLSTON RIVER AT SURGOINSVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	ALKALINITY (MG/L AS CACO3)	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)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT											
11...	2200	10	79	.73	.08	.10	.08	780	<50	80	20
11...	14000	400	79	.73	.07	.09	.07	480	<50	60	10
NOV											
15...	2100	160	83	.66	.04	.16	.06	130	<50	20	20
15...	500	100	84	.68	.06	.13	.05	510	<50	20	10
DEC											
06...	10000	600	81	.85	.04	.12	.07	730	<50	60	<10
06...	6200	1000	84	.87	.08	.17	.07	520	<50	60	<10
JAN											
24...	200	<10	74	.87	.07	.09	.04	170	50	26	17
24...	600	<10	81	.84	.08	.08	.04	170	70	26	20
FEB											
14...	2600	140	91	.98	.18	.20	.08	440	<50	90	60
14...	1200	190	86	1.0	.30	.12	.07	530	<50	70	50
MAR											
07...	<100	10	100	.64	.04	.18	.05	160	<50	60	40
07...	<100	<10	100	.60	.04	.36	.05	70	<50	60	60
APR											
11...	4000	10	100	.67	.15	.23	.07	150	36	88	55
11...	5000	10	100	--	--	--	--	110	33	69	56
MAY											
09...	20000	--	--	--	--	--	--	--	--	--	--
09...	13000	510	91	.73	.08	.22	.10	240	<50	60	20
09...	20000	330	92	.74	.08	.28	.08	190	<50	40	20
JUN											
06...	--	50	76	.70	.05	.15	.06	240	60	30	10
06...	--	--	79	.71	.06	.18	.06	190	170	40	40
JUL											
11...	23000	160	74	.96	.14	.06	.08	360	30	60	20
11...	>20000	180	73	.95	.09	.14	.09	280	30	50	20
AUG											
09...	18000	80	74	.76	.06	.15	.06	780	<50	50	<10
09...	>20000	210	77	.80	.07	.17	.07	820	<50	50	20
SEP											
06...	6200	40	73	.70	.02	.16	.05	440	<50	30	<10
06...	9500	70	72	.76	.04	.14	.05	430	<50	40	20

DATE	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)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)
OCT											
11...	22	40	9.6	9.3	1.8	30	12	160	.22	1850	<200
11...	25	39	6.8	10	1.9	20	14	150	.20	1660	200
JAN											
24...	9	29	6.6	7.7	1.4	18	14	130	.18	881	120
24...	11	31	6.3	7.8	1.5	18	14	110	.15	745	110
APR											
11...	23	39	8.5	19	1.6	32	31	210	.29	788	140
11...	20	40	9.1	18	1.5	31	31	220	.30	838	90
JUL											
11...	7	28	7.0	9.4	1.8	32	10	140	.19	--	230
11...	7	30	7.7	12	2.3	37	12	160	.22	--	230

DATE	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT										
11...	<2	40	9	<5	30	<10	.6	<1	60	1.9
11...	<2	50	<1	<5	20	<10	<.4	<1	10	2.1
JAN										
24...	<2	180	<1	<5	10	<10	<.2	<1	20	1.8
24...	<2	110	<1	<5	10	<10	<.2	<1	20	1.7
APR										
11...	<2	80	<1	<5	28	<10	.4	<1	30	3.7
11...	<2	120	<1	<5	11	<10	<.2	<1	30	--
JUL										
11...	<2	60	<1	<5	50	14	<.2	<1	60	3.1
11...	--	80	<1	<5	20	30	<.2	<1	70	4.3

TENNESSEE RIVER BASIN

03490500 HOLSTON RIVER AT SURGOINSVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.5	20.0	20.5	17.0	14.5	15.5	13.0	11.5	12.0	7.0	5.5	6.5
2	22.0	19.0	20.0	18.0	14.5	16.0	12.0	11.0	11.5	6.0	4.0	5.0
3	19.5	16.5	18.0	19.5	15.5	16.5	11.5	9.5	11.0	6.5	3.0	5.0
4	18.5	16.0	17.0	19.5	16.0	17.0	12.0	11.0	11.5	6.0	4.0	5.0
5	18.5	15.5	17.0	19.5	16.5	17.0	13.5	11.5	12.0	6.0	3.5	4.5
6	18.0	15.5	16.5	20.0	18.0	18.5	11.5	7.0	10.0	7.0	5.0	6.0
7	19.0	15.5	17.0	18.0	16.0	17.0	8.5	6.5	7.0	9.5	6.0	8.0
8	19.0	17.0	18.0	16.0	15.5	15.5	8.5	6.5	8.0	9.0	7.0	5.5
9	19.0	17.0	18.0	16.5	15.5	16.0	9.0	6.5	8.5	8.0	1.5	4.5
10	17.0	15.5	16.0	16.5	14.0	15.5	8.0	6.0	6.5	3.5	1.5	2.0
11	17.0	15.0	16.0	15.0	13.0	14.0	8.5	6.0	7.0	4.0	1.0	3.0
12	18.0	15.5	16.5	13.5	11.5	13.0	9.0	6.0	7.0	3.0	.5	1.5
13	16.0	14.5	15.5	13.5	10.0	11.5	9.5	6.5	8.0	3.5	1.5	3.0
14	16.5	14.5	15.0	13.5	8.5	11.5	10.0	9.0	9.5	4.0	3.0	3.5
15	17.0	14.0	15.5	14.0	11.0	12.0	10.5	8.5	9.5	3.5	3.0	3.5
16	16.0	14.0	15.5	14.0	12.0	13.5	10.0	8.0	9.0	4.5	.5	2.0
17	16.0	14.0	14.5	14.5	11.5	13.5	10.0	7.0	9.0	3.0	1.0	2.0
18	16.0	14.0	15.0	13.5	11.0	12.0	10.0	8.0	9.0	5.5	3.0	3.5
19	15.5	14.0	15.0	13.0	10.5	11.5	10.0	7.0	9.0	6.0	3.5	4.5
20	16.0	14.0	15.0	13.5	10.0	12.0	10.0	8.5	9.0	5.0	3.0	3.5
21	16.0	14.0	15.0	13.5	11.5	13.0	8.5	6.0	7.0	3.0	2.0	2.0
22	16.5	13.5	15.0	13.5	13.0	13.5	6.0	5.5	6.0	4.0	2.0	3.0
23	17.0	11.5	15.0	14.5	13.5	14.0	8.0	5.5	6.5	5.5	2.0	4.0
24	17.0	14.0	15.5	14.5	13.0	14.0	9.0	7.0	8.0	5.0	3.0	4.0
25	17.0	15.0	15.5	13.5	11.0	13.0	8.5	5.5	7.0	6.5	4.5	5.5
26	15.5	14.5	15.0	11.0	9.0	10.0	6.0	4.0	5.0	5.5	2.0	3.5
27	15.5	14.5	14.5	9.5	8.5	9.0	5.0	3.5	4.5	3.0	1.5	2.0
28	15.5	14.5	15.0	10.5	9.5	10.0	5.5	3.0	4.5	2.0	1.0	1.5
29	16.0	14.0	15.0	12.0	9.5	11.0	5.0	2.0	4.0	2.0	.5	1.0
30	16.5	14.5	15.0	12.0	9.5	11.0	5.5	5.0	5.0	3.5	.0	1.5
31	16.0	14.5	15.0	---	---	---	8.0	5.0	6.5	3.0	1.0	2.0
MONTH	22.0	11.5	16.0	20.0	8.5	13.5	13.5	2.0	8.0	9.5	.0	3.5
		FEBRUARY			MARCH			APRIL			MAY	
1	5.5	1.5	3.5	8.0	5.0	6.0	---	---	---	17.0	14.5	16.0
2	6.0	4.0	5.0	5.5	4.5	5.0	---	---	---	19.0	13.5	15.5
3	5.5	3.0	4.5	6.0	4.0	5.0	---	---	---	18.0	13.5	15.5
4	6.5	3.5	5.0	6.0	4.0	5.0	---	---	---	17.0	15.0	16.0
5	5.5	4.5	5.0	---	---	---	---	---	---	18.0	15.5	16.0
6	5.0	3.0	3.5	---	---	---	20.0	18.0	19.0	18.5	14.0	16.0
7	4.5	1.5	3.5	---	---	---	21.5	16.5	19.5	18.0	16.5	17.0
8	6.0	2.0	4.0	---	---	---	21.0	16.0	18.5	17.0	16.5	17.0
9	6.5	3.5	5.0	---	---	---	22.0	18.0	20.0	18.5	16.0	17.0
10	8.0	4.5	5.5	---	---	---	23.5	19.5	21.0	18.5	16.0	17.0
11	7.0	4.5	5.5	---	---	---	21.5	18.0	20.0	20.0	15.5	18.0
12	8.5	4.0	6.0	---	---	---	20.0	16.5	18.5	18.5	18.0	18.0
13	9.5	7.0	8.5	---	---	---	21.0	17.0	19.0	18.5	16.5	17.0
14	9.5	5.5	7.0	---	---	---	20.5	16.0	18.5	16.5	15.0	16.0
15	8.5	5.5	7.0	---	---	---	20.0	17.0	19.0	15.5	14.5	15.0
16	8.5	6.5	7.0	---	---	---	18.5	15.5	16.5	15.0	13.5	14.5
17	8.0	6.0	6.5	---	---	---	19.5	15.5	18.0	16.5	13.5	15.5
18	8.0	6.5	6.5	---	---	---	19.5	18.0	18.5	17.0	14.5	16.0
19	8.5	7.0	8.0	---	---	---	19.0	15.5	17.0	19.0	15.5	17.0
20	8.5	5.5	6.5	---	---	---	15.5	13.5	14.5	21.0	15.0	18.0
21	8.0	5.0	6.0	---	---	---	14.5	13.0	13.5	19.5	15.5	18.0
22	6.5	3.0	4.5	---	---	---	17.0	13.5	15.0	24.5	18.5	21.0
23	5.5	3.5	4.5	---	---	---	17.0	13.5	15.5	20.0	17.0	19.0
24	7.0	4.0	5.5	---	---	---	20.5	15.5	18.5	20.5	19.0	19.5
25	9.5	5.0	7.0	---	---	---	19.0	16.5	18.0	20.5	18.0	19.5
26	10.0	6.5	8.0	---	---	---	16.5	13.0	15.0	20.5	16.0	18.5
27	9.5	5.5	7.0	---	---	---	14.0	11.5	13.0	20.5	16.0	18.5
28	8.0	7.0	7.0	---	---	---	14.0	10.5	12.0	23.0	18.5	20.0
29	---	---	---	---	---	---	15.5	12.0	14.0	25.0	20.0	23.0
30	---	---	---	---	---	---	15.0	14.5	14.0	23.5	21.5	23.5
31	---	---	---	---	---	---	---	---	---	23.0	18.0	20.5
MONTH	10.0	1.5	6.0	---	---	---	23.5	10.5	17.0	25.0	13.5	17.5

03490500 HOLSTON RIVER AT SURGOINSVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	23.5	17.0	20.5	25.0	22.0	24.0	27.0	20.0	22.0	24.5	21.5	23.0
2	23.0	17.0	19.5	28.0	22.0	24.5	25.5	20.5	20.0	26.5	21.0	24.5
3	23.0	17.0	18.5	28.0	25.0	26.0	25.0	20.5	22.0	26.0	23.0	24.5
4	21.0	16.5	19.0	26.5	21.5	23.5	25.0	20.0	21.5	25.5	21.5	24.0
5	25.0	19.0	21.5	---	---	---	24.0	20.5	22.0	28.0	24.0	26.0
6	22.0	18.0	20.0	---	---	---	25.5	21.5	24.0	24.0	19.0	21.0
7	23.0	18.5	19.5	---	---	---	25.0	21.5	24.0	24.0	19.0	21.0
8	21.5	18.0	19.0	24.5	19.5	22.0	24.5	19.5	21.0	25.0	20.5	22.0
9	20.5	17.0	19.0	24.5	18.5	21.0	24.5	19.5	20.5	24.5	19.0	21.0
10	21.5	16.5	19.5	26.0	21.0	24.0	23.5	18.0	20.0	24.0	19.5	20.5
11	22.0	18.0	20.0	26.5	20.5	23.5	23.5	18.0	20.0	23.0	19.5	20.5
12	26.5	20.5	24.5	26.5	19.5	23.5	24.0	19.0	20.5	22.0	19.0	20.5
13	24.5	20.0	21.5	25.5	21.0	23.5	26.5	20.5	23.5	26.5	21.0	24.0
14	23.0	17.0	20.0	24.5	20.5	22.0	25.0	19.0	21.5	25.5	20.5	23.5
15	22.0	16.5	19.5	24.0	23.0	23.5	25.0	19.0	21.0	23.5	20.5	21.5
16	23.5	17.0	20.0	26.5	22.0	24.0	24.5	18.5	20.5	25.0	19.0	23.0
17	24.0	18.0	20.5	28.5	23.5	25.5	24.5	18.5	20.0	26.0	18.5	23.5
18	21.5	17.0	20.0	28.0	25.0	26.0	23.0	18.5	20.5	---	---	---
19	27.0	21.0	24.5	25.0	19.5	21.5	24.5	21.5	23.0	---	---	---
20	24.0	21.0	23.0	24.5	20.5	22.0	26.5	20.5	24.0	---	---	---
21	24.5	20.5	21.5	23.5	18.5	21.0	26.0	20.5	23.0	---	---	---
22	23.5	18.0	20.5	24.5	18.5	21.0	---	---	---	---	---	---
23	23.5	18.5	21.0	26.5	21.5	24.5	---	---	---	---	---	---
24	24.0	18.5	20.5	29.5	26.0	28.0	24.0	18.5	20.5	---	---	---
25	23.5	19.0	21.5	27.0	22.0	26.0	24.0	18.5	20.0	---	---	---
26	28.5	21.5	25.5	24.0	20.5	21.5	22.0	18.5	20.0	---	---	---
27	25.0	21.0	24.0	25.5	20.5	23.5	24.0	18.5	20.5	---	---	---
28	25.5	18.5	22.0	25.0	21.0	23.0	25.5	20.5	23.0	---	---	---
29	23.5	18.0	20.5	24.5	22.0	24.0	26.5	22.0	24.5	---	---	---
30	23.5	19.0	21.0	25.0	23.0	24.5	25.0	22.0	24.0	---	---	---
31	---	---	---	27.0	22.0	24.5	24.0	21.0	23.0	---	---	---
MONTH	28.5	16.5	21.0	29.5	18.5	23.5	27.0	18.0	21.5	---	---	---
YEAR	29.5	.0	15.0									

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 mi^2 (122.5 km^2).

WATER-DISCHARGE RECORDS

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 good. Periodic observations of specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--28 years (water years 1942-48, 1958-78), 60.1 ft^3/s (1.702 m^3/s), 17.25 in/yr (438 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,760 ft^3/s (163 m^3/s) Mar. 12, 1963, gage height, 9.40 ft (2.865 m), from rating curve extended above 3,000 ft^3/s (85.0 m^3/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 ft^3/s (0.037 m^3/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 ft^3/s (42.5 m^3/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. 26	0345	2260	64.0	5.84	1.780	Sept. 11	0930	2180	61.7	5.76	1.756
June 9	0200	*2670	75.6	6.30	1.920						

Minimum discharge, 4.5 ft^3/s (0.13 m^3/s) Sept. 10, 11, gage height, 1.43 ft (0.436 m).

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	5.9	16	151	58	78	30	51	40	33	14	28	6.8
2	10	14	104	54	72	32	47	33	29	15	17	6.5
3	18	13	83	47	63	41	43	29	28	34	10	6.0
4	9.1	12	82	41	56	63	40	69	26	20	11	5.8
5	6.9	12	266	41	53	55	39	230	23	16	26	5.5
6	6.0	288	203	42	48	64	36	105	21	14	15	5.2
7	5.7	509	125	43	41	73	35	68	24	13	12	5.0
8	7.2	147	94	76	40	107	32	76	521	12	13	4.9
9	118	96	108	416	39	199	31	146	1060	21	12	4.8
10	48	76	107	155	37	326	30	94	191	17	12	4.7
11	24	67	85	102	35	221	30	66	115	14	16	650
12	17	53	71	85	33	149	32	54	82	12	67	70
13	13	43	63	78	35	112	28	66	72	12	28	32
14	11	37	62	68	51	179	25	67	55	11	18	22
15	10	33	66	57	41	182	24	64	46	12	16	19
16	10	32	58	48	39	130	23	59	40	12	26	17
17	13	269	53	54	43	100	23	51	35	12	17	14
18	14	132	59	99	45	81	25	44	31	10	13	13
19	12	78	57	115	45	70	32	37	29	9.1	10	11
20	10	59	87	386	40	64	27	33	47	8.6	9.2	10
21	9.1	50	111	195	38	58	26	30	30	8.0	8.2	9.3
22	8.4	48	79	138	35	55	25	27	27	7.7	7.6	9.0
23	7.8	50	63	108	31	50	23	25	24	7.4	7.2	9.6
24	7.4	63	62	98	32	46	22	439	22	7.4	6.9	9.2
25	9.9	54	424	312	30	44	25	273	20	10	7.0	8.9
26	157	48	180	1170	29	78	76	128	19	16	23	7.8
27	57	41	120	287	27	77	139	79	18	11	15	7.3
28	35	41	89	186	27	75	75	59	17	18	9.3	7.2
29	26	441	72	139	---	68	53	49	15	13	7.7	6.9
30	21	253	66	110	---	60	44	42	15	9.4	7.0	6.8
31	18	---	62	93	---	54	---	39	---	8.5	6.7	---
TOTAL	725.4	3075	3312	4901	1183	2943	1161	2621	2715	405.1	481.8	995.2
MEAN	23.4	103	107	158	42.3	94.9	38.7	84.5	90.5	13.1	15.5	33.2
MAX	157	509	424	1170	78	326	139	439	1060	34	67	650
MIN	5.7	12	53	41	27	30	22	25	15	7.4	6.7	4.7
CFSM	.50	2.18	2.26	3.34	.89	2.01	.82	1.79	1.91	.28	.33	.70
IN.	.57	2.42	2.60	3.85	.93	2.31	.91	2.06	2.14	.32	.38	.78

CAL YR 1977 TOTAL 21564.0 MEAN 59.1 MAX 2290 MIN 4.2 CFSM 1.25 IN 16.96
WTR YR 1978 TOTAL 24518.5 MEAN 67.2 MAX 1170 MIN 4.7 CFSM 1.42 IN 19.28

03491000 BIG CREEK NEAR ROGERSVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1972-75, 1976 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1971 to September 1975, November 1976 to current year.

INSTRUMENTATION.--Temperature recorder October 1971 to September 1975, November 1976 to current year.

REMARKS.--No record Apr. 5 to May 11, July 23 to Aug. 20 (range in temperature not available).

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 27.0°C July 21, 1977; minimum, 1.0°C Jan. 31 to Feb. 6, 1977, Feb. 7, 22, 23, 1978.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum recorded, 26.0°C July 8; minimum, 1.0°C Feb. 7, 22, 23.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.5	17.5	18.0	14.5	12.5	13.5	12.0	10.5	11.0	7.5	7.0	7.0
2	21.0	18.0	19.0	14.5	12.0	13.5	11.0	8.5	9.5	6.5	5.0	5.5
3	18.5	15.5	16.5	15.5	14.0	14.5	9.0	7.0	8.0	4.5	2.5	4.0
4	16.0	12.5	14.5	16.5	14.5	15.0	10.5	8.5	9.5	4.5	1.5	3.0
5	16.0	12.5	14.0	16.5	14.5	15.5	12.0	10.5	11.0	4.5	2.5	3.5
6	14.5	13.0	14.0	16.5	15.0	16.0	11.0	6.0	9.0	6.0	4.5	5.0
7	15.5	13.0	14.0	16.0	14.5	15.0	7.5	3.5	4.5	8.5	6.0	7.0
8	15.0	14.5	14.5	15.0	14.5	14.5	4.5	3.5	4.5	9.0	8.0	8.5
9	15.5	14.5	15.0	15.5	14.5	15.0	6.0	4.0	5.0	8.0	3.5	5.0
10	14.5	12.5	13.5	15.0	11.5	14.0	5.0	3.0	3.5	4.0	1.5	3.0
11	14.0	11.5	13.0	11.5	9.0	10.0	5.0	2.5	3.5	6.0	2.0	3.5
12	13.5	12.0	13.0	9.0	7.5	8.0	6.0	2.5	4.0	4.5	2.0	3.5
13	12.0	11.0	11.5	7.5	6.0	7.0	7.5	3.5	5.0	5.5	3.0	4.5
14	12.5	10.5	11.0	8.0	5.5	7.0	9.0	6.0	7.5	5.5	4.0	5.0
15	12.0	9.0	11.0	9.0	7.0	8.0	9.5	8.0	8.5	5.0	3.5	4.0
16	12.0	10.0	11.5	9.0	7.0	8.0	8.5	6.0	7.5	5.0	1.5	3.5
17	11.0	8.0	9.5	11.5	9.0	10.5	8.0	6.0	7.0	5.0	4.0	4.5
18	11.0	8.5	10.0	10.5	8.5	9.5	8.5	7.5	8.0	5.5	4.5	5.0
19	12.0	10.0	11.0	9.0	7.0	8.5	8.0	6.5	7.0	5.0	4.5	5.0
20	12.0	9.5	11.0	10.0	7.5	8.5	8.5	7.0	8.0	5.5	4.5	5.0
21	12.0	9.0	10.5	11.0	10.0	10.5	8.0	5.5	7.0	6.0	5.0	5.5
22	12.0	9.0	10.5	11.5	11.0	11.5	5.5	4.0	4.5	6.0	4.0	5.0
23	12.0	9.5	11.0	12.5	11.5	12.0	5.0	3.5	4.5	5.5	4.5	5.0
24	13.0	10.0	11.5	13.5	12.5	13.0	7.5	5.5	6.5	6.0	4.0	5.0
25	12.5	11.5	12.0	13.0	10.5	11.5	8.0	7.0	7.5	7.5	5.0	6.5
26	13.5	13.0	13.5	10.0	5.0	7.5	7.0	4.5	5.0	5.0	4.0	4.0
27	14.5	13.0	14.0	5.0	3.5	4.5	6.0	4.0	4.5	5.0	3.5	4.5
28	14.5	14.0	14.0	6.0	4.0	5.0	4.5	3.0	4.0	5.0	4.0	4.5
29	14.5	13.5	14.0	9.0	6.0	7.5	4.5	1.5	3.5	4.5	3.0	4.0
30	14.0	12.5	13.5	11.0	9.0	10.0	5.5	3.5	4.5	5.0	2.5	3.5
31	14.0	12.5	13.5	---	---	---	7.5	5.5	6.0	6.0	2.5	4.0
MONTH	21.0	8.0	13.0	16.5	3.5	11.0	12.0	1.5	6.5	9.0	1.5	4.5

TENNESSEE RIVER BASIN

03491000 BIG CREEK NEAR ROGERSVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

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 mi^2 (121.7 km^2).

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.--13 years, 53.0 ft^3/s (1.501 m^3/s), 15.31 in/yr (389 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,480 ft^3/s (98.6 m^3/s) Mar. 30, 1975, gage height, 13.38 ft (4.078 m), from rating curve extended above 1,300 ft^3/s (36.8 m^3/s); minimum observed, 0.97 ft^3/s (0.027 m^3/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 ft^3/s (34.0 m^3/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)
Nov. 6	1700	1320	37.4	8.58	2.615	June 8	1545	2270	64.3	11.22	3.420
Jan. 26	0415	*2330	66.0	11.35	3.459						

Minimum discharge, 1.6 ft^3/s (0.045 m^3/s) Sept. 30.

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	8.5	18	121	43	55	33	41	55	121	8.2	8.1	5.4
2	15	17	78	37	48	33	36	48	21	8.5	6.1	3.9
3	25	16	52	31	41	74	34	40	22	17	4.7	5.5
4	15	16	124	30	39	83	32	71	21	10	5.9	5.5
5	11	15	397	27	36	55	30	110	18	8.2	7.0	3.8
6	9.0	715	176	30	34	55	28	62	16	7.5	6.5	3.0
7	8.5	590	95	30	52	55	26	51	43	6.8	6.8	2.7
8	12	199	66	127	59	121	25	97	1030	6.6	9.3	2.5
9	250	110	106	347	52	160	24	238	512	10	9.9	2.4
10	80	123	74	145	46	631	23	130	110	7.5	7.0	2.4
11	18	100	55	119	28	225	26	83	64	7.7	7.7	3.5
12	15	55	46	86	25	143	27	66	46	6.9	9.3	3.2
13	12	34	42	87	30	117	23	143	36	6.2	6.8	3.1
14	11	27	50	84	112	304	20	194	29	6.5	6.7	2.8
15	11	24	49	82	51	171	20	184	24	6.3	6.1	3.2
16	14	71	39	83	44	110	19	164	21	7.3	5.1	3.2
17	22	570	35	80	44	84	19	148	19	6.6	4.6	3.1
18	16	163	49	59	44	66	25	135	17	5.6	4.3	3.0
19	14	99	43	140	42	57	26	125	16	4.9	4.2	2.6
20	13	67	49	519	36	51	23	117	16	4.6	3.9	2.2
21	12	49	48	147	34	48	21	110	15	4.4	3.6	2.1
22	12	45	40	96	32	46	20	106	15	4.2	3.4	2.1
23	12	37	34	76	31	40	19	102	18	4.0	3.2	2.4
24	12	35	66	69	29	36	19	99	14	3.9	3.2	2.4
25	24	31	615	561	27	34	56	97	12	9.9	3.6	1.9
26	343	28	139	1280	26	71	305	99	11	11	12	1.9
27	59	23	86	227	23	71	219	108	10	8.4	5.6	1.8
28	31	35	60	133	25	74	101	125	9.5	12	4.1	1.8
29	25	302	51	107	---	57	69	148	8.9	7.0	3.7	1.8
30	22	157	45	79	---	49	58	161	8.7	5.7	3.5	1.7
31	19	---	44	58	---	44	---	166	---	5.1	6.1	---
TOTAL	1151.0	3771	2974	5019	1145	3198	1414	3582	2324.1	228.5	182.0	86.9
MEAN	37.1	126	95.9	162	40.9	103	47.1	116	77.5	7.37	5.87	2.90
MAX	343	715	615	1280	112	631	305	238	1030	17	12	5.5
MIN	8.5	15	34	27	23	33	19	40	8.7	3.9	3.2	1.7
CFSM	.79	2.68	2.04	3.45	.87	2.19	1.00	2.47	1.65	.16	.13	.06
IN.	.91	2.98	2.35	3.97	.91	2.53	1.12	2.84	1.84	.18	.14	.07

CAL YR 1977 TOTAL 22232.1 MEAN 60.9 MAX 1670 MIN 2.8 CFSM 1.30 IN 17.60
WTR YR 1978 TOTAL 25075.5 MEAN 68.7 MAX 1280 MIN 1.7 CFSM 1.46 IN 19.85

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 mi^2 (8,878 km^2).

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Flow regulated by five reservoirs above site (see p. 327).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)
OCT									
17...	0945	--	--	12500	260	7.7	19.0	5	11
NOV									
21...	0730	--	--	11810	250	7.5	14.5	6	6
DEC									
19...	0800	--	--	16670	230	7.7	9.0	8	5
JAN									
23...	0730	--	--	14720	240	7.7	3.0	11	5
FEB									
01...	1529	--	--	--	260	7.5	3.0	--	13
21...	0710	--	--	6806	240	7.9	3.0	12	3
MAR									
08...	1725	--	--	--	220	7.9	4.0	--	11
27...	0715	--	--	3750	240	8.0	6.5	10	7
APR									
11...	1635	--	--	--	270	8.1	9.0	--	5
17...	0735	--	--	3333	270	7.5	8.5	9	4
MAY									
03...	0915	--	--	--	--	--	--	--	--
24...	0915	--	--	3300	--	7.3	12.0	--	2
30...	1005	--	--	6700	270	7.7	12.0	6	1
31...	1430	--	--	6800	--	--	11.5	--	--
JUN									
13...	1630	50	--	--	310	7.1	14.0	--	2
19...	1400	--	--	7000	240	7.5	13.0	15	1
JUL									
05...	0915	--	--	--	--	--	--	--	--
11...	1545	--	--	--	--	7.2	18.8	--	1
31...	1300	--	--	15800	310	7.7	19.0	12	2
AUG									
15...	1200	50	1.0	--	--	--	22.0	--	5
21...	1220	--	--	18060	280	7.6	25.0	6	3
SEP									
06...	0955	--	1.0	--	--	--	--	--	--
11...	1205	--	--	13750	260	7.6	26.0	7	3

03493510 HOLSTON RIVER AT CHEROKEE DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	ALKA-LINITY (MG/L AS CACO3)	SOLIDS, RESIDUE AT 180 DEG. C 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)
OCT									
17...	6.4	8	--	--	77	--	--	--	.55
NOV									
21...	7.0	6	--	--	76	150	.20	4780	.68
DEC									
19...	8.4	7	--	--	80	--	--	--	.84
JAN									
23...	10.0	12	--	--	86	--	--	--	.86
FEB									
01...	12.5	--	6.8	--	89	160	.22	--	.89
21...	10.4	4	--	--	81	140	.19	2570	.90
MAR									
08...	14.9	--	<1.0	--	98	130	.18	--	.90
27...	9.6	4	--	--	89	--	--	--	.92
APR									
11...	11.3	--	1.4	--	89	160	.22	--	1.0
17...	9.0	8	--	--	90	--	--	--	.08
MAY									
03...	--	--	--	--	--	--	--	--	1.0
24...	6.9	--	1.9	--	86	150	.20	1340	1.0
30...	4.7	17	--	--	95	160	.22	2890	.87
31...	--	--	--	10	--	--	--	--	--
JUN									
13...	5.0	--	1.3	--	93	170	.23	--	.91
19...	3.2	2	--	--	94	--	--	--	.89
JUL									
05...	--	--	--	--	--	--	--	--	.75
11...	1.0	--	1.5	--	96	170	.23	--	.91
31...	--	7	--	--	100	--	--	--	.39
AUG									
15...	--	--	1.4	--	100	160	.22	--	.18
21...	.8	4	--	--	90	160	.22	7800	.17
SEP									
06...	--	--	--	--	--	--	--	--	.43
11...	--	8	--	--	80	--	--	--	.25

DATE	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, DIS-SOLVED (MG/L AS P)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
17...	.03	.07	.04	--	--	--	260	70	--
NOV									
21...	.06	.08	.05	--	--	--	160	20	4.0
DEC									
19...	.05	.09	.04	--	--	--	240	20	--
JAN									
23...	.08	.10	.05	--	--	--	10	10	--
FEB									
01...	.14	.68	.09	.03	.04	.01	--	--	--
21...	.16	.10	.04	--	--	--	880	90	2.0
MAR									
08...	.17	.16	.05	.01	.04	.01	--	--	--
27...	.12	.10	.03	--	--	--	890	58	--
APR									
11...	.10	.08	.03	<.01	.02	<.01	--	--	--
17...	.08	.25	.03	--	--	--	79	17	--
MAY									
03...	.02	.13	.02	.01	.02	--	--	--	--
24...	.04	.10	.03	.01	.02	.01	--	--	--
30...	.30	.01	.02	--	--	--	80	10	1.9
31...	--	--	--	--	--	--	--	--	--
JUN									
13...	.02	.16	.03	.01	.02	.01	--	--	--
19...	.04	.10	.02	--	--	--	200	30	--
JUL									
05...	--	--	--	--	--	--	--	--	--
11...	.04	.22	.03	<.01	<.01	.01	--	--	--
31...	.15	.11	.01	--	--	--	180	200	--
AUG									
15...	.33	.11	.04	.03	.04	.02	--	--	--
21...	.18	.12	.02	--	--	--	410	310	2.1
SEP									
06...	.18	.18	.05	.03	.03	<.01	--	--	--
11...	.06	.22	.03	--	--	--	450	120	--

03493510 HOLSTON RIVER AT CHEROKEE DAM (TAILWATER), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)
NOV 21...	26	7.2	8.4	2.1	21	13	<60	<1
FEB 21...	24	6.7	4.9	1.2	19	10	1000	<1
MAY 30...	34	7.4	7.1	1.9	21	12	80	<1
AUG 21...	32	6.9	11	1.9	25	14	680	<1

DATE	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)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
NOV 21...	<10	160	<10	20	<.2	<50	10
FEB 21...	70	880	11	90	<.2	10	130
MAY 30...	90	80	<10	10	.2	<10	30
AUG 21...	50	410	<10	310	.5	<10	40

03494900 HOLSTON RIVER AT STRAWBERRY PLAINS, TN

LOCATION.--Lat 36°03'30", long 83°42'17", Knox County, Hydrologic Unit 06010104, at McBee Bridge on Mascot Road, 0.8 mi (1.3 km) southwest of Strawberry Plains, 1.7 mi (2.7 km) east of Mascot, and at mile 17 (27 km).

DRAINAGE AREA.--3,626 mi^2 (9,391 km^2).

PERIOD OF RECORD.--Water years 1977 to current year.

REMARKS.--Flow regulated by five upstream reservoirs (see p. 327).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)
OCT											
18...	1110	50	1.0	--	270	7.4	18.0	7	10	7.4	2.2
NOV											
15...	1345	50	1.0	--	260	7.8	15.0	6	3	8.9	<1.0
DEC											
13...	0945	50	1.0	--	240	7.1	9.0	6	6	9.9	2.3
JAN											
10...	1015	50	1.0	9770	220	7.5	3.0	8	11	12.2	1.8
FEB											
07...	1045	50	1.0	15900	250	7.7	1.0	9	10	13.5	1.8
MAR											
15...	1200	50	1.0	870	250	7.9	12.5	19	21	10.0	<1.0
APR											
19...	0940	50	1.0	--	270	7.7	12.2	11	5	10.8	1.7
MAY											
16...	1015	50	1.0	--	320	7.4	14.5	11	4	8.1	1.5
JUN											
20...	1010	50	1.0	--	290	7.6	15.5	8	12	7.9	1.0
JUL											
11...	0950	50	1.0	--	310	7.8	18.0	7	1	6.7	1.0
AUG											
15...	0940	50	1.0	--	290	7.3	24.5	10	2	4.8	3.8
SEP											
12...	0935	50	1.0	--	260	7.5	25.5	8	4	4.7	2.1

DATE	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	ALKALINITY (MG/L AS CACO3)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT										
18...	<100	<10	78	.53	.02	.08	530	<50	100	<10
NOV										
15...	200	30	83	.68	.02	.12	320	70	60	20
DEC										
13...	1600	60	72	.87	.03	.21	380	<50	60	--
JAN										
10...	<100	10	83	.97	.02	.10	360	20	38	3
FEB										
07...	1200	70	100	.85	.07	.11	80	<50	40	10
MAR										
15...	1100	160	120	.76	.02	.17	740	100	30	20
APR										
19...	1100	300	95	.79	.02	.12	250	80	62	45
MAY										
16...	3700	20	130	.71	.12	.28	210	<50	50	50
JUN										
20...	>20000	700	105	.92	.10	.02	290	<50	50	10
JUL										
11...	8100	50	98	.89	.02	.12	120	30	70	40
AUG										
15...	20000	120	97	.25	.15	.12	120	--	80	--
SEP										
12...	--	--	90	.85	.01	.18	160	<50	80	<10

03494900 HOLSTON RIVER AT STRAWBERRY PLAINS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	SODIUM, TOTAL RECOV-ERABLE (MG/L AS NA)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K)	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)
OCT											
18...	12	--	--	2.0	--	--	--	79	19	15	--
NOV											
15...	--	--	--	--	--	--	--	94	--	--	--
DEC											
13...	--	--	--	--	--	--	--	75	--	--	--
JAN											
10...	6.0	--	--	1.9	--	--	--	88	15	8.0	--
24...	--	6.7	11	--	1.8	110	0	90	17	8.3	.1
FEB											
07...	--	--	--	--	--	--	--	94	--	--	--
09...	--	7.5	12	--	1.8	124	0	102	19	11	.1
MAR											
07...	--	5.1	8	--	1.7	130	0	110	16	7.3	.0
15...	--	--	--	--	--	--	--	110	--	--	--
APR											
03...	--	5.6	9	--	1.8	140	0	110	17	7.6	.1
MAY											
01...	--	8.0	12	--	1.7	130	0	110	20	12	.1
JUN											
20...	--	--	11	--	--	--	--	--	--	--	--
JUL											
17...	--	11	15	--	2.0	--	--	100	19	15	.1
AUG											
01...	--	11	16	--	1.8	--	--	100	23	15	.1
SEP											
12...	--	12	20	--	2.1	--	--	80	24	15	.1

DATE	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)	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)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
OCT											
18...	--	140	--	.19	3970	.57	.05	.05	.03	--	680
NOV											
15...	--	--	--	--	--	.69	.03	.15	.03	--	230
DEC											
13...	--	--	--	--	--	.86	.04	.12	.05	--	640
JAN											
10...	--	150	--	.20	4090	.87	.08	.05	.04	--	380
24...	5.2	134	133	.18	1130	.85	.01	.18	.03	.02	--
FEB											
07...	--	--	--	--	--	.77	.11	.03	.04	--	480
09...	5.2	158	148	.21	1850	.84	.08	.18	.02	.03	--
MAR											
07...	3.5	146	140	.20	183	.78	.01	.50	.02	.01	--
15...	--	--	--	--	--	.67	.06	.19	.07	--	2300
APR											
03...	.8	151	147	.21	145	.52	.03	.31	.02	.00	--
MAY											
01...	1.9	162	154	.22	783	.85	.02	.13	.90	.02	210
JUN											
20...	--	--	140	.23	--	--	--	.56	--	--	--
JUL											
17...	2.4	199	156	.27	424	.65	.00	.26	.02	.01	--
AUG											
01...	3.3	192	159	.26	2380	.43	.08	.33	.02	.01	90
SEP											
12...	3.1	163	140	.22	2610	.39	.02	.13	.03	.02	--

03494900 HOLSTON RIVER AT STRAWBERRY PLAINS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
OCT 18...	14	32	7.9	12	2.0	18	15	150	.20
JAN 10...	6	31	7.1	6.4	2.1	17	8.0	130	.18
APR 19...	6	35	8.2	7.3	1.4	19	11	150	.20
JUL 11...	4	38	7.8	9.1	1.9	28	16	160	.22

DATE	SOLIDS, DISSOLVED (TONS PER DAY)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 18...	--	400	<1	20	<10	<.2	<50	90	2.5
JAN 10...	3430	500	<1	<10	<10	<.2	<50	40	1.3
APR 19...	--	170	<1	38	<10	<.2	<10	40	2.6
JUL 11...	--	110	<1	30	<10	<.2	<10	20	3.3

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN
(National stream-quality accounting network station)

LOCATION.--Lat 36°00'56", long 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 mi^2 (9,705 km^2).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1930 to June 1976, January to September 1978. 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. 327).

AVERAGE DISCHARGE.--45 years (water years 1931-75), 4,716 ft^3/s (133.6 m^3/s), 17.09 in/yr (434 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,900 ft^3/s (1,780 m^3/s) Mar. 28, 1935, gage height, 20.20 ft (6.157 m), site and datum then in use; minimum, 44 ft^3/s (1.25 m^3/s) Dec. 12, 21, 22, 1941, gage height, -0.58 ft (-0.177 m), site and datum then in use; minimum daily, 44 ft^3/s (1.25 m^3/s) Dec. 21, 22, 1941. Maximum discharge since closure of Cherokee Dam on Dec. 5, 1941, 31,400 ft^3/s (889 m^3/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 observed during period January to September 1978, 19,600 ft^3/s (555 m^3/s) Jan. 26, gage height, 7.92 ft (2.414 m); minimum observed, 340 ft^3/s (9.63 m^3/s), gage height, 1.31 ft (0.399 m) Apr. 4; minimum daily observed, 370 ft^3/s (10.5 m^3/s) Apr. 3. Extremes may have been slightly higher or lower during short periods of missing record.

DISCHARGE, IN CUBIC FEET PER SECOND, JANUARY TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				14400	10300	6080	1080	2440	4220	8070	8170	10900
2				14600	7530	4850	510	1660	6080	7190	9820	10200
3				15000	8380	5670	370	481	7620	912	9790	7750
4				15400	7720	3000	3130	529	3340	5700	9820	1320
5				11600	7440	1000	3560	728	591	728	9140	940
6				11000	8290	800	4920	510	4360	6440	7690	8000
7				8690	15300	400	4730	436	3300	6770	2400	8000
8				3150	11700	510	4780	436	6710	6950	7010	8000
9				5450	7190	3560	1470	778	4180	7070	6710	5800
10				11700	7470	4450	1040	549	500	1120	5650	5200
11				17100	4400	2070	2220	559	400	8130	5820	7500
12				16100	3170	1090	5500	481	2300	7190	6680	6600
13				9330	4850	969	3630	472	3000	7560	6920	5600
14				5430	9650	1110	4870	500	600	7370	5850	6600
15				3800	8690	984	4800	491	500	7400	9920	6800
16				5800	7910	803	3960	559	4000	5180	9300	6800
17				6570	9590	955	2010	612	5800	765	9010	4800
18				10500	6600	716	2030	830	2300	4400	9620	4600
19				8130	4640	570	2500	623	2100	7160	9490	7000
20				6650	8720	539	2960	1700	3600	9590	8540	7500
21				6200	9330	510	2980	1770	3400	8290	5670	7500
22				4130	9360	519	1910	602	3700	8320	10100	7000
23				7440	8170	519	2050	463	3800	5670	10300	4400
24				6230	8350	481	2710	445	3820	790	10900	1500
25				6130	8850	454	2460	4160	2340	6390	10900	3000
26				13700	7910	570	3260	4250	1090	6800	9820	5600
27				11500	7780	1250	2240	3910	7130	4590	8130	5000
28				9390	8320	2360	2320	612	9790	6470	6740	4800
29				8010	---	1490	2010	386	9360	6650	10100	4600
30				7440	---	1340	2150	4050	8880	4590	10600	3400
31				8690	---	1160	---	4380	---	1010	11000	---
TOTAL				289260	227610	50779	84160	40402	118811	175265	261610	176710
MEAN				9331	8129	1638	2805	1303	3960	5654	8439	5890
MAX				17100	15300	6080	5500	4380	9790	9590	11000	10900
MIN				3150	3170	400	370	386	400	728	2400	940

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. 327).

COOPERATION.--Records furnished by Tennessee Valley Authority as noted.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)
OCT											
18...a	1025	50	1.0	10500	260	7.2	18.0	10	13	--	7.4
NOV											
15...a	1300	50	1.0	11500	260	7.9	15.5	6	6	--	8.5
DEC											
13...a	1120	50	1.0	18000	240	6.7	9.2	6	11	--	11.2
JAN											
10...a	0940	50	1.0	10100	220	7.3	3.5	7	14	--	11.6
24...	1230	--	--	3110	250	8.3	3.5	--	8	--	--
FEB											
07...a	0935	50	1.0	16400	250	7.4	1.0	7	10	--	13.8
09...	1310	--	--	4340	255	8.0	2.5	--	10	--	--
MAR											
07...	1300	--	--	463	250	8.2	7.0	--	9	--	14.0
15...a	1055	50	1.0	900	230	7.8	13.7	25	100	--	12.0
APR											
03...	1500	--	--	355	265	8.0	19.0	--	4	--	7.5
MAY											
01...	1430	--	--	1790	280	8.2	13.5	--	4	--	7.6
JUN											
20...	0930	--	--	--	265	7.4	20.5	--	--	--	5.4
JUL											
17...	0930	--	--	790	300	6.7	21.5	--	--	4.0	6.2
AUG											
01...	1345	--	--	4590	300	8.0	21.0	--	--	3.0	--
SEP											
12...	1445	--	--	5920	270	7.4	26.0	--	--	4.0	--

DATE	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)	MAGNESIUM, DISSOLVED (MG/L AS MG)
OCT											
18...a	8	2.1	400	--	--	--	--	36	--	6.8	--
NOV											
15...a	--	<1.0	1600	--	--	--	--	--	--	--	--
DEC											
13...a	--	1.2	700	--	--	--	--	--	--	--	--
JAN											
10...	4	1.6	4400	--	--	--	--	29	--	6.6	--
24...	--	--	--	180	K12	110	21	--	32	--	7.6
FEB											
07...a	--	1.8	--	--	--	--	--	--	--	--	--
09...	--	--	--	K15	K14	120	18	--	34	--	8.2
MAR											
07...	--	--	--	K4	21	120	12	--	35	--	7.7
15...a	--	1.2	>20000	--	--	--	--	--	--	--	--
APR											
03...	--	--	--	38	K2	130	12	--	36	--	9.0
MAY											
01...	--	--	--	68	31	130	22	--	38	--	8.3
JUN											
20...	--	--	--	K620	--	120	19	--	33	--	--
JUL											
17...	--	--	--	3300	210	130	29	--	38	--	8.2
AUG											
01...	--	--	--	K9	72	130	25	--	37	--	7.9
SEP											
12...	--	--	--	36	60	100	21	--	29	--	7.0

a - Records furnished by Tennessee Valley Authority.

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

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHYTOPLANKTON, TOTAL (CELLS PER ML)	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
18...a	50	130	20	1.3	--	--	--	--	--	--
NOV										
15...a	80	60	10	--	--	--	--	--	--	--
DEC										
13...a	<50	60	<10	--	--	--	--	--	--	--
JAN										
10...a	40	50	8	1.4	--	--	--	--	--	--
24...	10	30	0	--	--	--	--	5	42	95
FEB										
07...a	<50	50	10	--	--	--	--	--	--	--
09...	--	--	--	1.2	--	--	--	9	105	87
MAR										
07...	--	--	--	7.4	720	--	--	10	13	74
15...a	200	80	20	--	--	--	--	--	--	--
APR										
03...	--	--	--	--	--	--	--	7	6.7	76
MAY										
01...	20	50	30	4.9	2700	--	--	8	39	90
JUN										
20...	--	--	--	--	1400	1.42	1.81	--	--	45
JUL										
17...	--	--	--	--	210	--	--	6	13	96
AUG										
01...	0	50	10	3.1	4600	--	--	8	65	--
SEP										
12...	--	--	--	1.7	3000	--	--	7	112	99

DATE	CARBON, ORGANIC DISSOLVED (MG/L AS C)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)
OCT								
18...a	--	300	--	--	--	--	<1	--
JAN								
10...a	--	270	--	--	--	--	<1	--
24...	1.5	--	0	0	0	0	1	1
MAY								
01...	2.6	--	1	1	0	0	1	0
AUG								
01...	--	--	1	1	0	0	0	0

a - Records furnished by Tennessee Valley Authority.

03495500 HOLSTON RIVER NEAR KNOXVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)
OCT									
18...a	--	--	--	--	30	--	<10	--	<.2
JAN									
10...a	--	--	--	--	10	--	<10	--	.5
24...	<10	0	4	5	3	1	6	2	<.5
MAY									
01...	<10	1	3	0	3	3	2	2	<.5
AUG									
01...	10	0	0	0	2	1	0	0	.5

DATE	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
OCT								
18...a	--	<50	--	--	--	--	230	--
JAN								
10...a	--	<50	--	--	--	--	30	--
24...	<.5	--	0	0	0	0	20	10
MAY								
01...	<.5	--	0	0	0	0	10	0
AUG								
01...	.5	--	0	0	0	0	20	0

a - Records furnished by Tennessee Valley Authority.

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 mi^2 (23,139 km^2), 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 ft^3/s (141.6 m^3/s), which are fair. Flow regulated by six reservoirs (see p. 327).

AVERAGE DISCHARGE.--79 years, 13,100 ft^3/s (371.0 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 195,000 ft^3/s (5,520 m^3/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 ft^3/s (3,680 m^3/s); minimum daily, 1,010 ft^3/s (28.6 m^3/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 ft^3/s (2,530 m^3/s) Mar. 12, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1791, 45.0 ft (13.72 m) Mar. 8, 1867, site and datum of gage at old city pumping plant, 3.2 mi (5.1 km) downstream from base gage, discharge, 290,000 ft^3/s (8,210 m^3/s), from rating curve extended above 130,000 ft^3/s (3,680 m^3/s), from high-water profile by Corps of Engineers and Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 46,100 ft^3/s (1,310 m^3/s) Jan. 26, gage height, 17.42 ft (5.310 m); minimum daily discharge, 1,810 ft^3/s (51.3 m^3/s) Mar. 7; minimum gage height, 10.39 ft (3.167 m) Mar. 24.

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	11000	14500	7820	20300	34100	15600	12300	7190	9310	16400	17500	21000
2	7100	15100	14500	23100	30300	13900	12400	5010	13800	12200	20000	20000
3	7800	15300	23600	22600	26800	14200	11200	3400	13700	5710	19000	13400
4	17400	12700	33400	29200	25900	10600	12400	3760	4390	9510	19000	5200
5	17200	5640	35600	27800	24900	3980	13600	4990	4280	6440	12200	9600
6	14200	5200	35300	17400	25300	3260	14700	4140	10700	14700	15400	18900
7	12800	7270	34100	15800	33200	1810	13900	2830	10600	14500	6000	19100
8	8800	12700	33800	6740	26400	4110	12900	2460	13500	13900	15000	18900
9	6700	14600	34300	17000	19900	13300	9090	3500	6000	11300	11600	16400
10	6600	23200	33700	25200	18900	14400	8000	3140	2250	7690	9500	10900
11	3300	25600	35500	33200	13200	8890	9300	3260	2230	16200	8700	17300
12	4300	23800	37200	33000	10400	4200	11900	3360	5220	14400	13400	15500
13	9600	23300	37500	24600	12800	4520	12000	4420	9260	15600	10800	12300
14	14800	23700	37400	13000	22600	5140	12300	3640	4470	15200	12000	13700
15	10800	24100	37500	12500	22000	8460	11300	4370	3870	13800	19500	14300
16	9800	25300	37000	17900	21100	11600	11200	4460	6380	7910	20000	13600
17	18500	28200	36600	20300	21100	12000	10900	4430	12500	3870	17500	13300
18	19000	29000	37000	21500	16300	13100	8890	4020	6860	11600	19000	8890
19	18000	26200	36700	19400	9100	11100	9460	4530	4600	15200	19500	17100
20	16000	27300	37200	16500	16100	10800	9530	4190	11200	18500	16000	18100
21	17800	26800	36800	16500	19400	11600	10100	4670	10200	17900	11600	11800
22	16100	27100	36800	13700	18300	11400	7500	4330	9700	16800	19500	16600
23	10100	27800	28700	17600	12900	11900	5420	4000	9810	9420	20000	11500
24	8130	29100	25400	21200	13500	10400	6900	5070	7780	6680	21500	6060
25	15400	30700	26300	21800	13000	11000	5760	11400	3690	12700	21000	6370
26	12000	31800	26300	40900	12700	11300	9930	11200	6910	12600	19000	12500
27	8170	31600	29000	31700	15000	14200	10500	7060	15400	9900	12200	11700
28	7980	31600	29100	29400	17700	16700	7620	2200	19500	12000	14600	10400
29	6350	26000	29100	26600	---	14500	6410	3530	20200	12000	20000	10300
30	3700	7440	32400	25700	---	13400	7120	8440	19000	5700	20500	9620
31	7170	---	26700	31900	---	14500	---	9880	---	4900	21500	---
TOTAL	346600	652650	982320	694040	552900	325870	304530	152880	277310	365230	503000	404340
MEAN	11180	21760	31690	22390	19750	10510	10150	4932	9244	11780	16230	13480
MAX	19000	31800	37500	40900	34100	16700	14700	11400	20200	18500	21500	21000
MIN	3300	5200	7820	6740	9100	1810	5420	2200	2230	3870	6000	5200

CAL YR 1977 TOTAL 5492900 MEAN 15050 MAX 37500 MIN 2150
WTR YR 1978 TOTAL 5561670 MEAN 15240 MAX 40900 MIN 1810

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. 327).

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, 28.5°C Sept. 18, 19, 20, 21; minimum, 1.5°C Jan. 29, Feb. 7, 8.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	24.0	23.0	23.0	18.0	16.5	17.0	13.0	13.0	13.0	8.0	7.0	8.0
2	24.0	23.5	24.0	18.0	16.5	17.0	13.0	11.5	12.0	6.5	6.0	6.5
3	24.0	23.0	23.5	18.0	16.5	17.0	13.0	11.0	11.5	6.0	5.0	5.5
4	23.0	20.0	21.5	18.5	18.0	18.0	13.0	13.0	13.0	6.0	5.0	5.5
5	22.0	21.0	21.5	18.5	18.0	18.5	13.5	13.0	13.0	6.0	5.5	5.5
6	22.0	21.0	21.5	18.5	18.0	18.0	13.0	10.5	11.5	6.0	5.5	6.0
7	21.5	20.5	21.0	18.5	18.0	18.5	10.5	9.5	10.0	7.0	6.0	6.5
8	21.5	21.0	21.5	18.5	18.5	18.5	10.5	10.0	10.5	8.0	6.0	6.5
9	21.5	20.5	20.5	18.0	17.0	17.0	10.5	10.0	10.5	6.5	4.5	5.5
10	20.5	19.5	20.0	17.0	15.5	16.0	10.0	9.0	9.5	4.5	3.0	3.5
11	19.5	18.0	19.0	15.5	14.5	15.0	9.5	9.0	9.5	4.0	3.5	3.5
12	19.5	18.0	18.0	15.5	15.0	15.5	10.0	9.0	9.5	4.0	4.0	4.0
13	19.0	16.5	18.5	15.0	14.5	15.0	10.0	9.5	10.0	4.0	3.5	4.0
14	19.0	16.5	17.0	15.5	14.5	15.0	10.5	10.0	10.5	4.5	3.5	4.0
15	19.5	18.5	19.0	15.5	15.0	15.0	10.5	9.5	10.0	4.0	3.5	3.5
16	19.0	18.5	19.0	15.5	15.5	15.5	10.0	9.0	10.0	4.0	3.0	3.5
17	18.5	17.0	18.0	15.5	15.5	15.5	10.0	9.5	10.0	4.0	3.5	4.0
18	19.0	18.5	18.5	15.5	14.5	15.0	10.0	9.5	10.0	4.5	4.0	4.0
19	19.0	18.5	18.5	15.0	14.5	15.0	9.5	9.0	9.5	4.5	4.0	4.5
20	18.5	18.0	18.5	15.5	15.0	15.0	9.5	9.5	9.5	4.0	3.5	4.0
21	18.5	18.0	18.5	15.5	15.0	15.5	9.5	8.5	8.5	4.0	3.5	4.0
22	19.5	18.5	19.0	15.5	15.5	15.5	8.5	8.5	8.5	4.0	3.5	4.0
23	19.5	19.5	19.5	15.5	15.5	15.5	9.0	8.0	8.5	4.0	3.0	3.5
24	20.0	19.0	19.5	15.5	15.0	15.5	9.5	8.5	9.0	3.5	3.0	3.5
25	19.0	18.0	18.5	15.0	14.0	14.5	9.5	8.5	9.0	4.0	3.5	4.0
26	19.5	19.0	18.5	14.0	12.0	13.0	8.5	6.5	7.0	4.0	3.5	3.5
27	19.5	17.0	19.0	12.0	12.0	12.0	8.0	6.5	7.0	3.5	2.0	3.0
28	19.5	16.5	18.5	13.0	12.0	13.0	7.0	6.0	6.5	3.0	2.0	3.0
29	20.0	19.5	19.5	13.0	13.0	13.0	7.0	6.0	6.5	3.0	1.5	2.0
30	20.0	19.5	19.5	13.5	13.0	13.0	7.0	6.5	6.5	3.0	2.0	3.0
31	20.0	19.0	19.5	---	---	---	8.0	7.0	7.0	3.0	2.0	3.0
MONTH	24.0	16.5	19.5	18.5	12.0	15.5	13.5	6.0	9.5	8.0	1.5	4.5

TENNESSEE RIVER BASIN

03497100 TENNESSEE RIVER BELOW KNOXVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

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 (0.5 km) 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 mi^2 (275 km^2).

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. Periodic observations of specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--15 years, 296 ft^3/s (8.383 m^3/s), 37.92 in/yr (963 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft^3/s (453 m^3/s) Mar. 16, 1973, gage height, 12.30 ft (3.749 m); minimum, 32 ft^3/s (0.91 m^3/s) Oct. 30, 31, 1963, Oct. 7-10, 1970; minimum gage height, 1.26 ft (0.384 m) Sept. 17, 18, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,620 ft^3/s (159 m^3/s) at 2330 hours, Jan. 25, gage height, 7.42 ft (2.262 m), no other peak above base of 3,100 ft^3/s (87.8 m^3/s); minimum daily discharge, 45 ft^3/s (1.27 m^3/s) Sept. 21, 29, 30.

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	211	237	310	290	339	138	302	496	203	80	152	63
2	204	220	279	263	317	138	285	533	189	98	120	62
3	186	206	256	234	289	212	270	473	195	198	90	85
4	174	196	434	223	266	196	253	466	187	102	155	70
5	160	189	491	216	250	168	245	446	166	87	160	60
6	150	438	468	221	231	173	230	388	164	80	180	56
7	140	395	379	214	207	168	216	364	179	87	446	60
8	183	358	341	721	222	224	202	399	334	77	352	54
9	446	320	389	1170	213	339	192	413	390	73	225	50
10	288	304	339	609	193	1140	189	489	289	72	189	54
11	232	269	323	463	184	818	216	433	245	67	166	56
12	211	246	304	403	179	663	236	372	221	64	185	60
13	187	226	286	362	198	616	195	391	345	60	275	58
14	174	212	317	318	182	1330	180	561	257	59	212	56
15	163	204	331	284	169	979	172	684	229	121	230	60
16	195	195	294	260	166	686	166	645	206	225	195	55
17	178	384	278	588	164	518	159	535	189	126	164	52
18	161	313	424	540	161	431	174	442	172	84	143	50
19	159	287	374	447	157	385	253	374	170	74	123	48
20	151	268	359	524	146	376	261	329	177	69	109	46
21	143	256	325	426	142	418	243	294	175	65	101	45
22	138	250	293	371	133	590	227	268	148	60	92	70
23	134	275	271	336	147	489	221	341	131	59	86	90
24	126	270	276	333	141	450	212	405	120	58	76	70
25	265	247	1350	1630	139	434	258	370	111	110	71	60
26	671	234	757	2990	143	603	702	352	104	104	79	55
27	477	217	539	1150	127	487	845	316	99	73	76	50
28	392	231	421	733	131	429	764	289	94	73	80	47
29	333	251	359	543	---	385	584	265	90	73	73	45
30	292	262	339	441	---	350	500	243	84	71	77	45
31	263	---	312	387	---	321	---	221	---	71	68	---
TOTAL	7187	7960	12218	17690	5336	14654	8952	12597	5663	2720	4750	1732
MEAN	232	265	394	571	191	473	298	406	189	87.7	153	57.7
MAX	671	438	1350	2990	339	1330	845	684	390	225	446	90
MIN	126	189	256	214	127	138	159	221	84	58	68	45
CFSM	2.19	2.50	3.72	5.39	1.80	4.46	2.81	3.83	1.78	.83	1.44	.54
IN.	2.52	2.79	4.29	6.21	1.87	5.14	3.14	4.42	1.99	.95	1.67	.61

CAL YR 1977 TOTAL 119310 MEAN 327 MAX 5070 MIN 69 CFSM 3.09 IN 41.87
WTR YR 1978 TOTAL 101459 MEAN 278 MAX 2990 MIN 45 CFSM 2.62 IN 35.61

NOTE.--No gage-height record Sept. 3-30.

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, 25.5°C July 31; minimum, 0.0°C Feb. 23.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.0	16.0	17.0	14.0	13.0	13.5	12.5	11.0	12.0	6.0	5.5	6.0
2	19.0	17.5	18.5	13.5	12.0	13.0	11.0	7.5	9.0	5.5	2.0	3.5
3	17.0	14.0	15.5	14.5	13.5	14.0	9.0	6.5	7.5	2.0	.5	1.0
4	14.0	12.0	13.0	15.0	14.0	14.5	11.0	9.0	10.0	1.5	.5	.5
5	13.0	11.5	12.5	15.5	14.5	15.0	12.5	11.0	12.0	3.5	1.5	2.0
6	13.5	12.0	13.0	15.5	15.0	15.0	11.5	6.0	8.5	6.0	4.0	5.0
7	14.0	12.5	13.5	15.0	14.5	14.5	5.5	2.5	3.0	8.0	5.5	6.5
8	14.5	14.0	14.0	14.5	14.0	14.5	4.5	2.0	3.0	9.5	6.5	8.5
9	14.5	13.5	14.5	14.0	13.0	13.5	6.0	4.5	5.5	6.0	1.0	2.5
10	13.0	11.5	12.0	14.5	11.0	13.0	4.0	1.5	2.5	1.0	.5	.5
11	12.5	11.0	12.0	11.0	8.0	9.0	2.0	1.0	1.5	.5	.5	.5
12	12.5	11.5	12.0	8.0	6.0	6.5	3.0	1.5	2.0	1.0	.5	.5
13	11.0	10.0	10.5	6.0	4.5	5.5	5.5	3.0	3.5	3.5	1.5	2.5
14	10.0	9.5	9.5	6.0	4.5	5.0	9.0	6.0	8.0	3.5	1.5	2.5
15	10.5	8.0	8.5	7.0	5.0	6.0	9.0	8.0	9.0	1.5	.5	1.0
16	10.5	9.0	10.0	9.5	6.5	8.0	8.0	6.5	7.0	1.0	.5	.5
17	9.0	7.5	8.5	11.0	9.5	10.5	8.5	6.5	7.5	5.0	1.0	3.0
18	9.5	7.0	8.5	10.0	7.5	8.5	8.5	8.0	8.5	5.0	4.5	5.0
19	10.0	8.5	9.5	7.5	6.0	7.0	7.5	6.0	7.0	5.0	4.5	4.5
20	10.0	8.0	9.0	10.0	7.5	8.5	9.0	7.0	8.0	4.5	3.5	4.0
21	10.0	8.0	9.5	11.5	10.0	11.0	8.0	4.5	6.5	3.5	2.5	3.0
22	10.5	9.0	10.0	12.0	11.5	11.5	4.5	3.5	4.0	3.0	2.0	2.5
23	11.5	9.5	10.5	12.5	12.0	12.0	5.0	3.0	3.5	3.5	1.5	2.5
24	12.0	10.0	11.0	12.5	12.0	12.5	8.5	5.5	7.0	5.0	3.0	3.5
25	13.0	12.0	12.5	12.5	10.5	11.5	8.5	5.5	7.5	7.0	5.0	6.0
26	13.0	12.5	13.0	10.5	5.0	7.5	5.0	2.0	3.0	6.5	3.0	4.5
27	13.0	12.5	13.0	5.0	4.0	4.5	3.0	2.0	2.5	3.5	2.5	3.0
28	14.0	13.0	13.5	7.5	5.0	6.0	2.0	.5	1.0	2.5	1.0	1.5
29	13.5	12.5	13.0	10.0	7.5	8.5	2.5	.5	1.5	1.0	.5	.5
30	13.5	12.5	13.0	12.0	10.0	10.5	4.0	2.5	3.5	.5	.5	.5
31	13.5	13.0	13.0	---	---	---	6.0	4.5	5.5	1.5	.5	1.0
MONTH	19.0	7.0	12.0	15.5	4.0	10.5	12.5	.5	6.0	9.5	.5	3.0

03497300 LITTLE RIVER ABOVE TOWNSEND, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.5	.5	1.0	4.0	3.0	3.5	13.5	9.5	11.5	11.5	11.0	11.0
2	3.0	2.0	2.5	3.0	2.5	3.0	14.0	10.5	12.5	12.5	9.5	11.0
3	3.0	2.5	3.0	3.5	2.5	3.0	15.0	11.5	13.5	11.0	9.0	10.5
4	3.5	2.0	3.0	3.0	1.0	2.0	15.5	12.5	14.0	13.5	11.0	12.0
5	3.0	2.5	3.0	2.5	.5	1.5	16.0	13.0	14.5	13.0	12.0	12.5
6	2.0	.5	1.0	5.0	1.5	3.0	15.0	13.0	14.0	15.0	11.5	13.5
7	.5	.5	.5	5.5	3.5	4.5	16.5	13.5	15.0	14.0	13.0	13.5
8	.5	.5	.5	6.5	5.5	6.0	15.5	12.0	14.0	16.0	13.5	14.5
9	.5	.5	.5	6.5	6.0	6.5	16.0	12.5	14.5	15.5	13.0	14.0
10	1.0	.5	.5	6.5	5.5	6.0	16.5	14.0	15.5	14.5	12.5	13.5
11	2.0	.5	1.5	8.0	4.5	6.0	16.0	13.5	15.0	15.0	11.5	13.5
12	3.0	1.0	2.0	8.0	7.0	7.5	13.5	11.0	12.5	14.0	13.5	13.5
13	5.5	2.5	4.0	9.0	6.5	8.0	15.0	12.0	13.5	15.5	13.5	14.5
14	5.5	3.5	4.0	9.5	8.5	9.0	14.0	11.0	13.0	13.5	10.5	12.0
15	4.0	3.0	3.5	9.5	7.5	8.5	14.0	10.5	12.5	10.5	10.0	10.0
16	5.0	3.5	4.0	8.5	6.0	7.0	14.0	11.5	13.0	11.0	9.5	10.0
17	5.0	4.0	4.5	5.5	3.5	4.5	15.0	12.5	14.0	13.0	9.5	11.0
18	5.0	4.0	4.5	5.5	2.5	4.5	15.0	13.5	14.0	14.0	11.0	12.5
19	4.5	2.5	3.5	9.0	4.5	7.0	13.5	11.5	12.5	16.0	12.0	14.0
20	2.5	1.0	2.0	10.0	6.5	8.5	11.5	9.5	10.5	17.0	13.0	15.0
21	2.0	1.0	1.5	11.0	8.5	10.0	9.5	8.5	9.0	17.0	15.0	16.0
22	.5	.5	.5	10.5	8.0	9.5	11.0	7.0	9.0	17.5	14.5	16.0
23	.5	.0	.5	11.0	7.0	9.0	11.5	9.5	10.5	18.0	15.5	16.5
24	3.0	.5	1.5	11.5	8.5	10.5	14.0	10.5	12.5	16.0	15.0	15.5
25	4.0	1.0	3.0	13.0	10.5	12.0	13.5	10.5	12.5	16.5	14.5	15.5
26	4.0	2.5	3.5	11.5	7.5	9.5	10.5	9.0	9.5	18.0	15.0	16.5
27	3.5	1.0	2.5	7.5	6.0	6.5	11.5	8.0	9.5	18.0	15.5	17.0
28	3.0	2.5	3.0	9.5	5.5	7.5	12.0	8.5	10.0	17.5	16.0	17.0
29	---	---	---	10.5	6.5	9.0	12.5	9.5	11.0	18.0	16.0	17.0
30	---	---	---	11.0	8.0	9.5	12.0	11.0	11.5	18.0	16.0	17.0
31	---	---	---	11.5	7.5	10.0	---	---	---	19.0	16.0	17.5
MONTH	5.5	.0	2.5	13.0	.5	7.0	16.5	7.0	12.5	19.0	9.0	14.0
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.0	16.0	18.0	24.5	22.5	23.5	23.5	21.0	22.0	23.0	21.5	22.0
2	19.0	17.0	18.0	24.0	22.0	23.0	24.0	21.0	22.5	22.5	21.0	21.5
3	18.5	17.0	17.5	23.0	20.5	21.5	24.0	21.5	22.5	22.0	20.5	21.0
4	19.5	16.5	17.5	23.5	20.5	22.0	22.5	20.5	21.0	21.5	19.5	20.5
5	19.0	15.5	17.5	23.5	21.0	22.5	21.5	20.0	20.5	21.5	19.5	20.5
6	18.0	16.0	17.5	23.5	21.5	22.5	21.5	20.0	21.0	22.0	20.0	21.0
7	18.5	17.0	18.0	23.5	21.5	22.5	21.0	17.5	19.5	22.0	19.5	21.0
8	18.0	16.5	17.5	24.5	22.0	23.0	19.0	17.5	18.0	22.5	20.0	21.5
9	17.0	16.0	16.5	24.0	21.5	23.0	18.5	18.0	18.5	23.0	20.5	21.5
10	18.5	15.5	17.0	24.5	21.5	23.0	19.5	17.5	18.5	23.0	21.0	22.0
11	19.5	16.5	18.0	24.0	22.5	23.5	19.5	18.5	19.0	22.5	21.0	21.5
12	19.5	16.5	18.5	24.0	21.0	22.5	20.5	18.5	19.5	21.5	20.5	21.0
13	19.5	17.0	18.0	23.0	21.5	22.0	20.0	18.0	19.0	22.5	20.0	21.5
14	17.5	15.0	16.5	24.0	21.0	22.5	20.0	18.5	19.5	22.0	21.0	21.5
15	17.5	14.5	16.0	23.0	20.0	21.5	20.0	19.0	19.5	22.0	21.0	21.5
16	19.0	16.0	17.5	20.5	19.0	19.5	21.5	18.5	20.0	22.0	20.0	21.0
17	20.0	17.0	18.5	22.0	19.0	20.5	22.0	19.5	21.0	22.0	19.5	20.5
18	20.5	17.5	19.0	22.5	19.0	21.0	22.5	20.5	21.5	23.0	20.5	21.5
19	20.0	19.0	19.5	23.5	21.0	22.0	22.5	20.5	21.5	23.0	21.0	22.0
20	19.0	17.5	18.5	24.0	21.0	22.5	23.0	21.0	22.0	24.0	21.0	22.5
21	20.0	17.5	19.0	25.0	22.0	23.5	23.0	21.0	22.0	24.0	21.5	22.5
22	21.0	18.0	19.5	25.0	22.0	23.5	23.0	21.0	22.0	22.5	21.5	22.0
23	21.5	18.5	20.0	24.0	22.5	23.5	23.0	21.0	22.0	22.5	20.5	21.5
24	21.5	18.5	20.0	25.0	22.5	23.5	23.0	21.0	22.0	21.5	20.5	21.0
25	22.0	18.5	20.5	23.5	20.5	22.0	23.5	21.0	22.5	21.5	20.0	20.5
26	23.0	20.5	21.5	23.0	19.5	21.0	22.5	21.0	21.5	21.0	19.0	20.0
27	24.0	21.0	22.5	24.0	21.0	22.5	22.5	20.0	21.5	20.5	18.5	19.5
28	24.5	22.0	23.0	25.0	22.0	23.5	23.5	21.0	22.5	20.0	17.5	19.0
29	24.5	22.0	23.5	24.5	22.0	23.0	23.5	21.5	22.5	20.0	18.0	19.0
30	25.0	22.0	23.5	24.5	22.0	23.5	22.5	21.0	21.5	20.0	18.0	19.0
31	---	---	---	25.5	22.5	23.5	23.0	21.5	22.0	---	---	---
MONTH	25.0	14.5	19.0	25.5	19.0	22.5	24.0	17.5	21.0	24.0	17.5	21.0
YEAR	25.5	.0	12.5									

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 mi^2 (697 km^2).

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 ft^3/s (0.071 m^3/s) for municipal supply 300 ft (90 m) upstream from gage. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--27 years, 539 ft^3/s (15.26 m^3/s), 27.21 in/yr (691 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,200 ft^3/s (912 m^3/s) Mar. 12, 1963, gage height, 24.20 ft (7.376 m), from rating curve extended above 20,000 ft^3/s (566 m^3/s) on basis of area-velocity study and road overflow computations; minimum, 32 ft^3/s (0.91 m^3/s) Aug. 27, 1956; minimum gage height, 6.25 ft (1.905 m) Sept. 24, 1970; minimum daily, 44 ft^3/s (1.25 m^3/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 ft^3/s (1,420 m^3/s), and flood of April 1, 1896, reached a stage of 26 ft (7.9 m), discharge, 36,000 ft^3/s (1,020 m^3/s), from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,910 ft^3/s (252 m^3/s) at 0430 hours, Jan. 26, gage height, 15.13 ft (4.612 m), no other peak above base of 6,000 ft^3/s (170 m^3/s); minimum, 63 ft^3/s (1.78 m^3/s) Sept. 29, 30, gage height, 6.31 ft (1.923 m).

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	314	358	503	449	600	225	472	1050	278	135	228	105
2	304	329	470	413	564	224	444	975	261	171	160	99
3	274	307	419	357	505	468	416	795	263	264	129	134
4	250	290	1060	335	462	467	391	890	267	187	214	126
5	236	277	1070	319	427	348	382	859	232	144	215	102
6	223	602	891	336	406	326	360	674	217	134	246	94
7	214	594	681	333	380	295	340	600	254	146	377	104
8	236	547	589	773	375	341	319	795	732	132	571	91
9	948	480	701	3070	365	543	305	1320	740	126	331	85
10	532	446	605	1350	341	2550	297	878	438	121	278	87
11	399	398	552	1200	319	1750	320	697	350	114	255	91
12	347	359	511	1050	306	1130	394	594	310	108	239	93
13	304	330	477	978	319	1010	314	618	547	103	401	88
14	277	309	477	525	337	1890	287	702	363	103	405	84
15	258	294	536	459	273	1660	272	872	307	130	321	91
16	281	328	458	424	260	1140	258	843	276	383	288	84
17	286	1110	430	662	259	887	252	720	250	248	240	81
18	249	708	697	915	251	747	474	608	231	150	211	76
19	239	524	618	952	249	658	825	522	291	131	187	72
20	229	459	579	1440	231	623	545	461	282	120	171	70
21	219	428	522	917	228	623	458	415	314	121	158	66
22	212	434	464	714	222	874	403	379	246	106	148	111
23	205	434	422	612	207	752	371	346	208	101	139	137
24	197	432	405	583	226	690	348	573	191	97	132	95
25	314	399	2340	1740	216	651	697	471	178	358	126	80
26	1230	378	1340	5860	221	828	2300	469	172	276	143	75
27	753	350	895	2090	202	746	2300	414	164	153	139	74
28	606	383	693	1240	209	665	1330	383	156	138	118	68
29	507	476	585	965	---	606	946	353	149	125	123	65
30	442	480	525	861	---	550	897	328	142	117	124	66
31	395	---	499	752	---	503	---	302	---	141	113	---
TOTAL	11480	13243	21014	32674	8960	24770	17717	19906	8809	4883	6930	2694
MEAN	370	441	678	1054	320	799	591	642	294	158	224	89.8
MAX	1230	1110	2340	5860	600	2550	2300	1320	740	383	571	137
MIN	197	277	405	319	202	224	252	302	142	97	113	65
CFSM	1.38	1.64	2.52	3.92	1.19	2.97	2.20	2.39	1.09	.59	.83	.33
IN.	1.59	1.83	2.91	4.52	1.24	3.43	2.45	2.75	1.22	.68	.96	.37

CAL YR 1977 TOTAL 193103 MEAN 529 MAX 11600 MIN 99 CFSM 1.97 IN 26.70
WTR YR 1978 TOTAL 173080 MEAN 474 MAX 5860 MIN 65 CFSM 1.76 IN 23.94

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 Busselltown, 2.4 mi (3.9 km) southwest of Martel, and at mile 602.3 (969.1 km).

DRAINAGE AREA.--9,550 mi^2 (24,734 km^2).

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Flow regulated by many reservoirs above site (see p. 327).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)
NOV											
15...	0700	--	26600	200	7.5	14.0	8	7.0	10	21	4.7
FEB											
21...	1200	--	27500	180	7.7	5.6	12	9.9	11	20	5.1
MAY											
16...	0700	--	11000	180	7.5	15.0	11	6.6	6	21	4.3
AUG											
22...	0800	1.0	28000	240	7.1	26.0	--	3.6	10	27	4.8

DATE	SODIUM, TOTAL RECOVERABLE (MG/L AS NA)	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)
NOV											
15...	8.8	1.2	56	18	14	100	.14	7180	.56	.09	.04
FEB											
21...	4.3	1.0	61	13	7.0	110	.15	8170	.75	.14	.05
MAY											
16...	4.7	1.5	60	12	7.0	100	.14	2970	.50	.17	.04
AUG											
22...	10	1.7	72	--	13	--	--	--	.29	.09	.03

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	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)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV										
15...	170	<1	<10	330	<10	50	<.2	<50	40	3.2
FEB										
21...	1200	2	10	770	<10	40	<.2	<10	70	2.3
MAY										
16...	100	<1	80	140	<10	50	<.2	<10	20	2.9
AUG										
22...	550	<1	20	240	<10	50	.2	<10	20	3.9

03518210 LITTLE TENNESSEE RIVER AT CHILHOWEE DAM, TN

LOCATION.--Lat 35°32'43", long 84°03'02", Monroe County, Hydrologic Unit 06010204, at Chilhowee Dam, 0.6 mi (1.0 km) southeast of Tallassee, 4.0 mi (6.4 km) northwest of Calderwood, and at mile 33.6 (54.1 km).

DRAINAGE AREA.--1,977 mi^2 (5,120 km^2).

PERIOD OF RECORD.--Water years 1977 to current year.

REMARKS.--Flow regulated by seven reservoirs (See stations 03517900, 03518200, and Water Resources Data for North Carolina, 1978).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	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)
NOV											
14...	0930	5300	23	6.6	14.5	6	7.8	5	12	1.1	1.0
FEB											
21...	0940	10630	22	7.0	5.0	7	11.4	2	1.4	.5	1.0
AUG											
22...	1000	1370	22	6.1	13.5	6	8.1	2	2.1	.5	1.3

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
NOV										
14...	.4	10	2.0	<1.0	20	.03	286	.14	.08	.01
FEB										
21...	.2	8	2.0	<1.0	20	.03	574	.16	.07	.02
AUG										
22...	.6	7	2.0	1.0	20	.03	74	.15	.05	.01

DATE	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)	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)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV										
14...	70	<1	10	170	<10	60	<.2	<50	360	1.7
FEB										
21...	300	<1	20	230	<10	30	<.2	10	20	.6
AUG										
22...	470	<1	<10	140	<10	50	.2	<10	30	.9

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 mi^2 (5,146 km^2), including Cochran Creek.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1958 to current year.

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, 1978).

AVERAGE DISCHARGE.--20 years, 4,990 ft^3/s (141.3 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,500 ft^3/s (1,180 m^3/s) May 28, 1973, gage height, 17.31 ft (5.276 m); minimum, 20 ft^3/s (0.57 m^3/s) Oct. 4, 1974, gage height, 5.46 ft (1.664 m); minimum daily, 26 ft^3/s (0.74 m^3/s) Aug. 30, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,500 ft^3/s (496 m^3/s) Jan. 26, gage height, 12.64 ft (3.853 m); minimum, 957 ft^3/s (27.1 m^3/s) June 5, gage height, 6.70 ft (2.042 m); minimum daily, 1,260 ft^3/s (35.7 m^3/s) Apr. 11.

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	6010	4950	5400	8470	8810	8470	1370	3520	5750	3290	3980	4550
2	4960	5420	4800	8000	6790	8950	1420	4230	3630	1270	4640	3870
3	5420	4700	4300	6850	9440	7300	3360	4980	4500	2790	3890	3210
4	6770	5080	5600	8680	6930	6590	3570	3260	1320	2100	2220	4100
5	5660	4670	5200	7960	8290	8900	3720	1850	4610	3890	1300	4370
6	5190	5310	7800	6790	8610	6480	5250	1350	2660	4900	1300	4640
7	6030	4670	7000	7550	7130	5340	4640	1360	4540	3810	3090	5050
8	4930	4470	7300	7710	7340	7860	3140	3340	2020	4190	3810	4340
9	1930	5290	8400	11000	8290	6210	2510	2180	1340	1850	3860	4450
10	2700	6180	9100	7990	6590	7220	1660	1830	2050	3660	5040	5340
11	3490	3750	7430	8330	7790	6020	1260	1550	2360	1810	2790	4730
12	4240	4650	8260	8540	7600	4110	1310	3560	4930	2730	3700	1840
13	2490	3780	8250	9600	7800	4170	1300	1350	1380	2380	2670	3560
14	5750	4970	7620	8010	7100	4240	2070	1340	1320	3460	4940	3930
15	5460	5160	7440	5580	7800	3610	4170	2670	3220	2510	4260	4520
16	3950	5750	8710	8620	7390	4870	2520	2600	3590	1860	4690	4780
17	5240	4150	6860	9320	8090	3440	4000	2930	4810	4600	4840	3600
18	5010	7870	7200	6730	7340	3360	1840	3310	1320	3500	6520	5280
19	4450	6290	7430	8370	7000	1480	1370	4030	2400	4270	3550	6600
20	6340	4590	7240	8240	7280	2420	6000	2790	4450	4550	1300	5060
21	6720	5460	8900	7670	9110	2230	5110	1680	1650	4080	5400	4060
22	6310	6470	7070	7440	7110	3480	1430	4720	1390	3880	4510	4420
23	5950	5780	7820	7240	7040	2060	1300	2840	1600	2040	4930	3170
24	5660	5640	7740	9050	7780	1780	2780	4020	1710	4540	4380	2030
25	6070	5050	8660	8480	7000	1280	3170	4360	1550	3060	5240	5730
26	3860	7110	7380	12600	7400	1280	6370	4210	2690	2100	4300	2060
27	5590	4120	8170	9040	8630	2730	2740	2900	5420	1990	2130	1300
28	5700	6160	8420	9950	5870	4090	1950	1310	4420	1380	4830	2040
29	5050	5200	9430	8020	---	3040	1310	3340	3820	2940	3960	3640
30	4310	4300	5330	9240	---	2830	1420	5080	4580	2220	4820	2840
31	5460	---	6240	8930	---	1810	---	4040	---	4340	4510	---
TOTAL	156700	156990	226500	260000	213350	137650	84060	92530	91030	95990	121400	119110
MEAN	5055	5233	7306	8387	7620	4440	2802	2985	3034	3096	3916	3970
MAX	6770	7870	9430	12600	9440	8950	6370	5080	5750	4900	6520	6600
MIN	1930	3750	4300	5580	5870	1280	1260	1310	1320	1270	1300	1300

CAL YR 1977 TOTAL 1751540 MEAN 4799 MAX 14000 MIN 1290
WTR YR 1978 TOTAL 1755310 MEAN 4809 MAX 12600 MIN 1260

03518300 LITTLE TENNESSEE RIVER BELOW CHILHOWEE DAM, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to March 1978 (discontinued).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1963 to March 1978 (discontinued).

INSTRUMENTATION.--Temperature recorder since 1963.

REMARKS.--Recorder malfunction Dec. 21, 22, 26-30 (range in temperature not available). Flow regulated by seven reservoirs (See stations 03517900, 03518200, and Water Resources Data for North Carolina, 1978).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 28.0°C Aug. 29, 1964; minimum, 2.5°C Feb. 27, 1970.

EXTREMES FOR CURRENT PERIOD.--
WATER TEMPERATURES: Maximum, 18.5°C Oct. 2, 3, 4; minimum, 3.5°C Feb. 9.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977 TO MARCH 1978

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

03518300 LITTLE TENNESSEE RIVER BELOW CHILHOWEE DAM, TN--Continued

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977 TO MARCH 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	5.0	4.5	4.5	5.0	4.5	5.0						
2	4.5	4.5	4.5	5.0	4.5	4.5						
3	4.5	4.5	4.5	4.5	4.5	4.5						
4	5.0	4.5	4.5	5.0	4.0	4.5						
5	4.5	4.5	4.5	5.0	4.0	4.5						
6	5.0	4.0	4.5	5.0	4.0	4.5						
7	4.5	4.0	4.0	4.5	4.0	4.5						
8	4.0	4.0	4.0	4.5	4.5	4.5						
9	4.5	3.5	4.0	5.0	4.5	4.5						
10	4.5	4.0	4.0	5.0	4.5	4.5						
11	5.0	4.0	4.5	5.5	4.5	5.0						
12	5.0	4.0	4.5	5.5	4.5	5.0						
13	4.5	4.5	4.5	6.5	5.0	5.5						
14	4.5	4.5	4.5	7.0	5.5	6.0						
15	5.0	4.5	4.5	7.0	5.5	6.0						
16	5.0	4.5	4.5	6.5	6.0	6.0						
17	5.0	4.5	4.5	6.5	6.0	6.0						
18	5.0	5.0	5.0	8.0	6.0	6.5						
19	5.0	4.5	5.0	8.5	6.0	6.5						
20	5.5	4.5	5.0	8.5	6.0	6.5						
21	4.5	4.5	4.5	8.0	6.0	6.5						
22	5.0	4.0	4.5	8.5	6.5	7.0						
23	4.5	4.0	4.5	9.5	7.0	8.5						
24	5.0	4.0	4.5	9.5	8.0	8.5						
25	5.0	4.0	4.5	9.5	8.0	8.5						
26	5.0	4.5	4.5	8.5	7.0	8.0						
27	5.0	4.5	4.5	8.5	8.0	8.5						
28	5.0	4.5	4.5	10.5	8.5	9.0						
29	---	---	---	10.0	8.5	9.5						
30	---	---	---	10.0	8.0	9.0						
31	---	---	---	11.0	8.0	9.0						
MONTH	5.5	3.5	4.5	11.0	4.0	6.5						

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 mi^2 (306 km^2).

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. Periodic observations of specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--53 years, 285 ft^3/s (8.071 m^3/s), 32.80 in/yr (833 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,900 ft^3/s (564 m^3/s) Mar. 16, 1973, gage height, 14.18 ft (4.322 m) from dross line in well, from rating curve extended above 12,000 ft^3/s (340 m^3/s) on basis of slope-area measurement of peak flow; minimum, 13 ft^3/s (0.37 m^3/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 ft^3/s (609 m^3/s), from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,500 ft^3/s (99.1 m^3/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. 8	2145	4230	120	8.11	2.472	Jan. 26	0230	*4700	133	8.48	2.585

Minimum discharge, 35 ft^3/s (0.99 m^3/s) Sept. 30, gage height, 0.67 ft (0.204 m).

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	199	172	333	255	350	161	223	391	148	78	76	65
2	199	164	286	241	330	158	214	333	146	78	56	58
3	180	161	261	220	301	241	205	323	166	85	99	74
4	161	182	286	226	276	214	196	327	161	88	182	62
5	151	238	314	208	261	185	193	301	136	78	196	52
6	143	845	314	241	244	182	188	267	129	93	143	51
7	139	734	267	229	229	174	182	261	153	74	120	49
8	191	498	249	1150	252	226	174	687	403	72	134	48
9	527	360	298	1590	226	276	172	1090	333	70	174	45
10	289	350	252	632	211	845	169	560	211	116	214	44
11	229	289	244	463	199	596	246	423	174	76	164	76
12	202	258	229	407	191	471	255	353	158	70	205	55
13	182	238	223	364	226	407	196	403	181	70	182	61
14	172	223	258	323	214	1000	182	350	141	70	125	97
15	164	211	249	286	185	743	174	407	134	103	191	62
16	166	208	226	282	182	535	172	379	129	193	153	55
17	158	624	223	872	180	427	169	337	122	107	111	52
18	146	399	350	717	177	364	327	301	118	77	95	49
19	143	304	298	588	172	333	584	276	118	72	85	41
20	136	267	279	770	164	314	337	258	125	70	79	44
21	132	261	252	547	164	301	279	244	116	69	76	49
22	129	286	232	444	156	337	249	229	111	62	72	58
23	125	292	217	383	156	289	226	214	113	61	67	47
24	122	286	220	387	153	273	211	211	103	59	65	43
25	255	267	700	1640	153	264	279	211	99	158	62	43
26	514	249	432	2620	158	301	918	191	95	82	67	43
27	317	232	343	965	146	276	752	191	91	69	78	40
28	252	270	289	666	156	261	478	188	89	62	65	38
29	217	286	286	527	---	252	368	174	88	59	61	38
30	196	289	273	451	---	241	337	164	84	56	72	37
31	182	---	264	395	---	229	---	158	---	67	69	---
TOTAL	6318	9443	8947	19089	5812	10876	8655	10202	4375	2544	3538	1576
MEAN	204	315	289	616	208	351	289	329	146	82.1	114	52.5
MAX	527	845	700	2620	350	1000	918	1090	403	193	214	97
MIN	122	161	217	208	146	158	169	158	84	56	56	37
CFSM	1.73	2.67	2.45	5.22	1.76	2.98	2.45	2.79	1.24	.70	.97	.45
IN.	1.99	2.98	2.82	6.02	1.83	3.43	2.73	3.22	1.38	.80	1.12	.50

CAL YR 1977 TOTAL 101059 MEAN 277 MAX 3960 MIN 49 CFSM 2.35 IN 31.86
WTR YR 1978 TOTAL 91375 MEAN 250 MAX 2620 MIN 37 CFSM 2.12 IN 28.81

03518500 TELLICO RIVER AT TELLICO PLAINS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964 to February 1978 (discontinued).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: July 1964 to March 1972, January 1973 to February 1978 (discontinued).

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.

EXTREMES FOR CURRENT PERIOD.--
WATER TEMPERATURES: Maximum, 21.0°C Oct. 2; minimum, 0.5°C several days during winter months.

TEMPERATURE (DEG.C) OF WATER, OCTOBER 1977 TO FEBRUARY 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.5	17.0	19.0	16.0	13.5	14.5	14.0	11.5	13.5	6.5	5.0	6.0
2	21.0	18.0	19.5	15.0	13.0	14.0	11.5	8.0	10.0	5.0	2.0	4.0
3	18.5	14.5	17.0	15.5	13.5	14.5	9.5	7.0	8.5	2.0	.5	1.0
4	16.5	13.0	14.5	16.0	15.0	15.5	12.0	9.0	11.0	1.5	.5	1.0
5	16.5	11.5	13.5	16.5	15.5	16.0	14.0	12.0	13.5	3.5	.5	2.0
6	15.5	12.0	14.0	16.5	15.5	16.0	12.0	5.0	9.5	6.5	3.5	5.0
7	16.5	12.0	14.5	16.0	15.0	15.5	5.0	1.5	3.0	9.0	6.0	8.0
8	15.5	14.5	15.0	16.0	15.0	15.5	4.0	1.5	2.0	10.0	8.0	9.5
9	16.0	13.5	15.0	15.5	14.0	15.0	6.0	3.5	5.0	8.0	2.0	4.5
10	14.0	11.5	13.0	15.5	11.0	14.0	3.5	.5	1.5	2.0	.5	1.0
11	14.5	11.0	13.0	11.0	7.0	9.0	1.0	.5	.5	1.0	.5	.5
12	14.5	11.0	13.5	8.0	5.5	6.5	1.5	.5	1.0	1.0	.5	.5
13	12.0	9.5	10.5	6.5	4.5	5.5	8.0	1.5	4.5	3.5	.5	1.5
14	11.5	8.5	10.0	6.5	4.0	5.0	10.5	8.0	9.5	3.5	1.0	2.0
15	12.0	8.0	10.0	8.0	5.0	6.0	10.5	8.5	9.5	1.5	.5	1.0
16	11.0	9.0	10.0	9.5	6.0	8.0	9.0	6.5	7.0	1.0	.5	.5
17	11.0	8.0	9.5	12.0	9.5	11.0	9.0	6.5	8.0	5.5	.5	3.5
18	11.0	7.0	8.0	11.0	8.0	9.0	9.5	7.0	9.0	5.5	5.0	5.0
19	11.5	8.0	10.0	8.5	6.5	8.0	8.0	6.5	7.0	5.5	4.5	5.0
20	12.0	8.5	10.0	10.5	7.0	9.0	9.5	8.0	9.0	5.5	3.5	4.0
21	12.0	8.5	10.0	12.0	10.5	11.5	8.0	4.0	6.0	4.0	2.0	3.0
22	13.0	8.5	10.5	13.0	12.0	13.0	4.5	3.0	4.0	3.5	1.5	2.0
23	13.5	11.5	11.0	14.5	13.0	13.5	5.5	3.0	4.5	4.0	2.0	3.0
24	14.0	10.0	11.5	14.5	13.5	14.0	9.0	5.5	8.0	5.0	3.0	3.5
25	14.0	11.5	13.0	13.5	10.0	12.0	9.0	4.5	7.0	8.5	5.0	7.0
26	14.5	13.5	14.0	10.0	5.0	8.0	4.5	1.0	3.0	8.0	3.5	5.0
27	14.0	13.5	14.0	5.5	4.5	5.0	2.0	1.0	1.5	3.5	3.0	3.0
28	16.5	14.0	15.0	8.5	5.5	7.0	1.5	.5	1.0	3.0	1.0	1.5
29	16.0	14.0	14.5	11.0	8.5	9.5	1.0	.5	.5	1.5	.5	1.0
30	15.0	13.5	14.5	14.0	11.0	12.0	4.5	1.0	3.5	1.5	.5	1.0
31	15.0	14.0	14.5	---	---	---	6.0	4.5	5.5	3.0	.5	1.5
MONTH	21.0	7.0	13.0	16.5	4.0	11.0	14.0	.5	6.0	10.0	.5	3.0

03518500 TELLICO RIVER AT TELLICO PLAINS, TN--Continued

TEMPERATURE (DEG.C) OF WATER, OCTOBER 1977 TO FEBRUARY 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---									
2	---	---	---									
3	---	---	---									
4	---	---	---									
5	---	---	---									
6	---	---	---									
7	---	---	---									
8	---	---	---									
9	---	---	---									
10	---	---	---									
11	---	---	---									
12	---	---	---									
13	---	---	---									
14	---	---	---									
15	---	---	---									
16	6.5	4.0	4.5									
17	7.0	4.5	5.0									
18	5.5	5.0	5.0									
19	5.5	4.5	5.0									
20	5.5	1.5	3.5									
21	3.0	2.0	2.0									
22	4.0	.5	1.5									
23	1.5	.5	1.0									
24	5.5	1.0	3.0									
25	6.5	2.0	4.5									
26	7.0	3.5	5.0									
27	6.0	2.0	4.0									
28	4.5	3.5	4.0									
29	---	---	---									
30	---	---	---									
31	---	---	---									
MONTH	---	---	---									

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 mi^2 (6,765 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1975 to current year.

INSTRUMENTATION.--Single point temperature recorder since November 1975.

REMARKS.--Recorder malfunction Oct. 1-4 (range in temperature 15.5 to 20.0°C), Jan. 9 to Feb. 6 (range in temperature not available), July 22-26 (range in temperature 14.0 to 20.0°C). Flow regulated by seven reservoirs (see stations 03517900, 03518200, and Water Resources Data for North Carolina, 1978).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum recorded, 21.5°C July 4, 1977; minimum, 2.0°C Jan. 17, 1977.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 21.0°C July 3, 4, Aug. 21, 28; minimum, 3.5°C Mar. 5, but may have been lower during period of missing record Jan. 9 to Feb. 6.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

03519740 LITTLE TENNESSEE RIVER NEAR CENTERSVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

03528000 CLINCH RIVER ABOVE TAZEWELL, 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.--60 years, 2,104 ft³/s (59.59 m³/s), 19.38 in/yr (492 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 (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Nov. 8	0630	19600	555	11.94	3.639	Jan. 27	1630	*33600	952	16.45	5.014
Dec. 1	0230	14000	396	9.74	2.969						

Minimum discharge, 312 ft³/s (8.84 m³/s) Oct. 1, gage height, 0.90 ft (0.274 m).

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	316	1580	13500	2010	4020	1570	1980	3170	1730	550	1110	767
2	3080	1340	9510	1890	3460	1610	1820	2650	1690	608	953	665
3	9720	1170	5860	1730	2770	1690	1670	2170	1510	660	969	600
4	4020	1050	4300	1530	2510	1860	1520	2100	1300	896	1310	623
5	2190	959	5330	1360	2270	1770	1410	4100	1210	1250	1970	623
6	1480	3230	6670	1300	2010	1710	1320	5610	1080	1180	2410	516
7	1030	14300	6650	1340	1820	1880	1260	4040	1000	885	2240	458
8	868	19300	4940	1660	1630	2620	1180	3390	3130	718	1720	421
9	3140	13400	4080	5240	1420	4950	1110	5030	6360	764	1700	396
10	8600	8000	3710	6660	1440	8360	1060	5790	3300	615	1770	381
11	5020	5760	3170	4830	1390	12200	1020	4710	2200	574	1690	724
12	2890	4790	2710	3390	1290	11600	1010	3540	1660	1210	2050	919
13	1930	3740	2410	3000	1260	7400	985	3020	1390	893	2060	840
14	1460	2940	2240	2810	1470	6520	959	3230	1440	716	2150	684
15	1170	2410	2320	2460	1760	7660	905	3400	1670	706	2130	569
16	1010	2080	2550	2120	1980	7490	849	3250	1250	676	1620	492
17	994	3150	2530	1900	1890	5550	806	3040	1040	710	1250	473
18	1120	5750	2470	2340	1900	4200	824	2730	912	1240	996	454
19	1620	5470	2380	2890	1950	3350	876	2390	856	1220	839	422
20	1440	3770	2260	4510	1930	2860	904	2070	876	872	748	394
21	1210	2930	2320	5240	1860	2520	922	1820	1270	683	705	362
22	1030	2690	2210	4220	1750	2320	893	1630	1310	573	691	347
23	899	2880	2010	3390	1620	2120	850	1490	1110	507	680	404
24	804	3310	1860	2980	1460	1960	811	2270	1110	486	588	603
25	762	3420	4510	3680	1410	1830	838	5810	905	619	550	464
26	2270	3140	6980	16900	1410	1960	1170	5050	772	2370	581	413
27	6240	2740	4910	32300	1500	2240	4570	3270	692	3440	583	380
28	4420	2520	3510	31900	1570	2450	8920	2430	686	2660	946	356
29	2950	4690	2750	23000	---	2480	6380	2040	654	1670	764	338
30	2320	11300	2320	8230	---	2350	4230	1850	599	1840	592	322
31	1890	---	2160	5340	---	2150	---	1790	---	1330	543	---
TOTAL	77893	143809	125130	192150	52750	121230	53052	98880	44712	33121	38908	15410
MEAN	2513	4794	4036	6198	1884	3911	1768	3190	1490	1068	1255	514
MAX	9720	19300	13500	32300	4020	12200	8920	5810	6360	3440	2410	919
MIN	316	959	1860	1300	1260	1570	806	1490	599	486	543	322
CFSM	1.71	3.25	2.74	4.21	1.28	2.65	1.20	2.16	1.01	.73	.85	.35
IN.	1.97	3.63	3.16	4.85	1.33	3.06	1.34	2.50	1.13	.84	.98	.39

CAL YR 1977 TOTAL 926982 MEAN 2540 MAX 83300 MIN 294 CFSM 1.72 IN 23.39
WTR YR 1978 TOTAL 997045 MEAN 2732 MAX 32300 MIN 316 CFSM 1.85 IN 25.16

03528000 CLINCH RIVER ABOVE TAZEWELL, 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 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	ALKALINITY (MG/L AS CACO3)
OCT										
12...	1200	99	1.0	1090	260	7.6	13.7	12	40	100
JAN										
06...	1130	--	--	1310	285	--	3.0	--	--	--
18...	1255	99	1.0	2920	250	8.0	2.1	6	5	110
FEB										
08...	1200	--	--	1590	310	--	.5	--	--	--
APR										
18...	1315	99	1.0	826	300	8.2	16.5	7	2	130
MAY										
12...	1035	--	--	3580	255	--	15.5	--	--	--
JUL										
18...	1115	99	1.0	--	300	8.2	25.0	10	30	115
AUG										
28...	1350	--	--	1020	--	--	27.0	--	--	--

DATE	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	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)	SULFATE DISSOLVED (MG/L AS SO4)
OCT										
12...	9.9	14	<1.0	4200	700	35	8.8	2.9	1.9	21
JAN										
18...	14.0	2	1.0	400	20	36	8.6	3.4	1.2	18
APR										
18...	9.3	6	2.2	2800	80	38	14	4.3	1.1	17
JUL										
18...	8.9	9	1.4	20000	100	39	12	4.3	2.5	36

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	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)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)
OCT										
12...	2.0	150	.20	441	1.0	.04	.09	.07	300	<1
JAN										
18...	4.0	140	.19	1100	.78	.06	<.01	.01	100	<1
APR										
18...	4.0	170	.23	379	.39	.08	.12	.03	130	<1
JUL										
18...	4.0	190	.26	--	.78	.02	.18	.04	460	<1

DATE	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)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
12...	50	470	80	<10	100	20	.4	90	2.1
JAN									
18...	<10	220	50	<10	25	19	<.2	90	.4
APR									
18...	21	220	36	<10	32	17	<.2	<10	1.3
JUL									
18...	<10	980	30	10	66	11	<.2	70	2.0

TENNESSEE RIVER BASIN

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 mi^2 (1,774 km^2).

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.--59 years, 1,151 ft^3/s (32.60 m^3/s), 22.82 in/yr (580 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59,500 ft^3/s (1,690 m^3/s) Apr. 6, 1977, gage height, 38.96 ft (11.875 m), from floodmark; minimum, 47 ft^3/s (1.33 m^3/s) Jan. 6, 1940, result of freezeup; minimum daily, 60 ft^3/s (1.70 m^3/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 ft^3/s (963 m^3/s), and flood of Jan. 29, 1918, reached a stage of 29.2 ft (8.90 m) present datum, discharge, 33,000 ft^3/s (935 m^3/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 9,000 ft^3/s (255 m^3/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)
Oct. 3	1430	12100	343	16.31	4.971	Dec. 1	0100	9020	255	13.50	4.115
Nov. 8	0700	11200	317	15.54	4.737	Jan. 27	1200	*13600	385	17.52	5.340

Minimum discharge, 142 ft^3/s (4.02 m^3/s), Sept. 29, 30, gage height, 1.47 ft (0.448 m).

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	263	695	8250	1170	1680	719	1190	1010	1050	318	303	227
2	371	625	5920	1090	1470	742	1100	896	943	319	273	243
3	9840	578	3740	1020	1340	804	1020	796	857	316	269	280
4	3910	540	2660	918	1200	893	939	876	855	479	342	240
5	1510	510	3290	831	1100	988	883	1670	877	499	479	197
6	1030	1580	3830	801	1030	954	833	2690	757	413	1230	177
7	804	5630	3960	810	964	1010	794	2070	701	349	952	166
8	712	9780	2950	1210	882	1250	753	1780	1270	313	892	155
9	2580	5010	2340	4320	811	2000	718	2950	2160	397	779	150
10	7390	3360	2130	4960	815	3560	678	4050	2240	516	666	148
11	4340	2750	1910	3110	788	4310	659	2720	1500	429	527	206
12	2060	2410	1640	2190	751	3650	639	1900	1150	337	495	290
13	1430	1900	1490	1830	741	2710	621	2190	971	358	697	475
14	1110	1530	1390	1610	932	2670	597	2570	862	340	836	349
15	920	1290	1310	1410	964	3270	560	2490	833	303	675	296
16	816	1150	1320	1220	959	3520	536	2180	700	356	602	253
17	746	1600	1280	1130	921	2570	522	1880	635	320	594	236
18	763	2170	1260	1390	961	2020	561	1580	585	280	449	263
19	698	1870	1280	1750	968	1640	594	1350	549	266	381	246
20	625	1490	1230	2500	940	1430	591	1170	522	253	339	206
21	577	1300	1140	2910	898	1290	587	1050	498	224	296	188
22	529	2140	1100	2320	857	1190	559	947	480	203	269	174
23	488	3390	1020	1860	811	1110	527	882	472	191	246	171
24	454	3730	977	1630	761	1030	501	1520	446	209	233	169
25	474	2990	1680	2290	731	981	509	4860	422	293	221	169
26	1030	2310	3470	7780	763	1260	723	4060	398	543	212	166
27	1320	1900	3090	12200	730	1580	1070	2380	378	826	218	158
28	1470	1600	2130	6180	738	1770	1820	1710	360	552	286	153
29	1110	3440	1660	3460	---	1630	1560	1480	347	511	293	142
30	916	7460	1390	2490	---	1460	1190	1480	339	449	230	142
31	789	---	1260	1990	---	1310	---	1190	---	356	233	---
TOTAL	51075	76728	72097	80380	26506	55321	23834	60377	24157	11518	14517	6435
MEAN	1648	2558	2326	2593	947	1785	794	1948	805	372	468	215
MAX	9840	9780	8250	12200	1680	4310	1820	4860	2240	826	1230	475
MIN	263	510	977	801	730	719	501	796	339	191	212	142
CFSM	2.41	3.73	3.40	3.79	1.38	2.61	1.16	2.84	1.18	.54	.68	.31
IN.	2.77	4.17	3.92	4.37	1.44	3.00	1.29	3.28	1.31	.63	.79	.35

CAL YR 1977 TOTAL 516153 MEAN 1414 MAX 50300 MIN 215 CFSM 2.06 IN 28.03
WTR YR 1978 TOTAL 502945 MEAN 1378 MAX 12200 MIN 142 CFSM 2.01 IN 27.31

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 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)
OCT										
11...	1030	99	1.0	419	220	7.8	13.2	12	10.2	14
JAN										
18...	1145	99	1.0	1398	260	8.2	4.0	6	13.9	3
APR										
18...	1110	99	1.0	573	280	7.4	16.5	6	9.3	6
JUL										
18...	1415	99	1.0	--	320	8.8	27.0	12	9.7	6

DATE	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	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)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT										
11...	<1.0	4800	900	30	7.3	3.0	1.4	82	19	3.0
JAN										
18...	<1.0	1400	80	35	9.0	4.8	1.2	110	22	4.0
APR										
18...	2.4	2400	360	35	11	7.5	1.3	110	29	2.0
JUL										
18...	1.6	1300	<10	41	13	8.4	2.3	131	40	3.0

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT									
11...	140	.19	158	.96	.04	.06	1000	<1	<10
JAN									
18...	150	.20	566	.87	.18	.03	100	<1	<10
APR									
18...	150	.20	232	.38	.02	.02	150	<1	48
JUL									
18...	190	.26	--	.73	.01	.03	260	<1	30

DATE	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)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
11..	2500	60	<10	120	10	.5	<50	130	2.5
JAN									
18...	200	30	<10	20	11	<.2	<50	50	.7
APR									
18...	220	50	<10	33	17	<.2	<10	50	2.1
JUL									
18...	500	30	<10	37	9	<.2	<10	70	1.4

03532190 OLLIS CREEK AT IVYDELL, TN

LOCATION.--Lat 36°23'34", long 84°07'53", Campbell County, Hydrologic Unit 06010205, 0.7 mi (1.1 km) northwest of LaFollette, 3.6 mi (5.8 km) southwest of Kilsyth, 5.1 mi (8.2 km) southwest of Duff, and at mile 0.24 (0.39 km).

DRAINAGE AREA.--13.3 mi^2 (34.4 km^2).

PERIOD OF RECORD.--Water years 1973-74, 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	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)
DEC											
12...	1315	150	4.9	5.0	5	<1	8.5	7.4	1.2	1.0	2
MAR											
14...	1400	120	4.8	5.0	6	3	7.3	7.6	.9	.8	2
JUN											
12...	1332	180	5.8	22.0	5	<1	11	10	1.9	1.9	2
SEP											
11...	1415	160	7.1	24.0	6	5	13	7.6	3.0	1.6	10

DATE	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA 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)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)
DEC											
12...	32	--	100	.14	--	--	--	650	<2	60	<1
MAR											
14...	32	<1.0	80	.11	.05	.03	<.01	790	<2	130	<1
JUN											
12...	97	<1.0	110	.15	.03	.02	.01	--	<2	60	<1
SEP											
11...	52	1.0	100	.14	<.01	<.01	.01	<100	<2	100	<1

DATE	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)
DEC										
12...	<5	30	180	<10	1100	.2	<50	<1	230	--
MAR										
14...	<5	50	450	<10	1100	<.2	10	<1	160	<.2
JUN										
12...	<5	40	130	<10	1700	<.2	40	<1	50	.3
SEP										
11...	<5	40	460	<10	670	<.2	<10	<1	20	1.3

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 mi^2 (7,545 km^2).

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	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)
NOV											
13...	1830	7140	240	7.6	16.0	6	5.2	3	34	9.7	3.0
FEB											
22...	0900	4100	240	8.0	4.0	6	--	6	29	8.2	1.4
MAY											
16...	0730	3600	240	7.8	6.0	7	9.4	2	29	8.3	2.3
AUG											
27...	1830	8350	240	7.7	15.0	7	2.5	4	35	8.0	3.4

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
NOV										
13...	1.1	98	24	3.0	150	.20	2890	.58	.03	.02
FEB										
22...	.7	97	19	2.0	130	.18	1440	1.1	.01	.01
MAY										
16...	--	92	19	3.0	140	.19	1360	.75	.01	.01
AUG										
27...	1.5	100	25	3.0	160	.22	3610	.96	.02	.01

DATE	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)	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)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV										
13...	90	<1	<10	210	<10	50	<.2	<50	80	2.0
FEB										
22...	420	<1	20	80	<10	10	<.2	<10	50	.7
MAY										
16...	40	1	100	40	13	<10	<.2	<10	<10	.4
AUG										
27...	480	<1	20	180	<10	<10	<.2	80	50	--

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 mi^2 (7,565 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: March 1976 to current year.

INSTRUMENTATION.--Single point water temperature recorder since March 1976.

REMARKS.--Interruptions in record caused by recorder malfunction. 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 PERIOD.--
WATER TEMPERATURES:
March to September, 1976: Maximum, 23.5°C July 2; minimum, 4.0°C Mar. 7.

Water Year 1977: Maximum, 20.5°C Sept. 19; minimum, 1.0°C Feb. 6.

Water Year 1978: Maximum, 20.5°C July 17, Sept. 29, 30; minimum, 3.0°C Feb. 9.

TEMPERATURE (DEG. C) OF WATER, MARCH TO SEPTEMBER 1976

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

03533500 CLINCH RIVER AT COAL CREEK, TN--Continued

TEMPERATURE (DEG. C) OF WATER, MARCH TO SEPTEMBER 1976

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	19.0	15.5	17.0	20.0	14.5	17.0	14.0	10.5	11.0	13.0	13.0	13.0
2	20.0	9.5	15.0	23.5	11.0	15.5	11.5	10.5	11.0	13.5	13.0	13.0
3	16.0	10.0	11.5	13.5	10.5	11.5	11.5	10.5	11.0	14.0	13.0	13.5
4	18.0	10.0	12.0	15.5	11.0	11.5	11.5	10.5	11.0	14.0	13.5	14.0
5	19.5	10.0	13.0	17.0	10.5	13.5	11.5	11.0	11.0	15.0	13.5	14.0
6	19.5	9.5	12.0	18.0	11.0	13.5	11.5	11.0	11.0	16.5	13.5	14.0
7	11.5	9.0	9.5	18.0	11.0	13.0	16.5	11.0	11.5	15.5	13.5	14.0
8	16.0	8.5	9.5	17.0	9.5	11.5	15.5	11.0	12.0	15.0	14.0	14.5
9	19.0	8.5	11.5	15.0	11.0	12.0	12.0	11.0	11.5	15.0	14.0	14.5
10	16.0	9.0	10.5	21.0	9.5	12.0	12.0	11.0	11.5	17.0	13.5	14.5
11	14.0	8.5	9.5	20.0	9.5	13.0	12.0	11.5	11.5	16.5	13.0	14.0
12	19.0	9.0	11.5	13.0	9.0	10.0	12.0	11.5	12.0	17.0	13.0	14.0
13	19.0	9.5	12.0	10.5	9.0	9.5	12.0	11.5	12.0	15.0	13.5	14.5
14	10.0	8.5	9.0	11.0	9.5	9.5	13.0	11.5	12.0	15.0	14.0	14.5
15	10.0	9.0	9.0	10.5	9.5	10.0	14.5	12.0	12.0	15.5	14.5	15.0
16	10.5	9.0	9.0	12.0	9.5	10.0	13.0	12.0	12.0	16.0	14.5	15.0
17	12.0	9.0	9.5	19.5	10.0	11.5	13.0	12.0	12.0	15.0	14.5	15.0
18	11.5	9.0	9.5	17.0	10.0	12.0	13.0	11.5	12.0	15.5	14.5	15.0
19	11.0	9.0	9.5	12.0	10.0	10.5	13.5	12.0	13.0	15.5	14.5	15.0
20	14.0	9.5	12.0	11.0	10.0	10.5	13.5	12.0	13.0	15.5	14.5	15.5
21	18.0	12.0	15.5	11.0	10.0	10.5	13.0	12.0	13.0	16.0	15.0	15.5
22	20.5	8.5	13.0	11.5	10.5	10.5	13.5	12.0	13.0	16.0	14.0	15.5
23	17.0	8.5	10.0	11.0	10.0	10.5	13.5	13.0	13.0	16.0	14.0	15.5
24	15.0	9.0	10.0	11.0	10.5	10.5	13.5	13.0	13.0	16.0	15.0	15.5
25	19.0	8.5	11.0	11.0	10.5	10.5	13.5	13.0	13.5	17.0	15.0	15.5
26	10.0	9.0	9.5	11.0	10.5	10.5	14.0	13.5	13.5	16.5	15.0	15.5
27	10.0	9.0	9.5	11.5	10.5	11.0	13.5	12.0	13.0	16.5	15.5	16.0
28	10.0	9.0	9.5	11.5	10.5	11.0	13.0	12.0	13.0	18.5	15.5	16.0
29	14.5	9.5	10.0	12.0	10.5	11.0	14.0	12.0	13.0	17.0	15.0	16.0
30	18.0	10.0	14.5	11.5	10.5	11.0	14.0	12.0	13.0	16.5	15.0	15.5
31	---	---	---	14.5	10.5	11.0	14.5	12.0	13.0	---	---	---
MONTH	20.5	8.5	11.0	23.5	9.0	11.5	16.5	10.5	12.0	18.5	13.0	15.0

03533500 CLINCH RIVER AT COAL CREEK, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.0	15.0	16.0	16.5	14.0	16.0	11.0	10.0	11.0	7.0	6.0	6.5
2	19.0	14.5	15.5	16.5	14.0	16.0	11.0	10.0	10.5	7.0	5.0	6.5
3	18.0	15.0	16.5	16.5	14.0	15.5	11.0	9.5	10.5	6.5	6.5	6.5
4	18.5	15.5	16.5	16.5	13.5	15.5	10.5	9.0	10.5	6.5	6.0	6.5
5	18.0	15.5	16.0	16.0	14.0	15.5	11.0	9.0	10.0	6.5	6.0	6.5
6	17.0	15.0	16.0	16.0	13.0	14.5	10.5	9.0	10.0	6.5	6.0	6.5
7	17.0	15.5	16.5	15.0	10.5	13.0	10.5	10.0	10.5	6.5	5.5	6.0
8	17.0	15.5	16.5	15.5	10.0	14.0	10.5	10.0	10.0	6.0	5.5	6.0
9	17.0	15.0	16.5	15.0	12.0	14.0	10.0	9.5	10.0	6.0	6.0	6.0
10	18.0	14.0	15.5	15.0	13.0	14.0	10.0	9.5	10.0	6.0	4.5	5.5
11	---	---	---	14.0	11.5	13.5	10.0	9.5	10.0	---	---	---
12	---	---	---	14.0	11.0	13.0	10.0	9.5	10.0	---	---	---
13	---	---	---	14.0	10.5	13.0	10.0	9.5	9.5	---	---	---
14	---	---	---	13.5	10.0	12.0	10.0	9.5	9.5	---	---	---
15	---	---	---	13.5	11.5	13.0	10.0	9.5	9.5	5.5	4.5	5.0
16	18.0	16.5	16.5	14.0	11.0	13.0	9.5	9.0	9.5	5.0	4.0	4.5
17	16.5	14.0	15.5	13.5	11.0	13.0	10.0	9.0	9.5	---	---	---
18	18.5	13.5	16.5	13.5	11.0	13.0	10.0	8.5	9.5	---	---	---
19	18.5	15.5	18.0	13.0	10.5	12.0	9.5	8.0	9.0	---	---	---
20	18.5	16.0	18.0	12.0	10.5	11.5	9.5	9.0	9.0	---	---	---
21	18.5	16.5	18.0	12.0	9.0	10.5	9.0	8.5	9.0	---	---	---
22	18.5	15.0	17.0	12.0	9.0	11.5	---	---	---	4.0	3.0	4.0
23	18.0	15.0	17.0	12.0	9.0	11.5	---	---	---	4.5	3.0	4.0
24	17.0	15.5	16.5	12.0	10.0	11.5	---	---	---	4.5	3.5	4.0
25	17.0	16.0	17.0	12.0	9.5	11.0	8.5	7.0	8.5	4.0	3.5	4.0
26	17.0	14.5	16.0	12.0	10.5	11.5	8.5	5.5	8.0	4.0	3.5	4.0
27	17.0	13.5	16.5	13.5	11.5	13.0	8.5	5.0	7.0	5.0	3.5	4.0
28	17.0	13.0	16.0	13.0	9.5	13.0	8.0	7.0	7.0	4.0	3.0	3.5
29	17.0	13.5	15.5	11.5	9.5	11.5	8.0	6.5	7.0	---	---	---
30	17.0	14.0	15.5	11.5	9.5	11.0	8.0	7.0	7.0	---	---	---
31	16.5	14.0	15.5	---	---	---	7.0	6.5	7.0	---	---	---
MONTH	19.0	13.0	16.5	16.5	9.0	13.0	11.0	5.0	9.0	---	---	---
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	4.5	3.5	4.0	16.0	10.5	13.5	8.5	7.0	8.0
2	---	---	---	8.0	3.5	5.5	16.0	14.0	14.5	8.5	8.0	8.5
3	---	---	---	7.0	5.0	6.0	15.0	13.5	14.5	8.5	8.0	8.5
4	---	---	---	10.0	6.5	8.5	13.5	12.0	13.0	9.0	8.5	8.5
5	3.5	2.0	3.0	11.0	6.5	9.0	13.0	11.0	11.5	9.0	8.5	8.5
6	3.5	1.0	3.0	9.0	6.5	8.5	11.5	5.0	7.0	9.0	8.5	8.5
7	4.0	2.0	3.0	10.0	5.5	8.0	5.0	4.5	5.0	9.0	8.5	9.0
8	4.0	1.5	3.0	8.5	3.5	6.5	5.5	5.0	5.5	9.0	8.5	9.0
9	3.5	1.5	2.5	11.5	5.5	9.0	5.5	5.0	5.5	9.0	8.0	9.0
10	5.0	1.5	3.0	9.5	5.0	8.5	6.0	5.5	5.5	9.5	8.0	9.0
11	5.5	2.0	3.5	13.0	9.0	11.0	6.0	5.5	5.5	9.5	8.0	9.0
12	4.0	3.0	3.5	12.0	7.0	10.0	6.0	5.5	5.5	9.5	8.5	9.0
13	4.0	3.0	3.5	11.0	5.5	8.0	6.0	5.5	6.0	9.5	8.5	9.5
14	5.5	3.0	3.5	13.0	7.0	10.5	6.5	6.0	6.0	16.0	9.0	10.0
15	4.5	3.0	3.5	10.0	5.0	8.0	6.5	5.5	6.0	16.5	9.0	13.5
16	3.5	3.0	3.0	13.5	8.5	10.5	6.5	6.0	6.5	14.5	9.0	10.5
17	3.5	2.0	3.0	9.0	5.0	8.0	6.5	6.0	6.5	15.5	9.0	10.0
18	4.5	2.0	3.5	14.5	8.5	12.0	6.5	6.5	6.5	12.0	9.0	9.5
19	4.5	3.0	3.5	11.0	4.5	6.0	7.0	6.5	6.5	14.0	9.0	9.5
20	4.0	3.0	3.5	12.0	5.5	9.5	7.0	6.5	6.5	10.5	9.0	10.0
21	4.0	3.0	3.5	10.5	4.5	8.0	7.0	6.5	7.0	14.0	10.0	10.0
22	6.0	3.0	3.5	6.0	3.5	4.5	8.5	6.5	7.0	14.0	9.5	10.0
23	4.5	3.0	3.5	5.5	3.5	4.5	13.0	8.5	11.0	10.5	10.0	10.0
24	5.0	3.5	4.0	5.5	3.5	4.5	15.5	11.5	14.0	10.0	10.0	10.0
25	9.0	4.0	6.5	5.5	3.5	4.5	16.0	7.0	10.0	10.0	9.5	10.0
26	13.0	6.0	10.0	11.0	4.0	8.5	8.0	6.5	7.0	10.5	9.5	10.0
27	10.5	7.0	9.5	13.0	8.0	10.5	8.0	6.5	8.0	10.5	10.0	10.5
28	7.0	3.5	5.0	13.5	10.5	12.0	8.5	7.0	8.0	14.0	10.0	10.5
29	---	---	---	16.5	11.5	14.5	8.5	8.0	8.0	16.5	9.5	10.5
30	---	---	---	14.5	10.5	13.0	9.0	7.0	8.0	10.5	10.0	10.0
31	---	---	---	15.0	10.0	13.0	---	---	---	10.5	10.0	10.0
MONTH	13.0	1.0	4.0	16.5	3.5	8.5	16.0	4.5	8.0	16.5	7.0	9.5

03533500 CLINCH RIVER AT COAL CREEK, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	10.5	10.0	10.0	13.0	10.5	11.5	12.0	11.0	11.5	14.0	13.0	13.5
2	11.5	10.0	10.5	15.5	10.5	11.5	13.0	11.5	11.5	14.5	13.0	13.5
3	11.0	10.0	10.5	20.0	10.5	13.0	13.5	11.5	12.0	14.5	13.5	13.5
4	13.5	10.5	11.0	17.0	10.5	11.5	14.0	11.5	12.0	14.0	13.5	13.5
5	16.0	10.5	11.0	11.0	10.5	11.0	13.5	11.5	12.0	15.0	13.5	14.0
6	11.0	10.5	11.0	11.5	10.5	11.0	13.5	11.5	12.0	14.5	13.5	14.0
7	11.0	10.5	10.5	11.5	11.0	11.0	19.0	12.0	13.0	14.5	14.0	14.0
8	11.5	10.0	10.5	11.5	10.5	11.0	14.0	12.0	12.0	16.5	13.5	14.0
9	13.5	10.5	11.0	14.0	10.5	11.0	14.5	12.0	12.0	15.0	13.5	14.0
10	11.5	10.0	11.0	18.5	10.5	11.5	13.5	12.0	12.0	17.0	13.5	14.0
11	13.5	10.5	11.0	11.5	10.5	11.0	13.5	12.0	13.0	18.0	13.0	14.5
12	15.0	11.0	11.0	11.5	10.5	11.0	12.0	11.5	12.0	17.0	13.5	14.0
13	12.0	11.0	11.5	11.0	10.5	11.0	13.5	11.5	12.0	14.0	13.5	14.0
14	12.0	11.0	11.0	11.0	10.5	11.0	15.0	11.5	12.0	15.0	13.5	14.0
15	12.0	10.5	11.0	11.0	10.5	11.0	12.0	12.0	12.0	15.0	13.5	14.0
16	11.5	11.0	11.0	11.0	10.5	11.0	13.0	12.0	12.0	15.5	14.0	14.5
17	13.0	11.0	11.0	---	---	---	13.0	12.0	12.0	17.0	15.0	16.0
18	13.0	11.0	11.5	---	---	---	13.5	12.0	13.0	19.0	16.5	18.0
19	17.0	11.0	11.5	---	---	---	17.0	11.5	13.0	20.5	15.0	16.5
20	12.0	11.0	11.0	---	---	---	18.0	11.5	13.0	19.5	15.0	15.5
21	12.0	11.0	11.0	---	---	---	17.0	12.0	15.0	15.5	14.5	15.0
22	13.5	11.0	11.0	---	---	---	16.5	11.5	13.5	15.5	15.0	15.5
23	14.0	11.0	11.5	---	---	---	14.0	12.0	12.0	16.0	15.5	16.0
24	13.0	10.5	11.0	---	---	---	13.5	12.0	12.0	17.0	15.5	16.0
25	15.0	10.5	11.0	---	---	---	14.5	12.0	13.0	17.0	16.0	16.5
26	15.0	11.0	11.5	---	---	---	14.5	12.0	13.0	16.5	16.0	16.0
27	11.5	10.5	11.0	---	---	---	14.0	13.0	13.0	17.0	16.0	16.0
28	13.0	10.5	11.0	---	---	---	17.0	12.0	13.5	19.0	15.5	17.0
29	13.0	11.0	11.0	---	---	---	14.0	13.0	13.0	18.5	16.5	18.0
30	12.0	11.0	11.0	15.5	11.5	---	15.0	13.0	13.5	18.5	15.5	16.5
31	---	---	---	15.5	11.5	12.0	15.0	13.0	13.5	---	---	---
MONTH	17.0	10.0	11.0	---	---	---	19.0	11.0	12.5	20.5	13.0	15.0
YEAR	20.5	1.0	10.5									

03533500 CLINCH RIVER AT COAL CREEK, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

TENNESSEE RIVER BASIN

03533500 CLINCH RIVER AT COAL CREEK, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.5	6.5	7.0	9.5	8.5	8.5	10.5	10.0	10.0	15.5	15.0	15.0
2	8.0	7.0	7.0	12.0	8.5	9.0	10.5	10.0	10.0	15.5	14.5	15.0
3	10.5	7.0	8.5	11.0	8.0	9.0	10.5	10.0	10.5	16.0	15.0	15.5
4	15.0	8.0	11.5	10.0	8.0	8.5	10.5	10.5	10.5	16.0	15.0	15.5
5	14.0	7.0	9.0	10.0	8.5	8.5	11.0	10.5	10.5	16.0	15.0	15.5
6	9.0	6.5	7.0	9.0	8.0	8.5	11.0	10.5	11.0	16.5	15.5	16.0
7	9.0	7.0	7.0	9.0	8.5	8.5	11.0	10.5	11.0	16.5	15.5	16.0
8	11.5	7.0	10.0	15.5	8.5	9.5	11.5	11.0	11.0	17.0	16.0	16.5
9	16.5	10.0	12.0	10.5	8.0	8.5	11.5	11.0	11.0	17.0	16.5	17.0
10	16.0	10.0	13.5	9.0	8.5	8.5	11.5	11.0	11.5	17.0	16.5	17.0
11	19.0	15.0	17.0	9.0	8.5	8.5	11.5	11.0	11.5	17.0	16.5	17.0
12	18.0	7.0	10.0	9.0	8.5	8.5	11.5	11.0	11.5	18.0	16.5	17.0
13	16.0	7.0	9.5	9.0	8.5	8.5	12.0	11.0	11.5	18.0	16.5	17.0
14	15.0	7.0	9.0	9.0	8.5	8.5	13.0	11.5	12.0	18.0	17.0	17.0
15	14.5	7.0	8.5	9.0	8.5	9.0	13.0	11.5	12.0	18.5	17.0	17.5
16	12.0	7.0	8.5	15.5	9.0	13.0	13.0	12.0	13.0	18.5	17.0	17.5
17	14.0	8.0	9.0	20.5	8.5	12.0	13.5	13.0	13.0	18.5	18.0	18.5
18	16.5	8.5	10.0	10.0	8.5	9.0	13.5	13.0	13.5	19.0	18.0	18.5
19	9.5	7.0	8.5	10.0	8.5	8.5	13.5	13.0	13.5	19.0	18.0	18.5
20	8.5	7.0	8.0	9.5	8.0	8.5	14.0	13.0	13.5	19.0	18.5	18.5
21	9.5	7.0	8.0	11.0	8.5	9.0	14.0	13.0	13.5	19.0	18.5	19.0
22	10.0	7.0	8.0	11.0	9.0	9.5	14.0	13.0	13.5	19.0	18.5	19.0
23	8.5	7.0	8.0	14.5	9.0	10.0	14.5	13.5	14.0	19.5	18.5	19.0
24	11.0	7.0	8.0	10.5	9.5	9.5	14.5	13.5	14.0	19.5	18.5	19.0
25	13.5	8.0	8.5	10.0	9.0	9.5	14.5	14.0	14.5	19.5	18.5	19.0
26	8.5	7.0	8.0	10.5	9.5	10.0	15.0	14.0	14.5	19.5	18.5	19.0
27	8.5	7.0	8.0	11.0	9.5	10.0	15.0	14.0	14.5	19.5	19.0	19.5
28	8.5	8.0	8.0	10.0	9.5	10.0	15.0	14.5	15.0	19.5	19.0	19.5
29	8.5	8.0	8.0	10.5	10.0	10.0	15.0	14.5	15.0	20.5	19.0	19.5
30	8.5	8.0	8.5	13.5	10.0	10.5	15.5	15.0	15.0	20.5	20.0	20.5
31	---	---	---	10.5	10.0	10.0	15.5	14.5	15.0	---	---	---
MONTH	19.0	6.5	9.0	20.5	8.0	9.5	15.5	10.0	12.5	20.5	14.5	17.5
YEAR	20.5	3.0	11.0									

TENNESSEE RIVER BASIN

03534900 CLINCH RIVER AT EDGEMOOR, TN

LOCATION.--Lat 36°01'32", long 84°10'03", Anderson County, Hydrologic Unit 06010207, 0.5 mi (0.8 km) downstream from Edgemoor Bridge, 3.5 mi (5.6 km) southwest of South Clinton, 4.2 mi (6.8 km) northeast of Oak Ridge, and at mile 48.6 (78.2 km).

DRAINAGE AREA.--3,089 mi^2 (8,000 km^2).

PERIOD OF RECORD.--Water years 1968 to current year.

REMARKS.--Site located in Melton Hill Lake. Flow regulated by Norris Lake (station 03532500) above site.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	CALCIUM TOTAL RECOV-ERABLE (MG/L AS CA)	MAGNE-SIUM, TOTAL RECOV-ERABLE (MG/L AS MG)	POTAS-SIUM, TOTAL RECOV-ERABLE (MG/L AS K)	ALKA-LINITY (MG/L AS CACO3)
OCT												
18...	1530	5060	240	--	16.7	5	4	10	--	--	--	--
NOV												
01...	0930	1840	140	--	16.7	6	4	6	--	--	--	--
DEC												
06...	0800	10500	140	--	7.8	5	1	1	30	8.1	1.8	--
JAN												
03...	1030	8390	220	--	12.8	6	5	3	--	--	--	--
FEB												
07...	0900	8430	230	--	2.8	5	3	4	31	8.1	1.4	--
MAR												
07...	0930	1090	220	7.3	2.8	8	4	9	28	8.3	.9	96
APR												
12...	0900	--	240	8.3	10.0	8	7	11	--	--	--	98
MAY												
03...	1020	--	240	7.6	16.7	6	6	3	--	--	--	90
JUN												
06...	1300	--	230	8.0	11.7	2	5	5	35	8.5	1.1	96
JUL												
11...	1125	--	240	--	10.0	4	2	1	--	--	--	--
AUG												
08...	1200	--	260	7.3	--	6	10	2	--	--	--	94
SEP												
12...	0930	--	260	--	16.1	7	3	6	26	8.6	1.8	--

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)	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)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)
OCT												
18...	--	--	150	.20	2050	.35	.03	.01	.02	--	<2	--
NOV												
01...	--	--	--	--	--	.27	.12	<.01	.03	--	<2	--
DEC												
06...	18	3.0	--	--	--	.63	.03	.04	.02	<200	<4	--
JAN												
03...	--	--	170	.23	3850	.49	.01	.07	.01	--	<4	--
FEB												
07...	19	3.0	130	.18	2960	.50	.01	.19	.01	<200	<4	180
MAR												
07...	19	3.0	110	.15	324	.62	.11	.07	.02	<100	<2	310
APR												
12...	--	--	140	.19	--	.57	.02	.10	.02	--	<2	--
MAY												
03...	--	--	130	.18	--	.62	.08	.02	<.10	--	<2	--
JUN												
06...	18	3.0	150	.20	--	.63	.01	.10	.01	370	<4	200
JUL												
11...	--	--	130	.18	--	1.0	.03	.05	.01	--	<2	--
AUG												
08...	--	--	150	.20	--	.12	.02	.08	.01	--	<0	--
SEP												
12...	35	3.0	160	.22	--	.49	.06	.04	.02	450	6	140

03534900 CLINCH RIVER AT EDGEMOOR, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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)	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)
OCT 18...	<1	<5	20	290	<10	70	<.2	<50	<1	<10	--
NOV 01...	<1	<5	<10	170	<10	50	<.2	<50	<1	80	--
DEC 06...	<1	<5	40	<50	<10	20	.3	<50	<1	20	1.9
JAN 03...	<1	<5	40	140	<10	30	<.4	<50	<1	20	--
FEB 07...	<1	<5	20	170	<10	20	<.2	<10	<1	70	1.2
MAR 07...	<1	51	20	100	<10	20	<.2	<10	<1	<10	1.0
APR 12...	<1	<5	<10	400	<10	100	<.2	<10	<1	120	--
MAY 03...	<1	<5	20	140	<10	40	<.2	<10	<1	90	--
JUN 06...	<1	<5	30	320	<10	60	<.2	<10	<1	40	1.3
JUL 11...	<1	<5	20	160	<10	50	<.2	<10	<1	150	--
AUG 08...	<1	<5	<10	450	<10	60	<.2	<10	<1	<10	--
SEP 12...	<1	<5	20	230	<10	50	<.2	10	35	<10	1.9

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 mi^2 (177.4 km^2).

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 fair. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--21 years, 102 ft^3/s (2.889 m^3/s), 20.22 in/yr (514 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,300 ft^3/s (518 m^3/s) Apr. 4, 1977, gage height, 13.28 ft (4.048 m), from rating curve extended above 5,000 ft^3/s (142 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 2.5 ft^3/s (0.071 m^3/s) Aug. 12, 1974, caused by regulation upstream of unknown origin.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s (42.5 m^3/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)
Nov. 29	1430	1640	46.4	7.79	2.374	Jan. 26	0800	2550	72.2	8.68	2.646
Dec. 5	0600	2090	59.2	8.37	2.551	June 8	2030	*3790	107	9.36	2.853
Jan. 9	0400	1870	53.0	8.20	2.449						

Minimum discharge, 9.4 ft^3/s (0.27 m^3/s) Sept. 8, 9, 30.

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	19	31	213	96	111	67	80	78	40	24	39	13
2	25	29	144	86	105	68	73	66	37	23	18	12
3	21	27	117	75	94	120	68	58	38	33	15	11
4	17	28	551	69	85	142	63	167	36	25	18	11
5	15	28	1330	66	82	110	61	142	33	22	42	11
6	15	255	380	77	75	103	57	104	31	21	149	10
7	14	264	225	82	71	97	54	88	44	20	205	9.9
8	28	127	167	440	70	229	52	163	1690	19	312	9.7
9	345	84	151	1070	63	300	49	215	1290	20	68	9.4
10	74	69	114	292	61	965	48	138	274	26	69	10
11	47	57	97	187	59	459	48	109	156	21	39	26
12	37	49	87	145	58	311	46	99	115	19	31	19
13	31	43	84	127	66	239	43	180	240	18	48	13
14	27	40	83	107	87	433	41	170	113	18	48	15
15	25	37	76	89	68	316	39	159	87	30	31	23
16	27	37	69	75	67	225	38	139	72	94	25	23
17	27	141	65	120	73	170	37	118	62	36	22	15
18	24	84	80	167	74	141	56	101	53	23	25	13
19	22	63	71	252	70	120	53	86	56	20	19	12
20	20	53	70	471	65	107	44	75	60	19	18	11
21	19	55	65	253	63	99	43	67	47	18	16	11
22	19	306	60	184	59	97	41	59	64	17	15	11
23	19	395	56	149	57	85	38	54	51	17	14	11
24	18	172	122	169	56	80	37	74	38	16	14	10
25	129	116	772	571	59	78	145	116	34	21	13	11
26	245	94	252	1810	63	113	323	75	32	24	14	9.9
27	71	80	166	463	57	120	206	57	30	19	14	9.9
28	52	95	123	272	59	111	127	50	28	17	13	9.7
29	43	1090	103	195	---	102	97	47	26	16	12	9.7
30	38	363	96	154	---	92	87	51	25	16	12	9.7
31	34	---	96	131	---	85	---	45	---	16	16	---
TOTAL	1547	4312	6085	8444	1977	5784	2194	3150	4902	728	1394	379.9
MEAN	49.9	144	196	272	70.6	187	73.1	102	163	23.5	45.0	12.7
MAX	345	1090	1330	1810	111	965	323	215	1690	94	312	26
MIN	14	27	56	66	56	67	37	45	25	16	12	9.4
CFSM	.73	2.10	2.86	3.97	1.03	2.73	1.07	1.49	2.38	.34	.66	.19
IN.	.84	2.34	3.30	4.59	1.07	3.14	1.19	1.71	2.66	.40	.76	.21

CAL YR 1977 TOTAL 41396.7 MEAN 113 MAX 7400 MIN 8.8 CFSM 1.65 IN 22.48
WTR YR 1978 TOTAL 40896.9 MEAN 112 MAX 1810 MIN 9.4 CFSM 1.64 IN 22.21

03535912 CLINCH RIVER AT MELTON HILL DAM (TAILWATER), TN

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).

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.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	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)
NOV 14...	0800	10000	250	7.7	16.5	6	7.1	4	37	9.1	32
FEB 21...	0800	10000	240	8.1	7.0	6	--	2	28	8.3	1.7
MAY 15...	0800	10000	250	7.9	13.5	7	9.1	4	30	8.2	2.6
AUG 21...	1230	21000	270	7.3	23.0	6	7.4	5	33	8.3	3.2

DATE	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)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)
NOV 14...	1.0	100	22	3.0	150	.20	4050	.60	.02	.02
FEB 21...	.8	97	18	2.0	140	.19	3780	1.9	.02	.02
MAY 15...	1.6	98	17	3.0	150	.20	4050	.52	.37	.01
AUG 21...	1.5	100	21	3.0	150	.20	8510	.55	.07	.02

DATE	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)	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)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 14...	<60	<1	<10	160	<10	60	<.2	<50	90	2.5
FEB 21...	<200	<1	10	160	<10	40	<.2	<10	20	1.6
MAY 15...	60	<1	80	130	<10	20	.2	<10	<10	1.4
AUG 21...	2600	<1	20	840	<10	50	.3	<10	80	3.0

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 current year.

INSTRUMENTATION.--Temperature recorder since October 1974.

REMARKS.--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, 21.0°C several days in September; minimum, 3.0°C Jan. 29, 30.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

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 mi^2 (213.7 km^2).

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

AVERAGE DISCHARGE.--18 years, 177 ft^3/s (5.013 m^3/s), 29.14 in/yr (740 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft^3/s (323 m^3/s) Apr. 5, 1977, gage height, 27.93 ft (8.513 m) from floodmarks, from rating curve extended above 8,000 ft^3/s (227 m^3/s); minimum, 5.0 ft^3/s (0.14 m^3/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 mi^2 (144.8 km^2), discharge, about 14,000 ft^3/s (396 m^3/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 ft^3/s (51.0 m^3/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)
Oct. 9	1600	*3450	97.7	17.57	5.355	Dec. 5	1530	2600	73.6	15.77	4.807
Nov. 23	0830	3360	95.2	17.41	5.307	Dec. 25	1130	1850	52.4	13.83	4.215
Nov. 29	1900	2960	83.8	16.60	5.060	Jan. 26	1100	3370	95.4	17.43	5.313

Minimum discharge, 8.8 ft^3/s (0.25 m^3/s) Sept. 27, 28, 29, 30.

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	85	94	635	163	179	101	113	101	46	18	21	24
2	74	84	430	137	169	98	104	85	45	18	16	18
3	56	77	339	116	146	266	95	73	49	17	74	15
4	44	74	664	105	132	314	89	229	43	17	283	14
5	38	83	2210	104	128	251	87	350	42	16	263	13
6	34	534	934	157	117	219	81	208	62	16	132	12
7	33	629	423	162	99	196	79	153	843	15	89	11
8	253	518	325	445	100	261	73	258	554	15	65	11
9	2460	335	310	991	91	315	70	457	209	14	64	11
10	934	266	223	420	83	604	67	270	131	14	50	10
11	254	188	187	291	80	480	71	181	100	14	131	19
12	177	143	164	239	77	406	72	149	97	15	261	22
13	135	117	153	217	95	365	63	599	90	14	170	15
14	116	99	165	181	120	768	57	516	72	14	120	13
15	95	89	143	144	94	584	53	381	60	41	97	15
16	89	87	124	122	92	378	51	278	53	161	71	16
17	70	438	117	197	97	281	49	209	50	50	59	13
18	60	291	164	274	95	231	138	158	47	21	65	12
19	56	221	133	300	92	192	135	128	44	17	42	11
20	50	175	133	510	87	163	103	107	41	15	39	11
21	44	273	122	374	88	151	90	93	38	14	30	10
22	41	1460	107	292	85	155	80	82	36	13	26	11
23	39	2870	97	241	83	132	73	74	34	14	23	15
24	37	860	176	276	83	125	69	117	30	19	21	10
25	84	446	1480	682	87	132	86	104	28	25	20	9.7
26	695	332	556	2840	88	214	208	83	26	28	32	9.3
27	338	294	343	842	80	195	176	66	24	66	23	9.0
28	230	381	251	413	87	170	132	56	22	24	19	8.8
29	168	2230	195	309	---	150	108	51	20	17	17	9.0
30	132	1610	180	245	---	133	104	50	19	31	17	9.0
31	107	---	173	213	---	123	---	49	---	36	27	---
TOTAL	7028	15298	11656	12002	2854	8153	2776	5715	2955	809	2367	386.8
MEAN	227	510	376	387	102	263	92.5	184	98.5	26.1	76.4	12.9
MAX	2460	2870	2210	2840	179	768	208	599	843	161	283	24
MIN	33	74	97	104	77	98	49	49	19	13	16	8.8
CFSM	2.75	6.18	4.56	4.69	1.24	3.19	1.12	2.23	1.19	.32	.93	.16
IN.	3.17	6.90	5.26	5.41	1.29	3.68	1.25	2.58	1.33	.36	1.07	.17

CAL YR 1977 TOTAL 78407.2 MEAN 215 MAX 5300 MIN 6.6 CFSM 2.61 IN 35.35
WTR YR 1978 TOTAL 71999.8 MEAN 197 MAX 2870 MIN 8.8 CFSM 2.39 IN 32.46

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 mi^2 (50.5 km^2).

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 ft^3/s (0.57 m^3/s), and the west end sewage treatment plant of the City of Oak Ridge, which may add up to 10 ft^3/s (0.28 m^3/s). Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--18 years, 52.4 ft^3/s (1.484 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,100 ft^3/s (116 m^3/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, 15 ft^3/s (0.42 m^3/s) July 6, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 29, 1944, the greatest known since 1900, reached a discharge of about 4,600 ft^3/s (130 m^3/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 ft^3/s (19.8 m^3/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)
Nov. 17	1045	739	20.9	6.63	2.021	Dec. 25	0615	838	23.7	6.99	2.131
Nov. 23	0500	822	23.3	7.04	2.146	Jan. 26	0415	*981	27.8	7.65	2.332
Nov. 29	1015	836	23.7	6.98	2.128						

Minimum daily discharge, 17 ft^3/s (0.48 m^3/s) several days in August and September.

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	37	58	120	49	48	36	35	32	27	27	26	20
2	34	56	85	44	46	36	33	29	25	21	22	19
3	29	57	69	41	43	97	35	28	23	35	21	19
4	28	58	203	39	40	73	31	73	21	21	30	18
5	26	63	240	39	39	58	33	81	21	21	110	18
6	26	191	112	53	37	55	31	49	20	19	130	18
7	19	153	78	46	37	48	31	42	40	20	170	18
8	110	111	65	179	37	75	29	118	400	19	200	18
9	309	90	74	172	34	71	29	141	300	18	110	20
10	82	81	55	85	34	194	29	67	160	23	60	22
11	57	72	49	66	34	104	34	50	90	24	55	25
12	48	66	48	56	33	105	29	47	70	21	44	24
13	39	62	45	53	42	86	27	106	50	21	46	22
14	36	59	51	48	44	203	26	71	35	22	44	22
15	32	60	44	43	37	114	25	60	31	56	36	20
16	32	61	41	40	36	83	24	53	31	90	32	20
17	28	363	41	70	37	67	24	46	28	31	26	19
18	28	140	57	76	36	58	97	41	26	26	27	19
19	28	100	45	100	35	51	53	37	25	24	24	19
20	27	84	46	138	34	47	40	34	26	22	22	18
21	25	136	42	85	34	48	35	31	26	21	21	18
22	24	452	40	69	33	45	32	29	24	20	19	18
23	24	497	37	60	32	41	29	29	24	19	18	18
24	24	151	58	82	32	39	29	48	24	20	18	18
25	113	98	377	192	31	43	42	42	23	23	19	17
26	223	74	104	470	35	58	64	34	24	25	18	18
27	90	70	75	125	32	45	38	27	23	24	18	17
28	76	100	60	87	34	42	33	29	22	22	18	18
29	69	479	53	68	---	40	31	28	19	20	17	18
30	63	184	51	59	---	38	34	33	24	19	18	17
31	60	---	48	52	---	36	---	28	---	22	20	---
TOTAL	1846	4226	2513	2786	1026	2136	1062	1563	1682	796	1439	575
MEAN	59.5	141	81.1	89.9	36.6	68.9	35.4	50.4	56.1	25.7	46.4	19.2
MAX	309	497	377	470	48	203	97	141	400	90	200	25
MIN	19	56	37	39	31	36	24	27	19	18	17	17

CAL YR 1977 TOTAL 22966 MEAN 62.9 MAX 1720 MIN 17
WTR YR 1978 TOTAL 21650 MEAN 59.3 MAX 497 MIN 17

TENNESSEE RIVER BASIN

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 mi^2 (1,342 km^2).

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

AVERAGE DISCHARGE.--17 years (water years 1957-68, 1974-78), 1,069 ft^3/s (30.27 m^3/s), 28.02 in/yr (712 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 105,000 ft^3/s (2,970 m^3/s) May 27, 1973, gage height, 29.51 ft (8.995 m), dross line in gage well, 30.5 ft (9.30 m), from floodmarks, from rating curve extended above 33,000 ft^3/s (935 m^3/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 ft^3/s (0.011 m^3/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.--Peak discharges above base of 13,000 ft^3/s (368 m^3/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)
Nov. 23	0915	35400	1000	18.15	5.532	Jan. 26	0430	23600	668	14.85	4.526
Nov. 30	0900	*36100	1020	18.33	5.587	June 8	2230	13000	368	11.18	3.408

Minimum discharge, 17 ft^3/s (0.48 m^3/s) Sept. 26.

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	633	482	5160	904	1000	608	619	1030	171	54	86	55
2	449	425	3290	805	900	664	529	1380	138	51	69	51
3	417	378	2420	665	800	1740	452	1080	120	50	60	49
4	426	394	2960	555	700	2700	396	1430	151	64	100	47
5	387	507	8260	513	600	1970	354	2290	140	101	300	45
6	405	1530	4440	558	500	1620	328	1670	110	75	900	43
7	322	2890	2910	799	450	1390	297	1270	163	61	2000	41
8	254	1940	2200	1270	475	1370	264	1250	7310	67	1300	40
9	213	1440	1900	3720	473	1590	241	2410	7620	69	1000	36
10	2180	1710	1730	2500	465	3460	224	1960	3110	159	900	35
11	2360	1600	1410	2000	457	3550	217	1390	1680	84	800	34
12	1490	1210	1220	1500	436	2550	235	1110	1050	60	1100	33
13	1020	946	1080	1200	421	2190	227	4650	1820	57	1500	36
14	728	764	1020	1000	1070	5100	206	5030	1460	52	1200	34
15	551	633	947	900	1120	5090	177	4070	851	51	700	36
16	450	546	809	800	977	3050	160	2870	560	1990	600	36
17	370	1610	728	1000	450	2180	151	2090	405	1120	450	33
18	319	2400	1170	2500	350	1790	211	1560	302	399	350	31
19	286	1650	1490	1890	1030	1510	657	1140	236	218	231	30
20	241	1260	1290	1680	906	1250	648	840	205	143	181	28
21	213	2540	1110	1340	822	1100	538	635	181	103	168	25
22	187	10700	933	1090	713	1340	463	487	156	80	145	24
23	180	10400	767	939	592	1210	399	390	138	66	112	22
24	166	4930	680	944	552	1030	354	356	117	59	92	21
25	170	3030	4600	4760	543	937	346	467	102	187	78	19
26	1110	2150	3600	15400	575	1490	997	403	90	1280	69	24
27	1560	1690	2170	5740	532	1380	1330	292	80	634	65	29
28	1130	3960	1560	3140	513	1190	1060	229	71	312	97	27
29	866	14900	1290	2000	---	1010	818	276	64	203	91	26
30	687	11200	1030	1500	---	846	697	282	58	146	73	27
31	565	---	969	1200	---	716	---	212	---	110	61	---
TOTAL	20335	89815	65143	64812	18422	57621	13595	44549	28659	8105	14878	1017
MEAN	656	2994	2101	2091	658	1859	453	1437	955	261	480	33.9
MAX	2360	14900	8260	15400	1120	5100	1330	5030	7620	1990	2000	55
MIN	166	378	680	513	350	608	151	212	58	50	60	19
CFSM	1.27	5.78	4.06	4.04	1.27	3.59	.88	2.77	1.84	.50	.93	.07
IN.	1.46	6.45	4.68	4.65	1.32	4.14	.98	3.20	2.06	.58	1.07	.07

CAL YR 1977 TOTAL 426712 MEAN 1169 MAX 45000 MIN 10 CFSM 2.26 IN 30.64
WTR YR 1978 TOTAL 426951 MEAN 1170 MAX 15400 MIN 19 CFSM 2.26 IN 30.66

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 mi^2 (1,979 km^2).

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.--51 years, 1,463 ft^3/s (41.43 m^3/s), 26.00 in/yr (660 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 195,000 ft^3/s (5,520 m^3/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 ft^3/s (2,410 m^3/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 ft^3/s (538 m^3/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)
Oct. 9	1000	32500	920	20.47	6.239	Nov. 29	1900	32100	909	20.38	6.212
Nov. 22	2400	22800	646	17.72	5.401	Jan. 26	0600	*35300	1000	21.14	6.443

Minimum discharge, 23 ft^3/s (0.65 m^3/s) Sept. 27.

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	836	817	6980	1300	1470	987	1110	1450	313	51	146	116
2	683	728	4430	1190	1340	1060	974	1830	257	42	116	100
3	670	662	3220	1030	1180	2140	851	1540	225	41	102	86
4	559	639	4210	899	1040	3580	761	1920	226	39	294	74
5	453	755	11900	829	972	2680	691	3480	246	90	1010	64
6	380	2610	6100	896	906	2210	639	2560	203	107	957	59
7	339	4240	3870	1170	667	1920	591	1910	203	75	2590	51
8	448	2920	2870	2930	706	1990	535	1810	7730	54	1620	44
9	18800	2160	2430	7170	720	2520	488	3210	9520	99	1270	39
10	7100	2150	2140	4030	654	5290	454	2770	3800	253	1110	33
11	3160	2040	1760	2560	626	5340	433	1990	2070	192	841	30
12	1980	1600	1540	2090	602	3750	448	1570	1360	106	1230	28
13	1420	1310	1400	1750	683	3170	449	5340	1850	73	2340	30
14	1090	1120	1340	1490	1390	7260	407	6720	1660	62	1500	47
15	868	974	1300	1270	1550	7330	363	5470	1090	60	1200	51
16	740	863	1140	1060	1400	4340	327	3890	789	2270	866	50
17	632	2040	1060	1290	1420	3020	307	2830	609	1620	749	52
18	543	3200	1370	2860	1470	2440	462	2110	476	730	623	54
19	494	2280	1820	2630	1480	2060	1260	1600	379	427	486	51
20	423	1750	1640	2470	1330	1750	1250	1250	335	284	373	45
21	375	3020	1470	1970	1230	1550	1050	1010	301	207	309	40
22	334	15800	1290	1630	1120	1770	917	814	252	163	285	37
23	304	14400	1120	1430	965	1680	796	676	221	133	231	34
24	288	6500	1110	1410	913	1510	713	641	188	106	192	32
25	389	4000	6740	6150	885	1400	666	723	161	134	164	28
26	1980	2800	5050	22800	938	2580	2180	719	136	1160	152	25
27	2320	2250	3030	7850	910	2450	2800	547	112	900	138	23
28	1690	4900	2170	4200	883	2040	2020	436	93	486	129	34
29	1330	23500	1680	2830	---	1700	1530	408	76	329	182	34
30	1110	14600	1450	2070	---	1440	1280	491	61	241	155	33
31	934	---	1390	1850	---	1250	---	382	---	184	141	---
TOTAL	52672	126628	89020	95104	29450	84207	26752	62097	34942	10718	21501	1424
MEAN	1699	4221	2872	3068	1052	2716	892	2003	1165	346	694	47.5
MAX	18800	23500	11900	22800	1550	7330	2800	6720	9520	2270	2590	116
MIN	288	639	1060	829	602	987	307	382	61	39	102	23
CFSM	2.22	5.53	3.76	4.02	1.38	3.56	1.17	2.62	1.53	.45	.91	.06
IN.	2.56	6.17	4.33	4.63	1.43	4.10	1.30	3.02	1.70	.52	1.05	.07

CAL YR 1977 TOTAL 655763 MEAN 1797 MAX 60400 MIN 13 CFSM 2.35 IN 31.93
WTR YR 1978 TOTAL 634515 MEAN 1738 MAX 23500 MIN 23 CFSM 2.28 IN 30.90

03540500 EMORY RIVER AT OAKDALE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1965-67, 1974 to current year.

COOPERATION.--Samples collected and analyzed by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	ALKALINITY (MG/L AS CACO3)
OCT										
12...	1200	50	1.0	1950	60	6.6	13.5	8	5	9
18...	1400	--	--	531	50	--	12.0	--	--	--
21...	--	--	--	531	50	--	12.0	--	--	--
JAN										
11...	1400	50	1.0	2294	43	5.3	1.0	6	4	2
FEB										
06...	1200	--	--	839	60	--	.5	--	--	--
24...	1330	--	--	953	48	--	3.0	--	--	--
APR										
12...	1030	50	1.0	450	54	4.9	15.5	8	1	2
25...	1335	--	--	645	70	--	14.0	--	--	--
MAY										
26...	1200	--	--	725	45	--	22.0	--	--	--
JUN										
28...	1300	--	--	93	80	--	30.0	--	--	--
JUL										
12...	1345	50	1.0	--	77	5.7	27.2	8	7	14
28...	1100	--	--	477	100	--	24.0	--	--	--
SEP										
27...	1345	--	--	23	100	--	25.0	--	--	--

DATE	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	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)	SULFATE DISSOLVED (MG/L AS SO4)
OCT										
12...	10.8	4	1.0	200	10	5.4	1.6	1.3	.9	12
JAN										
11...	14.5	2	1.3	100	<10	3.9	1.2	1.2	.7	10
APR										
12...	9.5	4	1.1	100	10	7.6	2.0	7.8	.4	14
JUL										
12...	7.4	5	<1.0	5000	60	9.2	2.3	2.2	1.5	16

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	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)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)
OCT										
12...	4.0	40	.05	211	.32	.02	.04	.01	<200	<1
JAN										
11...	3.0	30	.04	186	.14	.10	<.01	.01	140	<1
APR										
12...	2.0	40	.05	48	.11	.03	.11	<.01	90	<1
JUL										
12...	4.0	40	.05	--	.16	.02	.06	.01	210	<1

DATE	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)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
12...	40	240	50	<10	80	70	.4	10	.8
JAN									
11...	20	170	50	<10	60	60	<.2	<10	.4
APR									
12...	8	160	73	<10	76	69	<.2	80	1.4
JUL									
12...	20	340	90	<10	71	59	<.2	60	2.0

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 mi^2 (44,830 km^2), 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. 327 and Water Resources Data for North Carolina, 1978).

COOPERATION.--Records furnished by Tennessee Valley Authority.

AVERAGE DISCHARGE.--9 years (water years 1935-39, 1975-78), 29,250 ft^3/s (828.4 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 202,000 ft^3/s (5,720 m^3/s) Mar. 28, 1936; minimum daily, 4,200 ft^3/s (119 m^3/s) Jan. 29, 30, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 79,500 ft^3/s (2,250 m^3/s) Jan. 28; minimum daily, 6,040 ft^3/s (171 m^3/s) May 2.

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	21300	35600	55600	47100	67500	33900	21700	15700	17100	35800	26400	27900
2	20300	28300	50800	45900	64000	37900	19900	6040	21300	26700	26700	32600
3	24300	23800	50700	47500	61100	41700	16200	14800	21700	22400	28300	28000
4	27600	32300	56100	47500	52800	30900	22600	12700	14600	11000	27400	27400
5	25600	9960	70800	46900	46700	26000	21400	15100	18100	14700	30800	24900
6	20200	11000	76200	40300	46700	27300	20800	19400	24700	21800	34800	26200
7	20900	17900	76100	33800	47000	24600	21900	17200	22000	22900	18900	24900
8	20400	36100	75800	32000	47000	27800	17400	24200	29900	27300	27100	25300
9	22800	46300	72800	43800	46000	28900	16800	11500	26200	29500	29600	25400
10	36500	46500	70200	59800	44200	21400	15900	8160	18600	27800	24800	23900
11	27700	46800	69800	63900	29600	23500	16300	13200	23100	19900	24300	30500
12	21700	46800	69700	67100	28300	30400	16000	20800	29500	20400	33000	26600
13	25800	46800	69500	58700	31900	38900	17900	21000	25300	19900	31600	25600
14	26000	47200	69500	44600	37200	37000	19500	20900	19100	17900	33800	27200
15	22000	47200	67200	46900	44700	34500	18900	16100	10800	26900	31300	26500
16	27400	46500	63200	47100	34600	37400	20100	15600	17600	26600	30900	26500
17	30600	49200	62300	47000	35100	34900	16000	14900	22100	28200	29900	19800
18	29100	54600	63500	47100	32900	34900	14600	16200	25000	19400	31500	27500
19	28300	57700	63700	47300	31300	29500	15500	17600	23900	20100	37800	33600
20	27000	57800	63700	47300	37100	29500	12700	16300	16500	25200	37700	32000
21	27600	57900	63600	47300	42400	22600	15600	11300	15200	25100	27300	27700
22	28300	60900	63800	41900	37700	20000	14300	8160	14300	27400	29200	24300
23	27000	68200	60000	46300	35900	23400	9820	14800	19300	28500	28300	19600
24	31100	70200	51900	46400	34300	20700	11400	13900	25300	19900	28000	11200
25	26500	70000	55400	52600	31200	15600	13100	18400	18500	19600	30500	19700
26	22900	69400	70100	67700	27900	15700	18600	22300	18100	18600	33400	23100
27	24800	64700	66700	77700	31300	24400	23100	17000	22000	19400	30800	21800
28	26500	60200	63100	79500	35900	28700	20700	13600	23500	18700	29900	21200
29	26100	60600	63000	79200	---	23900	18400	13500	28700	28900	24200	19100
30	16200	61000	55200	75400	---	23200	17300	14200	28100	22100	25700	19200
31	35900	---	47100	71300	---	22800	---	17300	---	19000	35100	---
TOTAL	798400	1431460	1977100	1646900	1142300	871900	524420	481860	640100	711600	919000	749200
MEAN	25750	47720	63780	53130	40800	28130	17480	15540	21340	22950	29650	24970
MAX	36500	70200	76200	79500	67500	41700	23100	24200	29900	35800	37800	33600
MIN	16200	9960	47100	32000	27900	15600	9820	6040	10800	11000	18900	11200

CAL YR 1977 TOTAL 11793960 MEAN 32310 MAX 161000 MIN 9960
WTR YR 1978 TOTAL 11894240 MEAN 32590 MAX 79500 MIN 6040

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. 327 and Water Resources Data for North Carolina, 1978).

COOPERATION.--Samples collected and analyzed by Tennessee Valley Authority as noted.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 270 micromhos July 27, 1978; minimum, 120 micromhos June 19, 20, 1976.
WATER TEMPERATURES: 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, 270 micromhos July 27; minimum, 130 micromhos May 28.
WATER TEMPERATURES: Maximum, 27.5°C several days in July and September; minimum, 2.0°C Feb. 7-10.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT											
19...	1100	42200	150	6.9	18.0	6	--	--	--	--	--
NOV											
08...a	1223	--	180	7.4	17.0	5	--	8.7	<10	--	--
08...a	1237	--	180	7.4	17.0	3	--	8.7	<10	--	--
15...	1100	48600	160	--	15.5	6	--	--	--	--	--
23...a	1020	67200	--	--	13.5	--	--	--	30	--	--
JAN											
25...	1230	46400	160	7.5	4.0	9	--	--	--	26	81
FEB											
07...	1230	47000	150	--	2.0	15	--	--	--	K3	K15
07...a	1245	46300	160	7.8	2.0	18	--	12.6	--	--	--
07...a	1247	46300	150	7.9	2.0	16	--	12.7	--	--	--
MAR											
08...	1200	44400	--	--	--	--	--	118	--	--	--
09...	1200	44000	155	7.5	5.0	6	--	--	--	<1	K1
22...	1000	32800	140	6.6	9.5	8	--	10.7	--	K4	<1
APR											
05...	1240	24770	150	7.9	13.0	6	--	8.4	--	K1	K3
MAY											
03...	1220	22500	150	7.2	17.0	5	--	6.2	--	<1	K3
23...a	1210	--	150	7.7	17.5	7	--	7.7	--	--	--
JUN											
22...	1030	600	160	6.9	24.0	--	--	--	--	K11	K23
JUL											
19...	1130	30750	180	6.4	26.0	--	3.0	3.0	--	88	140
AUG											
04...	1200	42800	190	6.8	26.0	--	5.0	--	--	K5	K6
08...a	1325	42300	200	8.2	25.0	5	--	4.2	--	--	--
SEP											
13...	1215	32950	200	6.5	26.5	--	3.0	--	--	K4	K2

a - Analysis by Tennessee Valley Authority.

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

03543005 TENNESSEE RIVER AT WATTS BAR DAM (Tailwater), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	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)	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
OCT											
19...	54	0	44	13	6.7	5.7	94	80	.13	10700	.32
NOV											
08...a	--	--	50	14	7.0	5.4	100	--	.14	--	.35
08...a	--	--	50	13	7.0	5.6	100	--	.14	--	.35
15...	66	--	54	14	7.9	5.6	95	91	.13	12500	.37
23...a	--	--	--	--	--	--	--	--	--	--	--
JAN											
25...	80	0	66	13	4.8	5.8	105	96	.14	13200	.53
FEB											
07...	62	--	51	15	5.6	6.0	94	86	.13	11900	.52
07...a	--	--	55	12	5.0	5.3	100	--	.14	12500	.56
07...a	--	--	56	13	5.0	5.4	90	--	.12	11300	.56
MAR											
08...	--	--	--	--	--	--	--	--	--	--	--
09...	68	0	56	13	5.2	5.3	103	86	.14	12200	.53
22...	56	0	46	12	3.0	4.8	84	73	.11	7440	.46
APR											
05...	64	0	53	11	4.5	4.8	82	80	.11	5480	.46
MAY											
03...	68	0	56	14	5.0	4.0	89	87	.12	5410	.43
23...a	--	--	58	12	5.0	--	80	--	.11	--	.28
JUN											
22...	--	--	--	--	--	--	--	--	--	--	--
JUL											
19...	--	--	63	14	5.5	3.2	97	95	.13	8050	.33
AUG											
04...	--	--	66	14	7.5	4.0	120	100	.16	13900	.31
08...a	--	--	60	16	8.0	--	120	--	.16	13700	.32
SEP											
13...	--	--	65	17	9.5	5.3	119	108	.16	10600	.28

DATE	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PERIPHYTON BIOMASS ASH WEIGHT G/SQ M	PERIPHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	CHLOR-B PERIPHYTON CHROMOSPECTMETRIC (MG/M2)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
19...	.01	--	.05	.00	--	--	--	--	16	1820	89
NOV											
08...a	.03	.06	.02	--	2.0	--	--	--	--	--	--
08...a	.23	.12	.03	--	2.3	--	--	--	--	--	--
15...	.03	--	.03	.02	12	--	--	--	11	1440	93
23...a	--	--	--	--	--	--	--	--	--	--	--
JAN											
25...	.04	.15	.03	.01	--	--	--	--	9	1130	52
FEB											
07...	.06	.27	.01	.02	4.4	--	--	--	16	2030	74
07...a	.09	.19	.03	.02	1.5	--	--	--	--	--	--
07...a	.10	.18	.04	.03	2.5	--	--	--	--	--	--
MAR											
08...	--	--	--	--	--	--	--	--	--	--	--
09...	.05	.12	.03	.01	2.2	--	--	--	10	1190	71
22...	.05	.28	.03	.01	1.8	--	--	--	4	354	99
APR											
05...	.04	.25	.03	.01	--	--	--	--	6	401	92
MAY											
03...	.06	.17	.02	.01	9.2	.236	.394	.790	5	304	81
23...a	.06	.22	.01	--	2.5	--	--	--	--	--	--
JUN											
22...	--	--	--	--	--	--	--	--	--	--	100
JUL											
19...	.01	.28	.02	.00	--	2.68	3.70	--	7	581	97
AUG											
04...	.00	.56	.03	.00	4.0	--	--	--	8	924	84
08...a	.04	.10	.02	--	2.0	--	--	--	--	--	--
SEP											
13...	.03	.25	.02	.00	2.1	--	--	--	8	712	100

a - Analysis by Tennessee Valley Authority.

03543005 TENNESSEE RIVER AT WATTS BAR DAM (Tailwater), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT									
19...	58	13	17	3.7	5.8	17	.3	1.7	.1
NOV									
15...	62	8	18	4.2	7.0	19	.4	1.6	.1
JAN									
25...	75	9	22	4.9	4.5	11	.2	1.4	.1
FEB									
07...	66	15	19	4.4	4.5	13	.2	1.3	.1
MAR									
09...	67	11	19	4.7	4.1	12	.2	1.3	.1
22...	56	11	16	4.0	3.8	12	.2	1.3	.0
APR									
05...	64	11	--	4.0	4.1	12	.2	1.3	.1
MAY									
03...	68	12	20	4.3	5.0	14	.3	1.4	.1
JUL									
19...	76	13	22	5.2	5.6	13	.3	1.5	.1
AUG									
04...	78	12	22	5.5	5.9	14	.3	1.7	.1
SEP									
13...	76	11	22	5.2	8.0	18	.4	1.5	.1

DATE	COLOR (PLATINUM-COBALT UNITS)	COLOR, TOTAL (PLATINUM COBALT UNITS)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	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)	FLUORIDE, TOTAL (MG/L AS F)
NOV										
08...a	9	19	6	1.2	350	15	4.1	5.4	1.2	<.1
08...a	10	19	7	1.2	250	14	4.1	5.3	1.2	<.1
FEB										
07...a	12	36	6	1.2	--	19	4.2	4.0	1.4	--
07...a	12	38	5	1.3	--	20	4.3	4.2	1.4	--
MAY										
23...a	10	--	6	1.4	--	19	4.2	15	1.6	--
AUG										
08...a	7	--	5	2.2	--	23	5.4	6.0	1.4	--

DATE	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	LEAD, DISSOLVED (UG/L AS PB)	MERCURY DISSOLVED (UG/L AS HG)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, DISSOLVED (UG/L AS ZN)
OCT												
19...	2	0	0	1	1	1	1	3	<.5	0	1	10
JAN												
25...	0	0	0	4	2	0	2	0	<.5	0	0	0
MAY												
03...	1	0	2	1	4	0	3	2	<.5	0	0	0
AUG												
04...	0	--	1	1	0	0	2	2	<.5	0	0	10

03543005 TENNESSEE RIVER AT WATTS BAR DAM (Tailwater), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	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)	IRON, DISSOLVED (UG/L AS FE)
OCT										
19...	--	3	0	--	--	0	<10	1	190	40
NOV										
08...a	<200	<2	<100	<10	90	<1	<5	20	280	10
08...a	<200	<2	<100	<10	80	<1	<5	10	270	40
JAN										
25...	--	0	0	--	--	0	<10	5	460	20
FEB										
07...a	1100	<2	22	1	160	<1	<5	<5	740	55
07...a	710	<2	22	1	160	<1	<5	15	580	84
MAY										
03...	--	1	0	--	--	2	<10	19	250	20
23...a	140	--	--	--	--	<1	<5	470	140	30
AUG										
04...	--	0	0	--	--	1	<10	6	240	40
08...a	340	--	--	--	--	<1	--	50	570	<50

DATE	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)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	TITANIUM, TOTAL (UG/L AS TI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
OCT									
19...	4	30	0	<.5	--	0	0	--	10
NOV									
08...a	14	40	<10	<.2	<50	<1	<10	<1000	<10
08...a	<10	40	<10	<.2	<50	<1	<10	<1000	<10
JAN									
25...	0	50	30	<.5	--	0	0	--	10
FEB									
07...a	<10	49	34	<.2	<10	<1	<10	48	<10
07...a	<10	51	34	<.2	<10	<1	<10	28	10
MAY									
03...	5	20	10	<.5	--	0	0	--	20
23...a	<10	30	10	<.2	<10	--	--	--	160
AUG									
04...	1	110	30	<.5	--	0	0	--	20
08...a	<10	110	20	.2	<10	--	--	--	<10

a - Analysis by Tennessee Valley Authority.

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C). WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	174	155	161	157	156	156	167	160	164	164	152	161
2	166	153	159	157	154	156	165	162	163	168	162	165
3	165	154	157	160	154	156	163	152	156	168	164	166
4	167	154	158	156	154	155	152	141	146	165	163	164
5	162	155	157	158	155	156	142	137	139	166	163	165
6	171	156	162	158	155	157	147	138	141	168	165	166
7	171	159	163	161	155	157	154	138	150	168	165	166
8	175	161	165	161	157	158	155	150	153	170	161	165
9	176	163	166	158	155	157	155	150	153	172	167	170
10	168	162	165	155	154	155	163	155	160	170	167	169
11	170	163	165	160	156	158	163	152	160	172	170	170
12	175	162	167	162	159	160	164	152	160	174	168	171
13	175	161	165	164	161	162	161	152	159	168	157	160
14	169	161	162	161	157	158	162	160	161	157	152	155
15	174	158	163	160	158	158	162	160	161	156	154	155
16	172	158	161	167	162	164	162	158	160	157	148	154
17	171	158	161	171	167	170	164	160	162	159	154	157
18	171	149	154	179	171	176	168	160	165	160	157	158
19	155	149	149	186	177	182	172	160	168	161	156	159
20	152	146	148	187	183	185	173	171	172	159	154	156
21	153	144	146	185	181	184	176	160	170	156	152	154
22	149	143	145	183	179	181	178	174	176	158	152	156
23	148	144	145	180	177	178	177	160	175	160	155	158
24	150	146	148	178	176	178	176	168	175	160	152	157
25	152	149	150	180	160	174	177	174	175	162	158	160
26	151	150	150	172	163	167	177	175	176	160	155	158
27	155	151	152	164	160	162	176	173	174	162	156	157
28	153	152	152	163	160	162	174	173	174	163	154	160
29	157	152	154	167	160	164	174	160	168	155	147	150
30	162	155	156	167	164	166	164	158	161	148	144	146
31	157	155	156	---	---	---	163	159	161	146	143	145
MONTH	176	143	157	187	154	165	178	137	163	174	143	160
		FEBRUARY			MARCH			APRIL			MAY	
1	149	146	147	158	154	156	150	146	148	162	148	152
2	147	141	144	160	155	158	154	148	150	160	149	153
3	144	141	143	158	156	157	152	147	149	156	149	151
4	143	141	142	158	152	156	152	145	148	164	148	151
5	145	143	144	163	154	156	153	147	150	157	147	151
6	149	145	147	171	154	157	156	148	151	161	151	154
7	154	148	151	165	154	156	157	151	153	170	150	154
8	155	152	154	172	155	156	162	151	154	151	148	150
9	154	149	152	159	155	157	161	152	154	161	148	151
10	152	149	150	162	158	160	163	152	155	161	148	152
11	154	150	152	163	161	162	155	151	153	157	147	150
12	156	150	152	164	162	163	157	151	153	156	144	147
13	157	151	153	165	161	163	158	152	154	155	143	146
14	156	152	154	164	160	162	165	151	155	151	142	145
15	154	153	154	160	151	155	167	152	155	156	142	145
16	154	152	153	151	143	147	169	152	156	153	143	146
17	153	151	152	146	140	142	162	152	155	155	143	146
18	152	150	151	143	138	142	161	151	155	153	139	144
19	152	148	150	142	140	141	159	152	154	158	138	143
20	149	144	146	141	137	139	161	152	155	152	138	143
21	147	144	145	140	136	138	165	152	156	157	138	144
22	150	147	148	143	135	137	166	150	154	150	138	142
23	156	149	151	139	134	136	166	150	153	152	136	140
24	154	149	151	140	135	137	167	149	152	146	136	139
25	163	149	152	145	135	137	164	148	151	153	133	139
26	151	148	150	142	134	137	167	146	150	142	132	136
27	152	147	149	138	134	136	160	148	150	141	131	135
28	153	148	150	142	138	140	165	148	151	137	130	133
29	---	---	---	143	141	142	163	147	151	139	131	134
30	---	---	---	148	142	144	161	147	151	149	131	135
31	---	---	---	151	146	148	---	---	---	144	131	134
MONTH	163	141	150	172	134	149	169	145	153	170	130	145

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	155	132	136	167	159	161	232	179	194	201	194	196
2	139	131	134	195	161	169	223	182	195	202	195	198
3	138	131	134	203	164	173	235	183	193	206	196	199
4	135	133	134	205	163	183	235	183	199	204	197	200
5	134	133	134	209	164	181	232	183	192	204	198	200
6	135	133	134	208	166	182	210	185	190	203	198	201
7	140	133	136	205	168	183	255	187	213	212	198	201
8	147	134	137	200	169	177	249	189	207	212	197	202
9	139	134	137	208	168	177	242	191	202	214	197	203
10	158	135	143	210	168	179	237	192	206	227	199	208
11	158	139	145	210	168	184	238	191	204	218	198	204
12	154	141	144	215	169	188	210	192	197	212	201	204
13	156	141	147	230	170	193	215	192	198	215	201	204
14	160	143	149	223	171	190	221	193	198	215	201	205
15	170	146	154	222	170	185	217	194	200	213	199	203
16	180	147	159	216	170	184	214	196	201	209	198	201
17	187	151	159	206	170	179	214	194	200	214	198	204
18	180	152	159	240	171	194	219	195	201	209	198	201
19	171	151	156	242	193	222	206	194	197	201	197	199
20	178	152	160	247	173	196	199	192	194	204	197	199
21	175	151	158	236	175	195	221	192	198	207	197	200
22	177	152	160	240	176	194	221	190	198	209	196	199
23	182	153	162	250	177	191	221	191	199	217	197	203
24	187	153	161	262	178	206	215	191	197	216	198	205
25	201	154	169	256	177	205	214	192	197	214	198	202
26	186	156	166	261	180	211	208	191	196	212	197	202
27	178	156	163	270	180	212	214	193	197	214	198	202
28	190	156	169	252	178	202	201	192	195	212	197	202
29	202	159	168	250	178	198	211	192	197	212	197	202
30	187	159	167	255	178	197	215	193	198	210	195	200
31	---	---	---	250	179	202	197	194	196	---	---	---
MONTH	202	131	151	270	159	190	255	179	198	227	194	202
YEAR	270	130	165									

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

03543005 TENNESSEE RIVER AT WATTS BAR DAM (TAILWATER), TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.0	19.0	20.0	26.5	24.5	26.0	27.0	25.0	26.0	27.5	26.5	27.0
2	20.5	19.0	20.0	26.5	24.5	26.0	27.0	25.5	26.5	27.0	27.0	27.0
3	21.5	19.5	20.0	26.5	25.0	26.0	27.0	25.5	26.5	27.5	26.5	27.0
4	21.5	19.5	20.0	27.0	25.5	26.5	27.0	25.0	26.5	27.5	26.5	27.0
5	22.0	19.5	20.5	27.0	25.5	26.5	27.0	26.0	26.5	27.0	26.5	27.0
6	22.5	20.0	21.0	26.5	25.0	26.0	27.0	25.5	26.5	27.0	26.5	27.0
7	22.0	20.0	21.0	26.5	25.0	26.0	27.0	25.5	26.5	27.0	26.5	27.0
8	22.0	19.5	21.0	26.5	25.0	26.0	27.0	25.5	26.5	27.5	26.5	27.0
9	23.5	21.0	22.0	27.0	26.0	26.5	27.0	25.5	26.5	27.5	26.5	27.0
10	23.5	21.5	22.5	27.5	26.0	27.0	27.0	25.5	26.5	27.5	26.5	27.0
11	23.5	22.0	22.5	27.5	26.0	27.0	26.5	25.5	26.0	27.0	26.5	27.0
12	23.5	22.0	22.5	27.5	26.0	26.5	26.5	26.0	26.5	27.0	26.5	26.5
13	24.5	21.5	23.5	26.5	26.0	26.5	26.5	25.5	26.5	27.0	26.5	26.5
14	24.5	22.5	23.5	27.0	26.0	26.5	26.5	26.0	26.5	26.5	26.5	26.5
15	24.0	22.5	23.0	27.0	26.0	26.5	26.5	25.5	26.5	26.5	26.0	26.5
16	24.0	22.5	23.5	27.5	26.0	26.5	26.5	25.5	26.0	26.5	26.5	26.5
17	24.0	22.5	23.0	27.0	25.5	27.0	26.5	25.0	26.0	26.5	26.5	26.5
18	24.0	22.5	23.5	27.0	25.5	26.5	27.0	25.5	26.0	27.0	26.5	26.5
19	24.5	22.5	24.0	26.5	25.5	26.0	26.5	25.0	26.5	27.0	26.5	26.5
20	24.0	22.5	23.5	27.0	25.5	26.5	27.0	25.5	26.5	27.0	26.5	27.0
21	24.5	23.0	24.0	27.0	25.5	26.5	27.0	25.5	26.5	27.0	26.5	26.5
22	24.5	23.0	24.0	27.0	25.5	26.5	26.5	25.0	26.0	27.0	26.5	27.0
23	25.0	23.5	24.5	27.0	26.0	26.5	26.5	25.0	26.0	27.0	26.5	27.0
24	25.0	23.5	24.5	27.0	25.5	26.5	27.0	25.5	26.5	26.5	26.5	26.5
25	25.5	23.5	24.5	27.0	25.0	26.5	27.0	26.0	26.5	26.5	26.0	26.5
26	25.0	23.5	24.5	26.5	25.0	25.5	27.0	26.0	27.0	26.5	26.0	26.5
27	25.5	23.5	24.5	26.0	25.0	25.5	27.0	26.0	26.5	26.0	26.0	26.0
28	26.0	24.5	25.0	26.5	25.0	26.0	27.0	26.0	26.5	26.0	26.0	26.0
29	26.5	24.0	25.5	26.5	25.0	26.0	27.0	26.0	26.5	26.0	26.0	26.0
30	26.5	24.5	25.5	26.5	25.5	26.0	27.0	26.5	26.5	26.0	25.5	25.5
31	---	---	---	26.5	25.0	25.5	27.0	26.5	26.5	---	---	---
MONTH	26.5	19.0	23.0	27.5	24.5	26.5	27.0	25.0	26.5	27.5	25.5	26.5
YEAR	27.5	2.0	16.5									

03543005 TENNESSEE RIVER AT WATTS BAR DAM (Tailwater), TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	NOV 15,77	MAR 9,78	MAY 3,78	JUN 22,78
TIME	1100	1200	1220	1030
TOTAL CELLS/ML	880	1800	2900	4000
DIVERSITY: DIVISION	1.3	0.1	0.4	1.3
.CLASS	1.3	0.1	0.4	1.3
..ORDER	1.6	0.7	0.4	1.7
...FAMILY	1.7	0.8	0.4	1.8
....GENUS	2.0	1.5	0.4	2.3

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	--	-
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	19	2	--	-	--	-	--	-
....MICRACTINIUM	97	11	14	1	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	13	1	*	0	--	-	--	-
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
....FRANCEIA	--	-	--	-	--	-	23	1
....KIRCHNERIELLA	6	1	--	-	--	-	--	-
....TETRAEDRON	--	-	--	-	*	0	--	-
....TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	--	-	--	-	--	-	93	2
..TETRASPORALES								
...COCCOMYXACEAE								
....ELAKATOTHRIX	--	-	--	-	--	-	--	-
...PALMELLACEAE								
....SPHAEROCYSTIS	--	-	--	-	--	-	190	5
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	26	3	--	-	--	-	--	-
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	--	-	--	-	--	-	23	1
....STAURASTRUM	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	26	3	370#	21	--	-	23	1
....MELOSIRA	570#	65	1100#	63	2700#	94	1200#	31
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	--	-	--	-
...CYMBELLACEAE								
....CYMBELLA	--	-	--	-	--	-	23	1
....RHOPALODIA	--	-	--	-	--	-	46	1
...DIATOMACEAE								
....DIATOMA	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	210	11	--	-	--	-
....FRAGILARIA	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	27	2	--	-	190	5
...GOMPHONEMATACEAE								
....GOMPHONEMA	--	-	14	1	--	-	--	-
...NAVICULACEAE								
....GYROSIGMA	6	1	--	-	--	-	--	-
....NAVICULA	19	2	--	-	--	-	--	-
...NITZSCHIACEAE								
....NITZSCHIA	--	-	21	1	--	-	69	2
.XANTHOPHYCEAE								
..HETEROCOCCALES								
...CENTRITRACTACEAE								
....CENTRITRACTUS	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03543005 TENNESSEE RIVER AT WATTS BAR DAM (Tailwater), TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 15,77 1100		MAR 9,78 1200		MAY 3,78 1220		JUN 22,78 1030	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTO,ONADACEAE								
....CRYPTOMONAS	19	2	--	-	--	-	--	-
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	26	3	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	-	--	-
....ANACYSTIS	52	6	--	-	170	6	--	-
....COCCOCHLORIS	--	-	--	-	--	-	--	-
..HORMOGONALES								
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	--	-	1600#	40
....OSCILLATORIA	--	-	--	-	--	-	460	12
...RIVULARIACEAE								
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....PHACUS	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	--	-

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

03543005 TENNESSEE RIVER AT WATTS BAR DAM (Tailwater), TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	JUL 19,78		AUG 4,78		SEP 13,78	
TIME	1130		1200		1215	
TOTAL CELLS/ML	7900		21000		16000	
DIVERSITY: DIVISION	1.4		0.8		0.6	
.CLASS	1.4		0.8		0.6	
..ORDER	2.3		1.7		1.5	
...FAMILY	2.8		2.3		1.9	
....GENUS	3.2		2.5		2.6	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	--	-	--	-	*	0
...COELASTRACEAE						
....COELASTRUM	180	2	--	-	150	1
...MICRACTINIACEAE						
....GOLENKINIA	*	0	*	0	--	-
....MICRACTINIUM	--	-	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	*	0	140	1	*	0
....DICTYOSPHAERIUM	180	2	--	-	--	-
....FRANCEIA	--	-	--	-	--	-
....KIRCHNERIELLA	89	1	430	2	*	0
....TETRAEDRON	270	3	240	1	--	-
....TREUBARIA	--	-	*	0	--	-
...SCENEDESMACEAE						
....SCENEDESMUS	270	3	380	2	420	3
..TETRASPORALES						
...COCCOMYXACEAE						
....ELAKATOTHRIX	--	-	--	-	*	0
...PALMELLACEAE						
....SPHAEROCYSTIS	--	-	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	110	1	190	1	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....COSMARIUM	*	0	--	-	--	-
....STAURASTRUM	--	-	--	-	*	0
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	220	3	810	4	150	1
....MELOSIRA	490	6	330	2	290	2
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	*	0	*	0	--	-
...CYMBELLACEAE						
....CYMBELLA	--	-	--	-	--	-
....RHOPALODIA	--	-	--	-	--	-
...DIATOMACEAE						
....DIATOMA	*	0	--	-	--	-
...FRAGILARIACEAE						
....ASTERIONELLA	--	-	--	-	--	-
....FRAGILARIA	240	3	--	-	270	2
....SYNEDRA	--	-	--	-	--	-
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....GYROSIGMA	--	-	--	-	--	-
....NAVICULA	*	0	--	-	--	-
...NITZSCHIACEAE						
....NITZSCHIA	530	7	520	3	--	-
.XANTHOPHYCEAE						
..HETEROCOCCALES						
...CENTRITRACTACEAE						
....CENTRITRACTUS	--	-	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	JUL 19,78		AUG 4,78		SEP 13,78	
TIME	1130		1200		1215	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTO.ONADACEAE						
....CRYPTOMONAS	--	-	--	-	--	-
...CRYPTOCHRYSIDACEAE						
....CHROOMONAS	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	--	-	920	6
....ANACYSTIS	2200#	27	6200#	30	7200#	46
....COCCOCHLORIS	--	-	--	-	670	4
..HORMOGONALES						
...OSCILLATORIACEAE						
....LYNGBYA	310	4	470	2	1200	8
....OSCILLATORIA	2200#	28	3800#	18	1600	10
...RIVULARIACEAE						
....RAPHIDIOPSIS	440	6	7100#	34	2600#	16
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....PHACUS	--	-	--	-	*	0
....TRACHELOMONAS	110	1	--	-	*	0

NOTE: # -DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* -OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

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 mi^2 (303 km^2).

PERIOD OF RECORD.--May 1934 to current year. Prior to October 1935, published as Suee 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.--44 years, 195 ft^3/s (5.522 m^3/s), 22.63 in/yr (575 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,900 ft^3/s (677 m^3/s) Jan. 7, 1946, gage height, 23.97 ft (7.306 m), from floodmarks, from rating curve extended above 11,300 ft^3/s (320 m^3/s) on basis of slope-area measurement at gage height 22.81 ft (6.952 m); minimum, 11 ft^3/s (0.31 m^3/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 ft^3/s (65.1 m^3/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)
Nov. 23	0900	*3210	90.9	8.20	2.499	Jan. 26	0900	3140	88.9	8.08	2.463
Nov. 29	1500	2390	67.7	6.53	1.990						

Minimum discharge, 24 ft^3/s (0.68 m^3/s) Sept. 30; gage height, 0.30 ft (0.091 m).

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	129	134	684	177	267	107	126	924	63	47	41	35
2	367	118	473	157	244	119	119	532	61	95	37	30
3	190	108	388	138	216	516	111	380	62	60	35	30
4	140	136	953	126	188	401	105	1070	61	51	60	30
5	116	209	1590	120	180	291	96	703	58	47	57	28
6	99	834	1010	137	163	245	93	440	56	44	91	28
7	88	778	558	131	144	211	89	368	56	42	68	28
8	243	512	439	560	136	295	85	806	744	42	53	28
9	1280	377	385	963	131	362	81	1050	766	192	49	28
10	530	306	287	454	126	1660	77	505	210	165	47	32
11	338	233	236	354	119	787	78	371	139	53	44	339
12	249	194	208	299	111	541	79	301	119	47	44	58
13	193	165	192	266	148	420	76	286	580	45	45	45
14	160	147	188	227	166	727	71	228	169	44	42	40
15	137	132	169	192	140	521	70	201	124	54	40	37
16	128	125	150	166	132	409	69	173	102	383	37	37
17	111	299	143	250	128	333	64	151	87	97	56	35
18	97	195	210	340	122	278	161	131	78	63	47	32
19	89	159	168	476	118	237	190	114	73	54	40	30
20	83	142	156	847	108	210	121	104	70	49	37	30
21	78	604	142	513	106	209	103	95	147	46	37	30
22	73	2040	128	407	96	223	90	88	78	43	35	28
23	69	2780	118	352	91	181	84	94	67	41	35	28
24	66	1020	173	421	88	171	79	119	63	40	35	28
25	392	630	899	996	88	168	250	106	59	43	32	28
26	1070	456	423	2500	85	204	568	86	56	52	35	28
27	396	367	328	846	80	180	371	78	54	43	32	28
28	281	394	254	564	92	165	254	74	52	44	30	28
29	217	1780	214	427	---	152	195	70	50	41	30	28
30	178	1030	206	358	---	142	526	70	49	37	30	28
31	155	---	200	310	---	133	---	66	---	41	40	---
TOTAL	7742	16404	11672	14074	3813	10598	4481	9784	4353	2145	1341	1262
MEAN	250	547	377	454	136	342	149	316	145	69.2	43.3	42.1
MAX	1280	2780	1590	2500	267	1660	568	1070	766	383	91	339
MIN	66	108	118	120	80	107	64	66	49	37	30	28
CFSM	2.14	4.68	3.22	3.88	1.16	2.92	1.27	2.70	1.24	.59	.37	.36
IN.	2.46	5.22	3.71	4.47	1.21	3.37	1.42	3.11	1.38	.68	.43	.40

CAL YR 1977 TOTAL 88965 MEAN 244 MAX 5110 MIN 22 CFSM 2.09 IN 28.29
WTR YR 1978 TOTAL 87669 MEAN 240 MAX 2780 MIN 28 CFSM 2.05 IN 27.87

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 mi^2 (2,942 km^2).

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, 1978). Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--36 years, 2,427 ft^3/s (68.75 m^3/s), 29.01 in/yr (737 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,100 ft^3/s (1,330 m^3/s) May 28, 1973, gage height, 15.34 ft (4.676 m), from rating curve extended above 15,000 ft^3/s (425 m^3/s) on basis of slope-area measurement of peak flow; minimum daily, 30 ft^3/s (0.85 m^3/s) estimated, Sept. 18-20, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,900 ft^3/s (337 m^3/s) Jan. 26, gage height, 7.36 ft (2.243 m); minimum, 118 ft^3/s (3.34 m^3/s) July 12, gage height, 1.45 ft (0.442 m); minimum daily, 402 ft^3/s (11.4 m^3/s) July 30.

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	2900	2810	3210	3730	4080	3070	507	636	1540	1540	1390	2510
2	2950	2940	3190	3750	4060	3090	533	1180	1720	440	1360	2490
3	1580	2940	3070	3720	3930	3240	1510	558	721	1370	1480	2480
4	1900	2990	2060	3690	3210	2740	1500	577	429	959	1520	2500
5	1540	2350	3160	3190	3150	2660	1500	1040	1700	1440	1530	2570
6	1440	3010	3150	3160	3140	2650	1040	532	1210	1440	1570	2470
7	1460	2870	3120	3170	3120	2640	1260	777	1280	1660	1640	2450
8	1470	3180	3100	3830	3130	2650	519	1020	1380	1640	1530	2390
9	1730	3020	4380	4680	3120	2740	491	1240	811	867	1540	2440
10	1610	2910	4390	5020	3130	3180	756	791	916	1340	1620	2450
11	1530	3110	4370	4660	3110	1740	511	639	546	1340	1640	2660
12	1480	3070	4410	4890	3110	1540	545	945	1710	1080	2060	2470
13	2050	3010	4160	4630	3130	2120	502	869	980	1260	1700	2460
14	3080	2990	3150	3250	3130	1170	489	589	1700	1360	2130	2440
15	3060	2990	3110	3180	3100	1100	486	768	1200	964	2130	2380
16	3020	3020	3090	3150	3090	2180	482	825	1370	565	2040	2440
17	3060	3430	3110	3780	3070	2110	483	798	1640	1380	2350	2370
18	3030	3270	3180	5430	3080	1870	574	800	676	1360	2330	2550
19	3050	3180	3180	5370	3070	1110	766	871	1420	1340	2440	2850
20	3050	3050	3150	5670	3060	1730	1600	1230	1190	1740	2060	2840
21	3030	2320	3270	5340	3070	1810	1970	481	624	1770	1440	2470
22	3030	3250	4400	5180	3070	1850	527	873	615	1320	1540	2460
23	3020	3260	4190	5090	3060	1770	530	824	629	716	1560	2510
24	3030	3270	3180	5020	3070	887	1160	859	652	1290	1640	2490
25	3160	3270	3330	5900	3070	820	559	1600	444	1290	1740	2460
26	2790	3260	3270	8900	3070	591	842	1540	1760	798	2180	2480
27	1900	3250	3450	9630	3050	890	838	702	2090	1230	2050	2490
28	2060	3250	5030	7950	3060	1500	686	711	2000	1250	2200	2490
29	2970	3250	5000	7900	---	868	867	745	2910	1330	2140	2490
30	2960	3030	4720	6890	---	838	595	1370	3000	402	2180	2490
31	2440	---	3770	4580	---	859	---	1380	---	1370	2330	---
TOTAL	75380	91550	111350	154330	89540	58013	24628	27770	38863	37851	57060	75040
MEAN	2432	3052	3592	4978	3198	1871	821	896	1295	1221	1841	2501
MAX	3160	3430	5030	9630	4080	3240	1970	1600	3000	1770	2440	2850
MIN	1440	2320	2060	3150	3050	591	482	481	429	402	1360	2370

CAL YR 1977 TOTAL 917320 MEAN 2513 MAX 5030 MIN 500 MEAN‡ 2589 CFSM‡ 2.28 IN.‡ 30.93
WTR YR 1978 TOTAL 841375 MEAN 2305 MAX 9630 MIN 402 MEAN‡ 2268 CFSM‡ 2.00 IN.‡ 27.10

‡ Adjusted for change in contents in Chatuge, Hiwassee, Apalachia (North Carolina), and Nottely (Georgia) Lakes.

TENNESSEE RIVER BASIN

03557400 HIWASSEE RIVER AT PATTY, TN

LOCATION.--Lat 35°13'32", long 84°38'45", Polk County, Hydrologic Unit 06020002, on the first pier from the right bank, on the downstream side of Patty Bridge, 1.8 mi (2.9 km) northeast of Benton, and at mile 36.9 (59.4 km).

DRAINAGE AREA.--1,358 mi^2 (3,517 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1975 to February 1978 (discontinued).

INSTRUMENTATION.--Single point water temperature recorder since November 1975.

REMARKS.--Flow regulated by four reservoirs (see Water Resources Data for North Carolina and Georgia, 1978).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 22.0°C Sept. 4, 5, 1977; minimum, 1.0°C Jan. 29, Feb. 8, 1977.

EXTREMES FOR CURRENT PERIOD.--
WATER TEMPERATURES: Maximum, 20.5°C Oct. 1, 2; minimum, 2.0°C Feb. 7, 8.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977 TO FEBRUARY 1978

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

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977 TO FEBRUARY 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	5.0	3.5	4.0									
2	5.0	4.5	4.5									
3	4.5	4.0	4.5									
4	5.5	4.0	4.5									
5	5.0	4.0	4.5									
6	4.0	3.0	3.5									
7	4.0	2.0	3.0									
8	4.0	2.0	3.0									
9	5.0	3.0	4.0									
10	5.0	3.0	4.0									
11	5.0	3.0	4.0									
12	5.5	3.0	4.0									
13	5.5	3.5	4.5									
14	5.5	3.5	4.5									
15	5.5	4.0	5.0									
16	5.5	4.0	5.0									
17	6.0	4.0	5.0									
18	6.0	4.5	5.0									
19	5.5	4.0	4.5									
20	5.5	3.0	4.5									
21	5.5	4.0	4.5									
22	4.5	3.0	4.0									
23	4.5	3.0	4.0									
24	6.0	3.5	4.5									
25	6.0	3.5	4.5									
26	6.0	4.0	5.0									
27	6.0	3.5	5.0									
28	6.0	4.0	5.0									
29	---	---	---									
30	---	---	---									
31	---	---	---									
MONTH	6.0	2.0	4.5									

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 mi^2 (3,528 km^2).

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

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)
OCT											
12...	0945	50	1.0	1740	31	5.6	17.2	5	4	5.1	<1.0
NOV											
08...	0900	50	1.0	3870	26	6.1	16.1	6	4	7.3	<1.0
DEC											
13...	0945	50	1.0	4260	25	6.3	12.2	6	5	7.8	1.6
JAN											
10...	1100	50	1.0	--	26	6.4	2.8	7	4	7.9	<1.0
FEB											
14...	1040	50	1.0	--	24	6.7	3.3	17	7	11.7	<1.0
MAR											
14...	0930	50	1.0	--	24	6.9	7.8	12	5	12.0	<1.0
APR											
11...	0940	50	1.0	--	21	6.8	14.4	8	2	10.8	<1.0
MAY											
24...	0930	50	1.0	--	22	7.0	14.4	6	1	10.1	<1.0
JUN											
13...	1100	50	1.0	--	60	7.1	14.0	10	22	9.4	2.3
JUL											
11...	0925	50	1.0	--	22	6.8	25.0	3	1	9.2	1.0
AUG											
15...	1030	50	1.0	--	23	--	18.3	7	1	6.6	<1.0
SEP											
12...	1015	50	1.0	--	30	--	17.0	7	1	7.2	1.5

DATE	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	ALKALINITY (MG/L AS CACO3)	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)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT											
12...	1900	<10	8	.19	.08	.04	.03	180	120	280	280
NOV											
08...	<100	<10	8	.10	.03	.04	.02	150	120	30	20
DEC											
13...	<100	<10	7	.15	.06	.14	.01	350	<50	90	70
JAN											
10...	200	10	7	.15	.09	.08	.01	170	150	39	39
FEB											
14...	100	<10	7	.19	.02	.02	.01	250	<50	10	10
MAR											
14...	500	300	8	.19	.02	.04	.01	140	<50	20	<10
APR											
11...	<100	<10	8	.13	.07	.09	.01	98	44	28	14
MAY											
24...	>20000	<10	8	.08	.02	.06	<.01	<50	<50	<10	<10
JUN											
13...	--	--	9	.22	.08	.22	.04	710	<50	110	60
JUL											
11...	1900	10	8	.08	.01	--	<.01	110	20	20	<5
AUG											
15...	2000	10	13	.18	.03	.05	<.01	100	<50	20	10
SEP											
12...	2100	10	--	.26	.01	.05	<.01	120	<50	30	20

03557405 HIWASSEE RIVER NEAR BENTON, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	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)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 12...	4	30	.04	141	6.2	1.1	1.5	.7	1.0
JAN 10...	1	40	.05	--	1.8	.6	1.1	.8	1.0
APR 11...	11	20	.03	--	5.9	.6	1.1	.2	2.0
JUL 11...	2	20	.03	--	7.2	.6	1.1	.7	2.0

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
OCT 12...	3.0	<200	<1	40	<10	.8	<50	160
JAN 10...	1.0	110	<1	<10	<10	<.2	<50	<10
APR 11...	<1.0	80	3	10	40	<.2	<10	180
JUL 11...	1.0	60	<1	<10	<10	<.2	<10	110

03560500 DAVIS MILL CREEK AT COPPERHILL, TN

LOCATION.--Lat 34°59'43", long 84°22'56", Polk County, Hydrologic Unit 06020203, on right bank 100 ft (30 m) upstream from bridge on State Highway 68, 0.1 mi (0.2 km) upstream from mouth, 0.4 mi (0.6 km) northwest of Louisville and Nashville Railroad station, and 0.8 mi (1.3 km) northwest of Post Office at Copperhill.

DRAINAGE AREA.--5.16 mi^2 (13.36 km^2).

PERIOD OF RECORD.--July 1940 to September 1941 (published as Mill Creek at Copperhill), December 1948 to December 1977 (discontinued).

REVISED RECORDS.--WSP 1206: Drainage area. WSP 2110: 1949-65(M).

GAGE.--Water-stage recorder and modified V-notch weir and dam. Datum of gage is 1,451.06 ft (442.283 m) National Geodetic Vertical Datum of 1929. July 16, 1940, to Sept. 30, 1941, water-stage recorder and sharp-crested weir at site 145 ft (40 m) upstream at datum 1.58 ft (0.482 m) higher. Oct. 1, 1941, to Aug. 12, 1971, water-stage recorder and concrete San Dimas flume and dam at present site and datum.

REMARKS.--Records fair. Flow is predominately process water for Cities Service Company plant that is withdrawn from Ocoee River upstream from Davis Mill Creek and discharged to Davis Mill Creek upstream from the gage.

AVERAGE DISCHARGE.--28 years (water years 1941, 1950-77), 55.2 ft^3/s (1.563 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,520 ft^3/s (99.7 m^3/s) Oct. 6, 1949, gage height, 6.02 ft (1.835 m) in gage well, 8.5 ft (2.59 m) from floodmarks, from rating curve extended above 150 ft^3/s (4.25 m^3/s) on basis of critical depth measurement of peak flow; minimum daily, 3.1 ft^3/s (0.088 m^3/s) July 30, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period October to December, 1977, 310 ft^3/s (8.78 m^3/s) Oct. 25, gage height, 2.56 ft (0.780 m); minimum daily, 87 ft^3/s (2.46 m^3/s) Oct. 5.

DISCHARGE IN CUBIC FEET PER SECOND, OCTOBER TO DECEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	105	110									
2	92	106	105									
3	91	107	115									
4	92	115	120									
5	87	123	135									
6	92	125	120									
7	94	104	110									
8	99	100	120									
9	94	97	115									
10	94	91	110									
11	99	91	110									
12	103	96	105									
13	101	100	115									
14	101	97	115									
15	104	95	110									
16	103	96	110									
17	104	105	125									
18	98	99	120									
19	97	103	110									
20	99	104	105									
21	96	103	105									
22	103	105	105									
23	104	109	110									
24	105	107	150									
25	121	105	125									
26	103	105	115									
27	97	115	100									
28	101	120	100									
29	100	115	105									
30	101	115	115									
31	105	---	110									
TOTAL	3074	3158	3525									
MEAN	99.2	105	114									
MAX	121	125	150									
MIN	87	91	100									

CAL YR 1977 TOTAL 33875 MEAN 92.8 MAX 450 MIN 15

NOTE.--No gage-height record Nov. 25 to Dec. 31.

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 mi^2 (1,357 km^2).

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 fair. Flow regulated by Blue Ridge Lake (station 03558500 in Water Resources Data for Georgia, 1978), 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.--66 years, 1,249 ft^3/s (35.37 m^3/s), 32.37 in/yr (822 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,400 ft^3/s (833 m^3/s) July 10, 1916, gage height, 13.7 ft (4.18 m), from rating curve extended above 17,000 ft^3/s (481 m^3/s); minimum, 3.4 ft^3/s (0.096 m^3/s) Sept. 20, 1962, gage height, 2.12 ft (0.646 m); minimum daily, 4.6 ft^3/s (0.13 m^3/s) Sept. 14, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 19, 1906, discharge, 62,000 ft^3/s (1,760 m^3/s) was the greatest known since at least 1840, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,440 ft^3/s (182 m^3/s) Jan. 26; gage height, 7.51 ft (2.289 m); minimum recorded, 22 ft^3/s (0.62 m^3/s) Sept. 17, 18; gage height, 2.41 ft (0.735 m), but may have been lower during period of no gage-height record; minimum daily, 34 ft^3/s (0.96 m^3/s) Oct. 19.

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	1240	401	1520	1500	1500	1500	1040	805	900	950	846	900
2	863	79	1520	1500	1500	1510	933	872	950	850	855	876
3	1240	516	1520	1500	1500	1600	821	889	850	850	855	991
4	1190	615	1520	1500	1500	1580	880	1020	850	850	863	823
5	1150	1300	1550	1500	1500	1540	855	951	850	850	1010	875
6	1110	2710	1540	1500	1500	1530	805	772	850	800	855	866
7	1150	2320	1520	1500	1500	1530	805	747	850	850	889	873
8	1170	1270	1500	2400	1500	1530	660	978	1200	900	1010	920
9	1530	707	1500	3000	1500	1580	593	1650	900	850	906	869
10	1170	1030	1490	2100	1500	2670	723	960	900	850	1330	892
11	1490	1510	1500	1700	1500	1630	805	969	900	750	855	885
12	1470	1490	1500	1500	1500	1340	915	1110	1050	800	1060	876
13	1470	1480	1490	1500	1500	1570	755	1250	1400	969	1330	889
14	1470	1480	1500	1500	1500	1720	607	1080	1050	780	1060	881
15	1460	1480	1490	1500	1500	1630	600	1230	1100	813	1020	954
16	1200	1520	1550	1500	1500	1610	600	1210	950	880	1140	910
17	978	1600	1520	1600	1500	1550	600	1160	950	889	1120	901
18	253	1550	1520	1600	1500	1340	699	1050	1050	846	1150	647
19	34	1520	1500	1500	1500	1020	739	1040	1000	772	1130	1150
20	578	1500	1500	1700	1500	978	747	1030	1050	780	1130	1050
21	1370	1500	1490	1600	1450	1190	906	1020	950	855	1130	950
22	1460	1500	1490	1600	1500	1010	667	846	900	906	1120	1000
23	1460	1550	1550	1500	1500	942	607	813	800	855	1100	1000
24	1450	1550	1550	1500	1490	951	543	898	900	788	1120	1000
25	1550	1550	1500	2500	1480	969	607	900	1000	872	1130	1000
26	1810	1520	1490	5400	1470	969	1010	900	950	996	1080	1000
27	1530	1500	1490	2500	1490	1060	1090	950	1500	788	889	950
28	1500	1560	1490	1900	1500	1040	699	850	1000	755	883	900
29	924	1520	1480	1600	---	933	644	850	1200	755	893	950
30	622	1520	1500	1500	---	889	652	1050	1200	755	880	950
31	81	---	1500	1500	---	951	---	900	---	821	999	---
TOTAL	35973	41348	46780	56700	41880	41862	22607	30750	30000	26025	31638	27728
MEAN	1160	1378	1509	1829	1496	1350	754	992	1000	840	1021	924
MAX	1810	2710	1550	5400	1500	2670	1090	1650	1500	996	1330	1150
MIN	34	79	1480	1500	1450	889	543	747	800	750	846	647
(†)	-8100	+4200	-5900	+12800	-3500	+7700	+10600	+7900	-2500	-9400	-4600	-15000
MEAN‡	899	1518	1319	2242	1371	1599	1107	1247	917	536	872	424
CFSM‡	1.72	2.90	2.52	4.28	2.62	3.05	2.11	2.38	1.75	1.02	1.66	.81
IN.‡	1.98	3.23	2.90	4.93	2.72	3.52	2.36	2.74	1.95	1.18	1.92	.90

CAL YR 1977 TOTAL 477287 MEAN 1308 MAX 8050 MIN 34 MEAN‡ 1338 CFSM‡ 2.55 IN.‡ 34.66
WTR YR 1978 TOTAL 433291 MEAN 1187 MAX 5400 MIN 34 MEAN‡ 1171 CFSM‡ 2.23 IN.‡ 30.34

† 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.

NOTE.--No gage-height record Nov. 14 to Feb. 23; June 7 to July 12.

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 mi^2 (1,541 km^2).

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, 1978), Ocoee No. 3 Lake (station 03562500), and Lake Ocoee (station 03564000).

AVERAGE DISCHARGE.--62 years, 1,334 ft^3/s (37.78 m^3/s), 30.45 in/yr (773 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,700 ft^3/s (615 m^3/s), Mar. 29, 1951, gage height, 20.22 ft (6.163 m); minimum daily, 10 ft^3/s (0.28 m^3/s) Oct. 28, 1925.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 19, 1906, discharge, 65,000 ft^3/s (1,840 m^3/s) was the greatest known flood since at least 1840, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,270 ft^3/s (121 m^3/s) Nov. 7, gage height, 7.44 ft (2.268 m); minimum, 64 ft^3/s (1.81 m^3/s) Oct. 30, 31, Nov. 1, gage height, 2.80 ft (0.853 m); minimum daily, 139 ft^3/s (3.94 m^3/s) Nov. 1.

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	1080	139	1900	1440	2740	1550	792	723	950	1010	854	936
2	1140	427	1550	1460	2730	1640	783	1010	1370	824	845	936
3	1140	714	1360	1620	1810	1640	500	1490	772	804	864	867
4	1220	729	1360	1600	1660	1730	681	1420	778	945	882	899
5	1140	685	1520	1560	1660	1820	579	933	770	861	856	931
6	1120	2130	1580	1540	1690	1720	674	1010	739	701	853	997
7	1100	2870	1810	1390	1620	1610	764	820	795	773	1180	931
8	1160	2170	1800	1920	1580	1600	526	902	1280	785	1080	944
9	1420	1650	1690	2190	1540	1700	526	2050	1120	777	944	915
10	1520	1850	1550	2660	1550	1710	525	1930	874	783	1310	905
11	1710	1990	1480	2670	1600	1900	489	1140	942	792	1340	909
12	1480	1900	1590	2710	1570	1880	430	1070	1110	794	1300	1000
13	1360	1960	1620	2740	1480	2550	544	1470	903	796	1010	956
14	1370	1520	1850	1840	1460	2740	502	1400	947	785	1180	929
15	1370	1600	1990	1700	1410	2750	488	1390	949	805	1100	920
16	1400	1540	2190	1750	1540	2100	524	1030	944	766	1110	932
17	1010	1670	1530	1500	1530	1950	471	985	956	907	1090	928
18	252	2150	1410	1670	1530	1640	468	979	932	889	1070	943
19	257	2130	1670	1570	1600	1280	414	962	935	901	1050	947
20	268	2120	1710	2190	1560	1030	629	1050	708	891	1140	1130
21	1310	1990	2020	2190	1560	862	761	961	927	886	1120	868
22	1300	2020	1940	2200	1550	850	591	962	869	845	1160	900
23	1310	2120	1630	2210	1540	865	510	1020	1050	847	1180	813
24	1450	1760	1410	1550	1530	853	491	852	946	869	1270	857
25	1500	1310	1420	2150	1560	851	463	867	933	788	1270	816
26	1590	1710	1530	2800	1540	857	552	853	970	848	948	998
27	2070	1720	1640	2730	1550	874	1240	729	911	840	913	935
28	2150	1710	1650	2690	1450	665	983	725	978	895	926	957
29	1590	2150	1910	2660	---	1030	985	727	1080	827	958	934
30	1010	1950	1770	2660	---	1210	691	857	1200	834	914	944
31	447	---	1440	2680	---	966	---	935	---	822	954	---
TOTAL	38244	50384	51520	64240	46140	46423	18576	33252	28638	25890	32671	27877
MEAN	1234	1679	1662	2072	1648	1498	619	1073	955	835	1054	929
MAX	2150	2870	2190	2800	2740	2750	1240	2050	1370	1010	1340	1130
MIN	252	139	1360	1390	1410	665	414	723	708	701	845	813

CAL YR 1977 TOTAL 517054 MEAN 1417 MAX 11200 MIN 124 MEAN‡ 1445 CFSM‡ 2.43 IN.‡ 32.97
WTR YR 1978 TOTAL 463855 MEAN 1271 MAX 2870 MIN 139 MEAN‡ 1253 CFSM‡ 2.11 IN.‡ 28.59

‡ 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, 1976 to current year.

REMARKS.--Flow regulated by Blue Ridge Lake (station 03558500 in Water Resources Data for Georgia, 1978), Ocoee No. 3 Lake (station 03562500), and Lake Ocoee (station 03564000).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	COLOR, TOTAL (PLAT-INUM COBALT UNITS)	TUR-BID-ITY (JTU)	OXYGEN, DIS-SOLVED (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	ALKA-LINITY (MG/L AS CACO3)
OCT												
05...	0900	2070	100	--	21.0	--	--	--	--	--	--	--
NOV												
02...	0915	1520	--	--	16.0	--	--	--	--	--	10	--
15...	1030	2230	110	--	13.5	--	--	--	--	--	--	--
FEB												
22...	1415	137	84	6.4	4.4	5	--	1	11.9	--	--	<1
24...	1115	2860	100	--	5.0	--	--	--	--	--	--	--
MAY												
04...	1530	2110	155	--	15.0	--	--	--	--	--	--	--
30...	1200	2060	120	6.3	18.0	6	--	3	10.1	--	--	3
JUN												
07...	1600	2060	--	--	19.0	--	--	--	--	--	<10	--
AUG												
29...	1210	--	100	5.4	24.0	5	11	5	7.5	900	<10	13

DATE	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	ACIDITY (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)	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)
FEB												
22...	<1	<1.0	9.0	8.0	1.1	1.0	.4	24	4.0	50	.07	18
MAY												
30...	3	1.0	--	14	1.2	2.9	1.2	38	6.0	70	.10	389
AUG												
29...	--	<1.0	--	14	1.0	2.5	1.1	33	4.0	80	.11	--

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)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	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												
22...	.13	.06	.02	.03	<200	--	--	--	--	1	--	40
MAY												
30...	.10	.04	.09	.01	150	<2	--	--	300	<1	<5	50
AUG												
29...	.11	.02	.16	.03	2100	3	<100	<10	680	<1	<5	50

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI)	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)
FEB											
22...	410	--	11	--	150	--	<.2	<10	--	240	2.0
MAY											
30...	340	--	<10	--	150	--	.2	<10	--	170	.5
AUG											
29...	230	<50	<10	<10	70	20	<.2	<10	2	100	1.1

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) southwest 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 mi^2 (82.4 km^2).

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.--21 years, 53.0 ft^3/s (1.501 m^3/s), 22.63 in/yr (575 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,000 ft^3/s (340 m^3/s) Mar. 16, 1973, gage height, 12.11 ft (3.691 m), from rating curve extended above 3,200 ft^3/s (90.6 m^3/s) on basis of contracted-opening and flow-over-road measurement of peak flow; minimum, 2.1 ft^3/s (0.059 m^3/s) Aug. 31, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft^3/s (22.7 m^3/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)
Oct. 26	0130	979	27.7	7.09	2.161	Mar. 10	0545	961	27.2	7.07	2.155
Jan. 8	2245	*1400	39.6	7.49	2.283	May 9	0230	1120	31.7	7.23	2.204
Jan. 26	0215	1260	35.7	7.37	2.246	June 13	0845	1170	33.1	7.28	2.219

Minimum discharge, 3.1 ft^3/s (0.088 m^3/s) Sept. 26.

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	40	23	82	41	64	24	24	102	11	8.0	6.0	5.0
2	34	20	60	35	67	30	23	67	11	7.8	5.7	4.8
3	28	26	50	29	59	146	22	42	12	8.0	5.5	4.7
4	23	75	46	26	51	82	21	113	11	7.7	7.2	4.5
5	20	231	94	26	49	55	20	78	10	7.4	22	4.3
6	19	229	70	37	42	45	19	45	9.4	7.0	11	5.3
7	18	381	46	38	37	39	18	43	9.9	7.1	7.4	4.4
8	25	128	41	439	35	135	18	215	35	6.9	40	4.3
9	60	82	39	495	34	207	17	430	60	6.5	28	4.2
10	27	64	32	128	33	636	16	97	19	6.7	13	4.2
11	21	50	29	90	32	163	26	64	13	6.4	9.0	4.1
12	19	43	27	77	30	119	26	50	21	6.2	12	4.2
13	18	37	26	75	42	97	19	50	420	5.9	15	4.3
14	18	33	29	67	38	388	16	38	37	5.7	9.2	4.4
15	18	32	26	55	31	158	15	36	23	8.5	8.1	4.8
16	19	30	23	48	29	108	15	31	18	12	7.6	4.2
17	18	141	24	198	28	84	14	27	16	7.1	7.6	3.9
18	17	62	49	169	26	71	76	24	14	6.3	6.9	3.8
19	16	46	32	265	25	59	81	22	13	6.4	6.3	3.6
20	15	39	28	413	24	51	35	20	13	6.4	6.0	3.6
21	14	75	24	156	25	50	26	21	12	6.1	5.9	3.7
22	14	116	22	114	23	52	22	19	12	5.7	5.7	10
23	13	153	20	96	23	42	19	18	12	5.8	5.7	4.8
24	13	95	23	110	22	37	17	18	11	7.0	5.5	4.2
25	217	70	123	433	22	35	42	17	10	9.1	5.1	3.6
26	386	56	55	727	20	42	125	17	12	7.3	5.9	3.5
27	68	47	41	170	19	36	73	15	13	6.3	5.6	3.4
28	49	64	33	122	22	30	40	15	9.9	6.2	5.2	3.4
29	40	122	29	96	---	30	31	15	8.9	6.0	5.0	3.3
30	32	95	42	79	---	27	36	13	8.4	5.7	5.0	3.3
31	27	---	51	72	---	25	---	11	---	6.1	5.9	---
TOTAL	1346	2665	1316	4926	952	3103	952	1773	885.5	215.3	294.0	129.8
MEAN	43.4	88.8	42.5	159	34.0	100	31.7	57.2	29.5	6.95	9.48	4.33
MAX	386	381	123	727	67	636	125	430	420	12	40	10
MIN	13	20	20	26	19	24	14	11	8.4	5.7	5.0	3.3
CFSM	1.37	2.79	1.34	5.00	1.07	3.15	1.00	1.80	.93	.22	.30	.14
IN.	1.57	3.12	1.54	5.76	1.11	3.63	1.11	2.07	1.04	.25	.34	.15

CAL YR 1977 TOTAL 20655.4 MEAN 56.6 MAX 1080 MIN 3.7 CFSM 1.78 IN 24.16
WTR YR 1978 TOTAL 18557.6 MEAN 50.8 MAX 727 MIN 3.3 CFSM 1.60 IN 21.71

03565414 HIWASSEE RIVER NEAR CHARLESTON, TN

LOCATION.--Lat 35°16'27", long 84°45'11", Bradley County, Hydrologic Unit 06020002, 0.4 mi (0.6 km) southeast of Charleston, 1.1 mi (1.8 km) south of Calhoun, 5.8 mi (9.3 km) east of Eureka, and at mile 22.9 (36.8 km).

DRAINAGE AREA.--2,223 mi^2 (5,758 km^2).

PERIOD OF RECORD.--Water years 1977 to current year.

REMARKS.--Site located in Chickamauga Lake (station 03566500).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)
DEC 22...	1043	--	--	7480	69	7.5	6.1	7	9.5	3	<1.0
MAR 28...	1045	--	--	--	140	7.2	8.5	10	10.6	5	1.8
JUN 28...	1515	1.0	1.0	--	28	7.4	23.0	6	7.7	2	1.0
SEP 26...	1400	1.0	1.0	--	66	7.2	22.5	6	7.3	1	1.1

DATE	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	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)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
DEC 22...	--	--	7.4	1.3	1.4	.8	28	12	--	100	.14
MAR 28...	--	--	14	3.2	2.0	.5	44	8.0	2.0	80	.11
JUN 28...	--	--	9.3	1.6	1.5	1.5	16	15	2.0	50	.07
SEP 26...	5600	50	7.7	1.4	2.2	1.1	13	14	2.0	50	.07

DATE	SOLIDS, DISSOLVED (TONS PER DAY)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA 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)	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)
DEC 22...	2020	.16	.02	.02	100	<2	60	<1	<5	10	250
MAR 28...	--	.30	.03	.01	210	<2	100	<1	<5	14	420
JUN 28...	--	.19	<.01	--	110	<2	120	<1	<5	40	220
SEP 26...	--	.19	.21	.22	<100	<2	120	<1	<5	<10	320

DATE	IRON, DISSOLVED (UG/L AS FE)	IRON, FERROUS 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)	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)
DEC 22...	30	50	<10	70	40	<.2	<50	<1	40	<.2
MAR 28...	35	--	<10	60	60	.3	<10	<1	80	1.8
JUN 28...	20	--	<10	60	50	1.1	<10	<1	40	1.2
SEP 26...	<50	--	<10	40	--	<.2	60	<1	70	1.5

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 mi^2 (147.6 km^2).

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

AVERAGE DISCHARGE.--24 years, 96.3 ft^3/s (2.727 m^3/s), 22.94 in/yr (583 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft^3/s (227 m^3/s) Mar. 16, 1973, gage height, 13.43 ft (4.093 m); minimum, 16 ft^3/s (0.45 m^3/s) Oct. 13-28, 1954, Sept. 27, 1959.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft^3/s (17.0 m^3/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. 9	2315	720	20.4	5.17	1.576	Jan. 26	2400	*873	24.7	5.69	1.734

Minimum discharge, 24 ft^3/s (0.68 m^3/s) Sept. 28, 29, 30, gage height, 2.33 ft (0.710 m).

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	64	70	239	92	170	71	103	216	64	45	41	36
2	62	69	197	88	150	70	101	201	63	45	37	34
3	67	66	174	84	140	124	98	156	66	46	34	33
4	59	72	170	79	130	122	93	234	66	46	35	33
5	55	101	181	77	120	97	90	313	62	44	44	33
6	53	176	171	82	115	89	88	200	60	42	64	33
7	52	259	150	96	110	84	86	172	59	41	116	30
8	56	199	136	202	110	116	83	179	82	40	111	31
9	172	154	130	577	105	197	82	237	162	40	82	30
10	139	133	122	399	100	471	81	190	86	48	65	30
11	91	116	114	194	95	432	81	159	72	43	54	32
12	79	105	108	171	110	239	92	141	71	41	50	67
13	72	97	103	161	130	204	80	141	217	39	51	33
14	70	92	101	149	120	276	76	135	81	39	48	31
15	67	87	99	136	100	317	73	126	70	42	44	34
16	65	85	93	125	95	213	72	118	67	87	42	32
17	65	143	90	140	95	185	72	109	65	76	54	30
18	61	145	101	191	90	169	113	103	63	54	72	31
19	58	100	100	194	85	156	296	96	62	46	54	32
20	57	92	89	381	80	145	155	92	72	42	43	28
21	55	114	84	307	78	135	110	89	64	40	42	26
22	54	241	81	222	75	144	98	86	61	39	40	26
23	52	276	78	197	75	133	92	83	58	40	37	26
24	51	228	80	185	74	123	87	83	55	40	36	27
25	90	188	183	314	72	120	109	89	54	40	35	28
26	282	164	153	767	71	146	216	83	53	42	43	28
27	152	146	111	600	70	143	179	83	51	39	40	25
28	97	145	99	400	69	127	138	76	48	39	39	25
29	85	290	92	300	---	118	117	74	47	37	37	25
30	79	383	92	250	---	112	114	71	46	36	35	25
31	75	---	96	200	---	107	---	68	---	37	35	---
TOTAL	2536	4536	3817	7360	2834	5185	3275	4203	2147	1375	1560	934
MEAN	81.8	151	123	237	101	167	109	136	71.6	44.4	50.3	31.1
MAX	282	383	239	767	170	471	296	313	217	87	116	67
MIN	51	66	78	77	69	70	72	68	46	36	34	25
CFSM	1.44	2.65	2.16	4.16	1.77	2.93	1.91	2.39	1.26	.78	.88	.55
IN.	1.66	2.96	2.49	4.80	1.85	3.38	2.14	2.74	1.40	.90	1.02	.61

CAL YR 1977 TOTAL 38856 MEAN 106 MAX 1420 MIN 24 CFSM 1.86 IN 25.36
WTR YR 1978 TOTAL 39762 MEAN 109 MAX 767 MIN 25 CFSM 1.91 IN 25.95

03566404 TENNESSEE RIVER AT SEQUOYAH NUCLEAR PLANT, TN

LOCATION.--Lat 35°13'15", long 85°05'12", Hamilton County, Hydrologic Unit 06020001, on right bank, 2.9 mi (4.7 km) southeast of Shady Grove, 4.8 mi (7.7 km) east of the Soddy-Daisy city boundary, and at mile 484.5 (779.6 km).

DRAINAGE AREA.--20,630 mi (53,432 km²).

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

REMARKS.--Site is located in Chickamauga Lake. Flow regulated by many reservoirs above site (see p. 327).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)
NOV									
15...	0935	66	1.0	170	7.4	14.3	9.3	--	--
15...	0937	66	3.0	170	7.4	14.2	9.2	5	<1.0
15...	0939	66	5.0	170	7.4	14.2	9.1	--	--
15...	0941	66	10	170	7.4	14.2	9.0	--	--
15...	0943	66	16	170	7.4	14.2	9.0	--	--
15...	0945	66	23	170	7.4	14.2	8.9	--	--
15...	0947	66	30	170	7.4	14.2	8.9	--	--
15...	0950	66	39	170	7.4	14.2	8.8	6	<1.0
15...	0952	66	49	170	7.4	14.2	8.8	--	--
15...	0954	66	56	170	7.4	14.2	8.8	--	--
15...	1000	40	1.0	170	7.4	14.1	9.7	--	--
15...	1002	40	3.0	170	7.4	14.1	9.3	--	--
15...	1004	40	5.0	170	7.4	14.1	9.2	--	--
15...	1006	40	10	170	7.4	14.1	9.0	--	--
15...	1008	40	16	170	7.4	14.1	9.0	--	--
15...	1010	40	23	170	7.4	14.1	8.9	--	--
FEB									
14...	1209	40	1.0	140	6.1	3.4	13.2	--	--
14...	1210	40	3.0	140	6.1	3.4	13.2	--	--
14...	1211	40	5.0	150	6.1	3.4	13.2	--	--
14...	1212	40	10	150	6.1	3.4	13.2	--	--
14...	1213	40	16	150	6.0	3.5	13.2	--	--
14...	1214	40	26	150	6.0	3.4	13.2	--	--
14...	1223	66	1.0	150	6.3	3.2	13.4	--	--
14...	1225	66	3.0	150	6.3	3.2	13.4	5	1.3
14...	1227	66	5.0	150	6.1	3.2	13.4	--	--
14...	1229	66	10	150	6.1	3.1	13.3	--	--
14...	1231	66	16	150	6.1	3.1	13.3	--	--
14...	1233	66	26	150	6.1	3.1	13.3	--	--
14...	1235	66	33	150	6.1	3.1	13.3	--	--
14...	1240	66	39	150	6.1	3.1	13.3	3	1.3
MAY									
09...	1130	40	1.0	250	7.5	15.0	9.2	--	--
09...	1131	40	3.0	250	7.4	14.4	9.1	--	--
09...	1132	40	5.0	250	7.3	14.0	9.0	--	--
09...	1133	40	10	250	7.2	13.8	8.7	--	--
09...	1134	40	16	250	7.1	13.5	8.3	--	--
09...	1135	40	26	250	7.1	13.0	8.2	--	--
09...	1142	66	1.0	250	7.2	15.0	8.8	--	--
09...	1145	66	3.0	250	7.2	14.9	9.1	6	1.5
09...	1147	66	5.0	250	7.2	14.1	9.1	--	--
09...	1149	66	10	250	7.2	13.8	8.8	--	--
09...	1151	66	16	250	7.1	13.5	8.4	--	--
09...	1153	66	26	250	7.0	13.4	8.2	--	--
09...	1155	66	33	250	7.0	13.3	8.2	--	--
09...	1200	66	39	250	7.0	13.2	8.1	5	<1.0
09...	1202	66	49	250	6.9	13.2	8.1	--	--
09...	1204	66	56	250	6.9	13.1	8.1	--	--
AUG									
01...	1048	40	1.0	200	7.3	27.0	7.3	--	--
01...	1049	40	3.0	200	7.3	26.5	7.2	--	--
01...	1050	40	5.0	200	7.3	26.5	7.1	--	--
01...	1051	40	10	200	7.3	26.5	6.9	--	--
01...	1052	40	16	200	7.1	26.5	5.8	--	--
01...	1053	40	20	200	7.0	26.0	4.6	--	--
01...	1054	40	23	200	7.0	26.0	4.6	--	--
01...	1055	40	26	200	7.0	26.0	4.6	--	--
01...	1100	66	1.0	200	7.4	26.5	7.3	--	--
01...	1101	66	3.0	200	7.4	26.5	7.3	9	<1.0
01...	1102	66	5.0	200	7.3	26.5	6.9	--	--
01...	1103	66	10	200	7.2	26.5	6.6	--	--
01...	1104	66	16	200	7.2	26.5	6.3	--	--
01...	1105	66	20	200	7.1	26.0	6.0	--	--
01...	1106	66	26	200	7.1	26.0	5.0	--	--
01...	1107	66	33	200	7.0	26.0	4.8	--	--
01...	1108	66	39	200	7.0	26.0	4.7	7	<1.0

03566404 TENNESSEE RIVER AT SEQUOYAH NUCLEAR PLANT, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	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)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, TOTAL (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
NOV											
15...	--	<10	17	4.4	4.4	.9	47	14	8.0	<.1	5.2
15...	--	--	18	4.2	5.2	.9	--	14	8.0	--	5.4
FEB											
14...	100	30	19	4.7	3.6	1.2	51	13	5.0	--	5.4
14...	--	--	18	4.5	3.6	1.2	51	14	6.0	--	5.4
MAY											
09...	--	--	16	3.9	--	1.7	47	14	6.0	--	4.5
09...	--	--	17	3.9	4.0	1.7	48	14	6.0	--	4.8
AUG											
01...	--	--	25	5.1	6.3	1.0	61	18	8.0	--	4.5
01...	--	--	23	5.2	6.2	1.1	57	17	8.0	--	4.5

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (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)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)
NOV										
15...	80	.11	8	.35	.08	.13	.02	.01	200	<2
15...	90	.12	14	.35	.05	.06	.03	.01	220	<2
FEB										
14...	80	.11	9	.55	.13	.15	.03	.01	440	<2
14...	80	.11	11	.56	.12	.12	.03	.02	1200	<2
MAY										
09...	90	.12	5	.40	.07	.17	.02	--	<200	<2
09...	80	.11	5	.40	.09	.16	.03	.01	390	<2
AUG										
01...	90	.12	4	.25	.02	.15	.02	.01	<200	2
01...	100	.14	11	.32	.05	.13	.02	<.10	330	<2

DATE	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	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)	IRON, DISSOLVED (UG/L AS FE)	IRON, FERROUS DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
NOV										
15...	<100	<10	60	<1	<5	<10	270	10	--	<10
15...	<100	<10	<10	<1	<5	<10	2100	60	--	<10
FEB										
14...	<100	<10	170	<1	<5	30	730	<50	360	<10
14...	<100	<10	200	<1	<5	20	790	<50	290	<10
MAY										
09...	<100	<10	40	<1	<5	<10	370	150	--	<10
09...	100	10	40	<1	<5	<10	230	<50	--	10
AUG										
01...	<100	<10	20	<1	<5	60	690	330	--	<10
01...	<100	<10	<10	<1	<5	50	1400	<50	--	<10

DATE	LITHIUM TOTAL RECOVERABLE (UG/L AS LI)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	TITANIUM, TOTAL (UG/L AS TI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV										
15...	<10	60	20	<.2	<50	<1	<10	<1000	100	2.2
15...	<10	150	20	<.2	210	1	<10	<1000	30	1.9
FEB										
14...	<10	60	40	.2	<50	<1	<10	<1000	<10	1.9
14...	<10	60	30	<.2	<50	<1	<10	<1000	<10	2.0
MAY										
09...	<10	30	20	<.2	<10	<1	<10	<1000	20	2.3
09...	<10	50	20	<.2	<10	<1	<10	<1000	10	1.0
AUG										
01...	<10	110	20	<.2	<10	<1	<10	<1000	40	1.9
01...	<10	180	20	<.2	<10	<1	<10	<1000	30	1.6

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 mi^2 (48.7 km^2).

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.--14 years, 33.6 ft^3/s (0.952 m^3/s), 24.27 in/yr (616 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,300 ft^3/s (207 m^3/s) Mar. 16, 1973, gage height, 9.75 ft (2.972 m); minimum, 1.8 ft^3/s (0.051 m^3/s) part of each day Sept. 13-18, 1964, Oct. 10, 1969.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft^3/s (19.8 m^3/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)
Oct. 25	2030	*1000	28.3	5.94	1.811	Jan. 25	2330	854	24.2	5.41	1.649

Minimum discharge, 2.5 ft^3/s (0.071 m^3/s) Sept. 30.

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	29	21	58	39	37	16	19	81	8.6	6.1	4.1	3.8
2	36	19	48	33	37	26	18	43	8.6	6.1	3.3	3.6
3	23	22	44	29	31	75	17	29	8.6	7.5	4.6	3.6
4	17	88	92	28	29	41	16	155	8.2	6.1	4.9	3.3
5	16	390	68	26	27	30	16	72	7.5	6.1	14	3.3
6	14	241	43	38	24	28	15	46	7.1	5.5	6.8	3.3
7	13	175	39	30	22	25	14	54	7.9	5.2	5.5	3.3
8	79	103	36	108	20	73	14	163	51	5.2	5.8	3.3
9	101	74	33	59	20	155	14	131	19	12	5.5	3.1
10	45	56	26	45	20	349	13	66	12	9.4	5.2	3.1
11	33	43	25	39	19	116	28	47	9.8	6.1	4.9	3.1
12	25	36	24	37	18	88	20	38	14	5.5	15	4.6
13	20	30	23	32	29	66	16	44	47	5.2	9.0	4.1
14	17	27	25	28	23	265	14	29	13	5.2	5.8	5.5
15	15	25	21	124	21	104	13	26	10	5.2	5.2	5.2
16	14	150	20	90	19	71	13	22	9.4	5.5	5.2	4.1
17	13	60	27	266	18	55	13	19	8.6	4.9	5.8	4.1
18	13	43	38	124	17	44	124	17	7.9	4.4	4.9	3.3
19	12	36	29	90	17	38	61	15	7.9	4.4	4.4	3.3
20	11	70	26	77	17	33	34	14	7.5	4.1	4.4	3.1
21	10	110	23	66	17	36	24	13	7.5	4.1	4.4	3.1
22	9.8	160	20	55	15	35	19	12	9.4	3.8	4.1	3.1
23	9.4	92	19	52	15	28	16	14	11	3.8	3.8	2.9
24	9.4	68	75	45	15	25	15	14	7.9	5.5	4.1	2.9
25	373	54	55	318	14	40	24	12	7.1	6.1	3.6	3.1
26	143	45	43	287	14	47	29	13	13	4.9	4.9	2.9
27	65	62	35	101	14	35	19	11	11	4.4	4.4	2.9
28	45	120	29	71	17	29	14	11	7.5	4.1	3.8	2.9
29	34	92	26	55	---	26	12	10	6.8	3.8	3.8	2.7
30	29	80	61	45	---	23	56	9.4	6.5	3.3	3.8	2.5
31	24	---	43	41	---	22	---	9.0	---	3.6	4.4	---
TOTAL	1297.6	2592	1174	2478	586	2044	720	1239.4	361.3	167.1	169.4	103.1
MEAN	41.9	86.4	37.9	79.9	20.9	65.9	24.0	40.0	12.0	5.39	5.46	3.44
MAX	373	390	92	318	37	349	124	163	51	12	15	5.5
MIN	9.4	19	19	26	14	16	12	9.0	6.5	3.3	3.3	2.5
CFSM	2.23	4.60	2.02	4.25	1.11	3.51	1.28	2.13	.64	.29	.29	.18
IN.	2.57	5.13	2.32	4.90	1.16	4.04	1.42	2.45	.71	.33	.34	.20

CAL YR 1977 TOTAL 15240.3 MEAN 41.8 MAX 622 MIN 2.7 CFSM 2.22 IN 30.15
WTR YR 1978 TOTAL 12931.9 MEAN 35.4 MAX 390 MIN 2.5 CFSM 1.88 IN 25.59

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 (see p.327 and water resources data for adjoining states, 1978).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
NOV											
29...	1044	64210	160	7.2	10.0	12	9.7	10	1.2	--	--
FEB											
23...	1130	40300	--	7.6	5.3	12	12.7	5	1.4	--	--
JUN											
01...	1100	35900	140	7.0	22.0	7	7.2	7	1.4	--	--
AUG											
16...	1035	--	190	7.0	25.6	8	5.9	5	1.3	1700	<10
30...	1410	30000	--	7.5	26.0	--	6.3	6	1.0	--	--

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)	FLUO-RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
NOV											
29...	19	4.3	4.7	1.8	51	17	6.0	<.1	100	.14	17300
FEB											
23...	18	4.4	3.1	.8	52	14	5.0	--	90	.12	9790
JUN											
01...	18	4.0	4.0	.9	48	13	6.0	--	90	.12	8720
AUG											
16...	22	4.8	6.1	1.6	56	16	6.0	--	110	.15	--
30...	--	--	--	--	74	--	--	--	--	--	--

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	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)	IRON, FERROUS DIS-SOLVED (UG/L AS FE)
NOV										
29...	.46	.32	.05	450	<10	<1	<10	380	40	--
FEB										
23...	.53	.06	.03	1000	--	<1	40	670	<50	110
JUN										
01...	.24	.08	.01	250	--	<1	30	250	10	--
AUG										
16...	.29	.03	.03	1300	--	<1	70	430	<50	--
30...	--	--	--	--	--	--	--	--	--	--

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI)	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)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	TI-TANIUM, TOTAL (UG/L AS TI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV										
29...	<10	<10	70	<10	<.2	<50	<10	<1000	<10	3.8
FEB										
23...	<10	--	50	50	<.2	<10	--	--	<10	1.9
JUN										
01...	<10	--	60	20	.5	<10	--	--	10	1.9
AUG										
16...	<10	--	110	<10	.5	80	--	--	60	2.1
30...	--	--	--	--	--	--	--	--	--	3.3

03567500 SOUTH CHICKAMAUGA CREEK NEAR CHICKAMAUGA, TN

LOCATION.--35°00'50", long 85°12'27", Hamilton County, Hydrologic Unit 06020001, on right bank 0.3 mi (0.5 km) upstream from bridge on U. S. Highway 11, 1.5 mi (2.4 km) south of Chickamauga, 6.0 mi (9.7 km) east of the city hall in Chattanooga, and at mile 12.4 (20.0 km).

DRAINAGE AREA.--428 mi^2 (1,109 km^2).

PERIOD OF RECORD.--October 1928 to September 1978 (discontinued as a continuous-record station; converted to a continuous stage only station). Monthly discharges only for December 1930, published in WSP 1306. Prior to October 1937, published as Chickamauga Creek near Chickamauga.

REVISED RECORDS.--WSP 823: Drainage area. WSP 853: 1937. WSP 1386: 1932.

GAGE.--Water-stage recorder. Datum of gage is 651.12 ft (198.461 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1930, nonrecording gage at same site and datum.

REMARKS.--Records fair. Some diurnal fluctuation at low flow caused by small mills upstream. Periodic observations of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--50 years 703 ft^3/s (19.91 m^3/s), 22.30 in/yr (566 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft^3/s (850 m^3/s) Mar. 17, 1973, gage height, 21.70 ft (6.614 m); maximum gage height, 23.75 ft (7.239 m), Mar. 17, 1973, from floodmarks (backwater from Tennessee River); minimum discharge, 61 ft^3/s (1.73 m^3/s) Oct. 8, 1941; minimum gage height, 0.24 ft (0.073 m) Oct. 5, 6, 7, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,500 ft^3/s (156 m^3/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)
Oct. 26	2000	5980	169	11.98	3.652	Nov. 7	0130	*11000	312	14.85	4.526

Minimum daily discharge 128 ft^3/s (3.62 m^3/s) Sept. 29, 30.

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	714	541	1550	1030	882	377	436	1390	277	197	150	166
2	2040	487	1190	893	819	382	413	1620	272	182	153	166
3	3390	456	1070	756	769	1020	396	822	279	210	204	158
4	2130	1240	1350	672	690	972	380	1740	267	182	383	156
5	813	4310	1430	624	631	639	374	1740	255	182	548	154
6	591	8550	1050	672	585	536	363	930	247	180	616	152
7	484	9460	903	1010	533	521	349	812	242	177	1190	148
8	743	5230	772	1710	500	697	341	1480	730	168	424	142
9	2410	2980	739	3680	488	1440	331	4200	1850	166	247	140
10	1580	1710	672	2860	482	4200	320	3230	624	360	225	148
11	840	1190	585	1620	468	4090	363	1390	408	225	217	168
12	634	954	551	1110	447	2700	439	903	352	182	255	150
13	521	822	536	1000	482	1520	388	825	1660	168	471	158
14	450	720	545	917	536	2450	344	749	1010	180	331	150
15	405	639	536	789	468	2980	320	607	439	215	350	168
16	370	598	488	705	433	1820	307	548	371	252	297	166
17	343	1240	503	1620	413	1250	302	497	328	220	600	156
18	321	1620	819	2380	405	1010	1010	450	294	187	527	150
19	304	896	759	1810	396	859	736	413	279	166	248	146
20	290	739	617	2820	391	766	548	388	265	160	204	140
21	276	1240	554	2370	374	705	442	366	255	158	182	140
22	265	2610	506	1590	363	746	391	352	260	152	171	156
23	255	3980	471	1240	352	653	363	598	255	152	162	138
24	245	3440	503	1200	349	582	349	716	242	150	156	134
25	1700	2220	1940	2520	344	560	388	382	237	215	152	134
26	5640	1430	1640	4900	344	766	408	371	225	265	245	134
27	5230	1120	958	4170	331	661	377	344	227	195	247	136
28	2980	1610	789	2580	352	567	336	315	225	170	170	132
29	1080	2290	679	1520	---	521	310	371	210	160	170	128
30	751	1920	802	1150	---	485	450	331	205	156	172	128
31	622	---	1310	975	---	456	---	294	---	150	166	---
TOTAL	38417	66242	26817	52893	13627	36931	12274	29174	12790	5882	9633	4442
MEAN	1239	2208	865	1706	487	1191	409	941	426	190	311	148
MAX	5640	9460	1940	4900	882	4200	1010	4200	1850	360	1190	168
MIN	245	456	471	624	331	377	302	294	205	150	150	128
CFSM	2.90	5.16	2.02	3.99	1.14	2.78	.96	2.20	1.00	.44	.73	.35
IN.	3.34	5.76	2.33	4.60	1.18	3.21	1.07	2.54	1.11	.51	.84	.39

CAL YR 1977 TOTAL 345165 MEAN 946 MAX 9560 MIN 113 CFSM 2.21 IN 30.00
WTR YR 1978 TOTAL 309122 MEAN 847 MAX 9460 MIN 128 CFSM 1.98 IN 26.87

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 mi^2 (55,430 km^2), 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, Ala. 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. 327 and Water Resources Data for adjoining states, 1978).

AVERAGE DISCHARGE.--104 years, 37,190 ft^3/s (1,053 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 410,000 ft^3/s (11,600 m^3/s) Mar. 1, 1875, gage height, 53.8 ft (16.40 m), present datum, at Walnut Street, from rating curve extended above 250,000 ft^3/s (7,080 m^3/s); minimum daily, 1,200 ft^3/s (34.0 m^3/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 ft^3/s (13,000 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge,115,000 ft^3/s (3,260 m^3/s) Jan. 28,gage height, 23.04 ft (7.023 m); maximum gage height at Walnut Street, 21.30 ft (6.492 m) Jan.28; minimum daily discharge, 11,300 ft^3/s (320 m^3/s) Apr. 17, minimum gage height, 10.77 ft (3.283 m) Oct. 8, but may have been less during period of missing record.

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	34100	38500	75700	55100	85400	42500	24400	23500	25300	32300	29900	37300
2	26300	38000	69900	55200	77700	40200	29300	15600	26400	22600	31900	35700
3	31300	36500	68400	55000	70100	41600	19200	24600	22200	25000	35800	27700
4	33300	34300	71900	55000	63800	39200	25800	21800	18700	18600	32500	24800
5	28700	23100	77700	54900	58500	33600	28700	23400	22300	24800	31700	30300
6	29100	23200	83800	48900	53800	38800	28600	26900	36400	28800	30700	34000
7	27800	38800	88200	44100	53800	40200	28100	28000	25700	27500	30900	34500
8	24700	44700	84500	44100	54100	35100	20200	36800	32100	25900	36800	32100
9	26300	61700	78500	52700	49000	35700	19100	23600	25200	25600	35900	22500
10	39100	65700	76600	69300	43100	36300	20100	20800	29200	26300	38600	23900
11	42500	63800	76800	76400	42700	44500	19900	23700	32200	28700	41500	28600
12	36700	61100	78200	75500	42500	49100	18400	34700	36200	27200	34400	39000
13	30900	60900	79500	75100	42000	49500	20800	36600	30700	28600	27900	28400
14	33700	60700	76800	61200	39100	51600	20400	27700	30900	28600	41200	32800
15	33900	60100	71900	58200	43100	49500	20700	20600	25500	25900	40000	28100
16	34000	59500	69100	57900	43300	49800	16300	18600	23400	23400	38900	27400
17	34000	59700	69400	58200	43300	50200	11300	19600	21300	29000	34700	20300
18	34100	62000	69700	60100	43300	46600	15000	23000	21800	28300	34700	28900
19	33100	65100	69800	61500	40400	46400	14300	24100	28700	27400	38800	33100
20	33200	65300	69600	67500	42300	41900	12600	24300	24000	31600	36900	36500
21	35500	64000	69600	67400	42400	30700	19700	17500	23400	32400	35600	37200
22	38800	73700	67300	64800	42500	24700	12900	17000	21200	27600	33000	30200
23	38700	86700	64200	61400	42200	30400	14300	19500	23500	23500	34300	24300
24	38700	89400	62200	59900	42300	30400	13800	19500	23700	25500	34400	18600
25	34300	86400	64400	67800	35900	27400	13200	22600	16000	23900	34200	24500
26	38600	85000	77000	89800	33600	20600	16600	24500	23100	26600	34900	28600
27	41500	79700	76400	104000	39900	27500	19800	23200	27200	27700	28200	30900
28	41100	75900	75500	103000	42600	33000	22500	22000	29300	28100	33800	25400
29	40000	80500	73200	100000	---	30000	21500	20500	39200	26000	35800	25600
30	39200	81900	68200	95600	---	25900	19400	21200	33500	22100	29800	19600
31	38900	---	59200	89800	---	29100	---	25800	---	24600	33200	---
TOTAL	1072100	1825900	2263200	2089400	1352700	1172000	586900	731200	798300	824100	1070900	870800
MEAN	34580	60860	73010	67400	48310	37810	19560	23590	26610	26580	34550	29030
MAX	42500	89400	88200	104000	85400	51600	29300	36800	39200	32400	41500	39000
MIN	24700	23100	59200	44100	33600	20600	11300	15600	16000	18600	27900	18600

CAL YR 1977 TOTAL 14821700 MEAN 40610 MAX 164000 MIN 13400
WTR YR 1978 TOTAL 14657500 MEAN 40160 MAX 104000 MIN 11300

NOTE.--No gage-height record Apr. 11 to May 1.

03570525 TENNESSEE RIVER AT NICKAJACK DAM (TAILWATER), TN

LOCATION.--Lat 35°00'09", long 85°37'16", Marion County, Hydrologic Unit 06020001, at left downstream side of Nickajack Dam, 4.6 mi (7.4 km) south of Jasper, 5.1 mi (8.2 km) southwest of Haletown, and at mile 425.7 (685.0 km).

DRAINAGE AREA.--21,849 mi² (56,589 km²).

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

REMARKS.--Site located in Guntersville Lake. Flow regulated by many reservoirs above site (see p. 327, and water resources data for adjoining states, 1978).

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI-FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)
NOV											
29...	0843	90400	160	6.8	10.1	12	9.9	9	1.5	--	--
FEB											
23...	0930	41300	--	8.1	4.8	15	12.5	5	1.8	--	--
JUN											
01...	0900	32600	150	6.9	23.0	12	7.1	8	1.9	--	--
AUG											
16...	1440	--	190	7.0	27.8	9	5.7	5	1.7	3900	20
30...	1130	30000	--	7.4	26.0	--	6.3	6	1.0	--	--

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)	FLUO-RIDE, TOTAL (MG/L AS F)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)
NOV											
29...	20	4.3	4.8	1.8	49	17	7.0	<.1	100	.14	24400
FEB											
23...	18	4.4	3.7	.9	65	14	6.0	--	90	.12	10000
JUN											
01...	18	4.1	4.4	1.0	52	14	6.0	--	100	.14	8800
AUG											
16...	22	4.7	6.0	1.4	54	15	6.0	--	110	.15	--
30...	--	--	--	--	64	--	--	--	--	--	--

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	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)	IRON, FERROUS DIS-SOLVED (UG/L AS FE)
NOV										
29...	.61	.05	.06	520	<10	<1	10	500	70	--
FEB										
23...	.54	.15	.03	680	--	<1	150	630	<50	60
JUN										
01...	.28	.08	.03	320	--	<1	30	300	20	--
AUG										
16...	.27	.05	.03	1200	--	<1	20	430	<50	--
30...	--	--	--	--	--	--	--	--	--	--

DATE	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI)	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)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	TI-TANIUM, TOTAL (UG/L AS TI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV										
29...	<10	<10	80	20	<.2	<50	<10	<1000	<10	3.7
FEB										
23...	<10	--	40	30	<.2	<10	--	--	<10	2.0
JUN										
01...	<10	--	70	40	.2	<10	--	--	10	2.2
AUG										
16...	<10	--	120	<10	<.2	40	--	--	40	1.9
30...	--	--	--	--	--	--	--	--	--	3.0

03570835 SEQUATCHIE RIVER NEAR DUNLAP, TN

LOCATION.--Lat 35°21'34", long 85°22'20", Sequatchie County, Hydrologic Unit 06020004, at Alvin C. York Highway bridge,0.4 mi (0.6 km) downstream from Rogers Branch, 1.3 mi (2.1 km) southeast of Dunlap, 3.9 mi (6.3 km) northwest of the Lewis Chapel Post Office, and at mile 44.7 (71.9 km).

DRAINAGE AREA.--292 mi^2 (756 km^2).

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	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)
DEC												
12...	1400	697	160	7.7	9.0	5	<1	24	3.2	1.0	.8	68
MAR												
20...	1330	--	140	7.9	11.0	6	4	18	2.9	.3	.6	62
JUN												
27...	1130	--	240	7.6	21.0	5	6	38	5.3	1.9	1.5	100
SEP												
11...	1400	--	250	7.9	21.0	9	4	46	7.4	1.8	1.5	18

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)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (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)
DEC											
12...	7.0	--	90	.12	169	1.0	.02	.02	190	<2	40
MAR											
20...	11	2.0	80	.11	--	.73	.03	.02	200	<2	500
JUN											
27...	7.0	3.0	130	.18	--	1.0	.02	.05	400	<2	40
SEP											
11...	1.0	3.0	150	.20	--	.81	.02	.02	<100	4	220

DATE	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)	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)
DEC											
12...	<1	<5	130	300	<10	70	.3	<50	<1	20	.2
MAR											
20...	<1	<5	<10	330	<10	20	<.2	<10	<1	10	<.2
JUN											
27...	<1	<5	560	620	16	80	1.1	<10	1	240	1.2
SEP											
11...	<1	<5	20	390	<10	30	<.2	<10	<1	<10	1.3

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 mi^2 (1,041 km^2), includes 18 mi^2 (47 km^2) without surface drainage.

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

AVERAGE DISCHARGE.--58 years, 747 ft^3/s (21.16 m^3/s), 25.23 in/yr, (641 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft^3/s (920 m^3/s) Mar. 16, 1973, gage height, 17.65 ft (5.380 m); minimum, 16 ft^3/s (0.45 m^3/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 ft^3/s (156 m^3/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)
Nov. 23	1330	6850	194	13.28	4.048	Jan. 26	2200	6600	187	13.20	4.023
Nov. 30	0800	*9870	280	14.08	4.292						

Minimum discharge, 71 ft^3/s (2.01 m^3/s) Sept. 29, 30.

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	547	523	6720	866	1080	380	523	2500	391	150	163	122
2	484	459	4620	791	974	394	493	2130	342	147	139	116
3	597	425	2710	710	879	569	461	1490	352	147	122	112
4	535	1470	1990	638	794	935	431	1730	317	140	121	109
5	420	2790	2380	587	728	1010	404	2160	287	136	140	105
6	352	3730	2490	597	671	872	386	1600	260	131	236	102
7	304	3260	1980	647	603	765	365	1320	250	127	909	99
8	603	2270	1500	888	572	716	342	1520	800	122	815	94
9	3550	1600	1310	2190	547	735	325	2490	2030	121	584	93
10	3400	1340	1150	1990	511	2730	315	1920	1280	121	753	91
11	2300	1160	1020	1510	487	3470	315	1380	894	119	490	91
12	1270	968	927	1200	464	2390	327	1120	686	116	386	90
13	906	815	848	1060	485	1640	315	1310	641	112	439	90
14	716	704	806	933	569	2740	292	1450	692	110	606	109
15	594	623	756	806	591	4090	274	1300	556	107	556	103
16	499	566	692	698	609	3220	262	1140	456	118	511	94
17	428	857	683	879	575	2030	252	998	380	388	529	90
18	383	977	1200	1370	547	1450	362	866	332	218	508	86
19	342	1030	1280	1440	532	1210	797	756	299	168	365	84
20	307	876	1180	1610	508	1060	695	656	282	137	282	82
21	279	1840	1030	1460	487	968	578	584	264	125	231	80
22	255	5000	891	1240	464	968	505	520	267	116	198	77
23	234	6600	779	1070	436	927	456	479	234	109	179	76
24	215	5380	756	1070	420	866	473	547	218	110	163	75
25	725	3470	1810	2100	404	803	514	499	202	148	152	75
26	2560	2060	2310	5650	388	759	597	459	190	337	145	73
27	1690	1450	2290	5600	370	725	612	391	181	294	137	72
28	1220	1610	1530	3900	365	716	569	532	172	241	131	72
29	918	5890	1140	2250	---	650	641	713	166	175	127	72
30	738	9170	998	1520	---	600	2090	550	157	145	122	72
31	615	---	938	1230	---	556	---	464	---	131	137	---
TOTAL	27986	68913	50714	48500	16060	40944	14971	35574	13578	4866	10376	2706
MEAN	903	2297	1636	1565	574	1321	499	1148	453	157	335	90.2
MAX	3550	9170	6720	5650	1080	4090	2090	2500	2030	388	909	122
MIN	215	425	683	587	365	380	252	391	157	107	121	72
CFSM	2.25	5.71	4.07	3.89	1.43	3.29	1.24	2.86	1.13	.39	.83	.22
IN.	2.59	6.38	4.69	4.49	1.49	3.79	1.39	3.29	1.26	.45	.96	.25

CAL YR 1977 TOTAL 367434 MEAN 1007 MAX 15900 MIN 71 CFSM 2.51 IN 34.00
WTR YR 1978 TOTAL 335188 MEAN 918 MAX 9170 MIN 72 CFSM 2.28 IN 31.02

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 mi^2 (1,062 km^2).

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Records furnished by Tennessee Valley Authority.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	COLIFORM, FECAL, 0.45 UM-MF (COLS./100 ML)	ACIDITY (MG/L AS CACO3)	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)
DEC												
14...	1048	160	7.8	9.8	5	3	140	--	23	3.2	1.1	.8
MAR												
31...	1025	130	--	13.3	5	3	--	--	26	3.6	1.2	.4
JUN												
12...	1400	--	7.7	29.0	6	2	--	--	24	2.8	.9	.9
JUL												
20...	1054	--	--	--	--	--	--	5.0	--	--	--	--
SEP												
12...	1500	240	7.5	--	8	7	--	--	41	6.3	2.0	1.5

DATE	ALKALINITY (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA 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)
DEC											
14...	65	8.0	--	90	.12	.89	.02	.02	150	<2	160
MAR											
31...	--	58	2.0	110	.15	.62	.05	.01	130	<2	110
JUN											
12...	72	8.0	2.0	90	.12	.75	.03	.07	660	<2	80
JUL											
20...	--	82	--	--	--	--	--	--	--	--	--
SEP											
12...	110	2.0	4.0	150	.20	.53	.07	.04	1400	<2	120

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)
DEC											
14...	<1	<5	10	230	<10	40	.2	<50	<1	20	.4
MAR											
31...	<1	<5	<5	250	<10	43	<.2	<10	<1	<10	<.2
JUN											
12...	<1	<5	10	940	<10	120	.2	<10	<1	<10	4.0
JUL											
20...	--	--	--	530	--	1700	--	--	--	--	--
SEP											
12...	<1	<5	70	440	<10	70	<.2	40	<1	<10	2.4

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 mi^2 (58,640 km^2), 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. 327 and Water Resources Data for adjoining states, 1978).

AVERAGE DISCHARGE.--48 years, 37,600 ft^3/s (1,065 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 315,000 ft^3/s (8,920 m^3/s) Mar. 18, 1973, gage height, 34.33 ft (10.464 m); minimum daily, 2,900 ft^3/s (82.1 m^3/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 ft^3/s (9,060 m^3/s), from rating curve extended above 225,000 ft^3/s (6,370 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 128,000 ft^3/s (3,620 m^3/s), Jan. 27, gage height, 22.68 ft (6.913 m); minimum daily, 19,900 ft^3/s (564 m^3/s) Apr. 17; minimum gage height, 10.78 ft (3.286 m) Sept. 26.

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	42400	46700	101000	64500	98400	48500	30900	32000	34100	39000	37000	41300
2	38900	46700	91000	65400	89900	48900	31100	25900	33200	32300	37600	43000
3	41700	43300	85600	65700	82600	48800	32400	32800	28600	32900	40200	33600
4	39900	43700	83900	64700	75200	49600	32600	33100	25300	25900	36200	31100
5	35800	49300	92600	64600	68700	46200	34200	39100	33200	31500	38400	34200
6	35300	52400	95800	51400	62900	47400	33900	39000	34000	33200	35300	38900
7	33800	61500	102000	55100	61200	48800	33800	37000	32600	30100	38400	38000
8	33400	69300	97900	54300	62700	41900	25200	48100	37400	31500	42300	38800
9	38100	74600	90600	66900	53500	43800	25100	39200	34900	33400	43200	28200
10	54100	81300	88000	87600	48900	50800	25000	33900	37400	34400	44500	28500
11	54700	76800	86900	90300	48900	53600	26500	39700	40600	30700	45600	36000
12	46700	71900	87700	88000	49200	63300	25400	43300	42300	30500	35100	45500
13	38000	70400	91400	86600	49300	67100	27800	45300	35300	33400	41100	32100
14	41300	71700	90800	74400	49200	64700	26900	36100	38900	34300	47700	38100
15	40000	70400	83800	67600	49100	66700	27800	30800	30200	33000	45400	36500
16	37000	69000	79400	68600	49200	65700	25000	28100	26200	26700	43400	33800
17	39400	72600	80700	67100	49300	62900	19900	28600	28400	32900	35500	26400
18	40300	73500	81500	70000	49200	54800	24000	29800	30900	32500	40400	32100
19	39100	77200	81900	75000	49400	57100	27400	30800	32700	33400	45700	42200
20	38800	76600	82000	80000	49300	52800	23800	32000	28600	39000	45000	42300
21	38300	81600	80100	75000	48900	39600	22400	26600	28500	34500	37100	40300
22	44300	95600	78500	70000	48800	30500	22100	24700	27400	35100	34100	39200
23	44100	108000	74400	70000	48700	37300	23500	27900	31100	30600	37100	29900
24	49500	113000	74700	70400	48700	37200	22600	27000	31000	31200	38900	24800
25	43700	106000	74700	83700	45900	36300	22100	30000	25500	32000	39400	27800
26	56700	99500	90800	108000	40700	30000	23500	33100	29900	32300	39800	33900
27	57800	95100	89700	125000	42000	34100	27000	30400	32500	32400	34100	37400
28	53100	88400	88400	120000	46400	39400	26300	27200	33600	31500	38100	31600
29	50000	108000	86100	116000	---	36300	28600	28900	43300	31400	40800	27600
30	47800	109000	81700	109000	---	27900	29400	31900	37900	29500	36200	23700
31	44000	---	71200	103000	---	33800	---	35000	---	31800	38600	---
TOTAL	1338000	2303100	2664800	2457900	1566200	1465800	806200	1027300	985500	1002900	1232200	1036800
MEAN	43160	76770	85960	79290	55940	47280	26870	33140	32850	32350	39750	34560
MAX	57800	113000	102000	125000	98400	67100	34200	48100	43300	39000	47700	45500
MIN	33400	43300	71200	51400	40700	27900	19900	24700	25300	25900	34100	23700

CAL YR 1977 TOTAL 17952200 MEAN 49180 MAX 202000 MIN 20100
WTR YR 1978 TOTAL 17886700 MEAN 49000 MAX 125000 MIN 19900

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. 327 and Water Resources Data for adjoining states, 1978).

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 193 micromhos Sept. 6, 1975; 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, 187 micromhos Jan. 9; minimum recorded, 120 micromhos Nov. 9, Jan. 29.
WATER TEMPERATURES: Maximum recorded, 31.0°C June 15; minimum recorded, 2.0°C Feb. 7.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	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)
OCT										
20...	1130	39000	160	7.4	17.0	2	--	--	--	--
NOV										
17...	1100	73200	150	--	15.0	6	--	--	--	--
JAN										
26...	1120	100100	145	8.0	5.0	30	--	--	590	K930
FEB										
08...	1130	62000	140	7.1	2.5	15	--	--	46	K16
MAR										
09...	1000	44200	150	7.3	6.0	8	--	12.1	230	72
23...	1115	44300	150	7.5	10.0	10	--	9.1	31	K12
APR										
06...	1030	42500	145	7.8	14.5	6	--	8.7	K6	K13
MAY										
04...	1300	24500	140	7.3	16.0	10	--	6.1	230	100
JUN										
21...	1400	39800	150	6.7	24.5	--	7.0	4.0	--	--
JUL										
18...	1230	46700	170	6.4	28.5	--	2.0	--	K230	40
AUG										
03...	1120	47200	185	6.7	28.0	--	3.0	--	K11	64
SEP										
14...	1230	42000	180	6.4	27.0	--	4.0	--	K19	85

DATE	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	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)
OCT										
20...	69	23	6.5	17	.3	56	0	46	14	9.7
NOV										
17...	66	17	6.4	17	.3	60	--	49	15	8.0
JAN										
26...	63	9	4.0	12	.2	66	0	54	12	4.5
FEB										
08...	61	12	4.5	13	.3	59	0	48	12	5.0
MAR										
09...	63	13	4.6	13	.3	60	0	49	12	5.5
23...	62	14	4.1	12	.2	59	--	48	12	4.0
APR										
06...	61	2	4.2	13	.2	72	0	59	11	5.2
MAY										
04...	63	15	6.0	17	.3	59	0	48	13	6.4
JUN										
21...	59	9	5.2	16	.3	--	--	50	10	5.6
JUL										
18...	66	12	6.0	16	.3	--	--	54	13	6.3
AUG										
03...	73	10	6.5	16	.3	--	--	63	14	8.0
SEP										
14...	78	15	7.3	17	.4	--	--	63	16	9.0

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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)	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										
20...	.1	5.6	89	90	.12	9370	.38	.03	--	.39
NOV										
17...	.1	5.4	77	89	.10	15200	.38	.04	--	.09
JAN										
26...	.1	5.4	96	83	.13	25900	.47	.04	.26	.23
FEB										
08...	.1	5.7	89	80	.12	14900	.47	.06	.28	.12
MAR										
09...	.1	5.1	101	80	.14	12100	.52	.04	.48	.15
23...	.0	4.4	83	77	.11	9930	.45	.03	--	.39
APR										
06...	.1	3.8	82	83	.11	9410	.44	.05	.22	.10
MAY										
04...	.1	4.5	87	83	.12	5760	.38	.09	--	.20
JUN										
21...	--	4.3	82	--	.11	7310	.31	.08	.19	.27
JUL										
18...	.1	3.7	98	87	.13	12400	.30	.06	.22	.28
AUG										
03...	.1	4.1	106	98	.14	13500	.29	.04	.40	.20
SEP										
14...	.1	5.7	115	105	.16	13000	.27	.05	.26	.27

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)	PHYTO-PLANK-TON, TOTAL (CELLS PER ML)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
OCT									
20...	.03	.03	--	--	--	--	--	9	948
NOV									
17...	.04	.00	8.0	--	240	--	--	18	3560
JAN									
26...	.05	.01	--	--	--	--	--	45	12200
FEB									
08...	.02	.02	1.2	--	--	--	--	12	2010
MAR									
09...	.04	.01	1.4	--	2000	--	--	12	1430
23...	.01	.01	3.6	--	--	--	--	6	718
APR									
06...	.03	.01	--	--	--	--	--	9	1030
MAY									
04...	.04	.01	7.9	3.6	480	3.46	4.96	16	1060
JUN									
21...	.03	.01	7.0	--	3500	--	--	20	2150
JUL									
18...	.03	.01	--	--	710	.079	.079	8	1010
AUG									
03...	.03	.01	10	--	950	--	--	21	2680
SEP									
14...	.05	.02	2.2	--	910	--	--	10	1130

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									
20...	0	0	100	100	0	0	10	1	0
JAN									
26...	0	0	0	0	1	1	<10	2	0
MAY									
04...	1	0	0	0	0	0	30	0	0
AUG									
03...	0	0	0	0	33	1	10	1	0

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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									
20...	0	2	0	240	90	--	5	40	20
JAN									
26...	0	6	9	1200	0	3	0	100	20
MAY									
04...	0	3	1	590	30	0	1	80	40
AUG									
03...	0	10	3	150	40	130	2	60	10

DATE	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, DIS-SOLVED (UG/L AS ZN)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)
OCT								
20...	0	0	0	1	0	10	3.2	.06
JAN								
26...	0	0	0	0	0	30	--	--
MAY								
04...	0	0	0	0	0	60	--	--
AUG								
03...	0	0	--	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)	ATRA-ZINE, TOTAL (UG/L)	ATRA-ZINE, 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)
NOV											
17...	ND	--	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB											
08...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
MAY											
04...	ND	ND	ND	ND	--	--	ND	ND	ND	ND	ND
AUG											
03...	ND	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL (UG/L)	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)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
NOV											
17...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB											
08...	--	ND	--	ND	--	ND	--	ND	--	ND	--
MAY											
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG											
03...	--	ND	--	ND	--	ND	--	ND	--	ND	--

ND - MATERIAL SPECIFICALLY ANALYZED FOR BUT NOT DETECTED

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued
WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL (UG/L)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOTAL (UG/L)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOTAL (UG/L)
NOV											
17...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB											
08...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
MAY											
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG											
03...	ND	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOTAL (UG/L)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	PARATHION, TOTAL (UG/L)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4-D, TOTAL (UG/L)
NOV										
17...	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
FEB										
08...	--	ND	--	ND	--	ND	--	ND	--	ND
MAY										
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG										
03...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	2,4-D, TOTAL IN BOTTOM MATERIAL (UG/KG)	2,4,5-T TOTAL (UG/L)	2,4,5-T TOTAL IN BOTTOM MATERIAL (UG/KG)	SILVEX, TOTAL (UG/L)	SILVEX, TOTAL IN BOTTOM MATERIAL (UG/KG)	SIMAZINE TOTAL COULSON COND. (UG/L)	SIMAZINE IN BOTTOM MATERIAL (UG/KG DRY SOLIDS)	AROCLOR TOT. IN BOT MAT 1242 PCB SERIES (UG/KG)	AROCLOR TOT. IN BOT MAT 1254 PCB SERIES (UG/KG)	AROCLOR TOT. IN BOT MAT 1260 PCB SERIES (UG/KG)
NOV										
17...	ND	--	ND	--	ND	ND	ND	3	2	5
FEB										
08...	--	ND	--	ND	--	ND	--	--	--	--
MAY										
04...	--	ND	--	ND	--	--	--	--	--	--
AUG										
03...	--	ND	--	ND	--	ND	--	--	--	--

ND - MATERIAL SPECIFICALLY ANALYZED FOR BUT NOT DETECTED

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	171	155	163	142	134	139	157	136	149	172	157	166
2	168	159	164	142	137	140	148	134	141	171	143	165
3	167	148	158	145	137	142	150	135	147	167	158	162
4	169	158	164	150	135	144	153	131	145	164	153	158
5	171	141	156	156	137	148	155	141	149	161	155	158
6	173	145	163	152	138	145	156	133	148	163	152	157
7	172	156	162	152	131	147	152	126	143	162	154	159
8	172	154	163	146	129	139	140	130	137	165	155	160
9	176	150	162	138	120	127	138	122	133	187	142	164
10	166	151	159	144	133	140	145	130	138	164	151	162
11	169	156	161	144	136	141	149	140	146	163	145	160
12	161	151	157	145	138	144	150	140	148	160	147	154
13	159	148	156	149	138	145	154	139	148	162	149	155
14	157	153	155	149	143	146	158	150	154	162	151	158
15	158	151	156	150	143	147	158	140	152	167	155	159
16	160	154	158	150	146	148	160	142	150	167	158	162
17	160	151	157	153	132	146	158	136	152	165	154	160
18	163	155	158	152	133	147	160	142	156	160	151	156
19	162	153	159	155	139	149	162	148	157	160	145	154
20	164	154	158	153	131	144	160	147	156	158	144	152
21	165	155	161	157	137	153	165	154	159	158	138	155
22	164	151	160	163	145	156	166	148	161	158	135	150
23	162	154	159	168	151	160	167	156	164	156	147	151
24	159	149	155	169	134	158	169	163	166	152	144	149
25	157	150	153	163	139	156	171	158	165	151	140	147
26	154	140	149	170	143	153	172	155	163	152	131	143
27	152	131	142	165	126	149	172	152	163	141	136	139
28	147	129	137	167	146	159	169	156	163	139	125	133
29	135	127	131	165	130	148	171	152	164	133	120	128
30	137	129	134	157	153	155	170	161	167	140	127	132
31	142	128	138	---	---	---	172	158	165	145	134	138
MONTH	176	127	155	170	120	147	172	122	153	187	120	153
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	143	128	138	---	---	---	148	141	144	155	138	149
2	137	127	133	---	---	---	147	139	145	148	131	140
3	135	122	133	---	---	---	149	140	144	156	134	146
4	137	128	133	---	---	---	148	140	144	153	127	147
5	139	135	137	---	---	---	149	128	144	156	136	147
6	141	135	138	---	---	---	149	141	145	158	136	148
7	142	132	139	---	---	---	154	145	149	149	136	144
8	140	133	138	---	---	---	153	145	150	151	137	146
9	---	---	---	---	---	---	153	145	150	145	127	140
10	---	---	---	163	146	153	152	143	149	145	125	137
11	---	---	---	159	137	148	157	135	151	147	123	139
12	---	---	---	159	133	151	157	147	152	149	139	145
13	---	---	---	150	134	144	156	147	152	148	134	143
14	---	---	---	151	138	147	158	149	155	150	131	146
15	---	---	---	152	147	149	158	136	154	152	140	148
16	---	---	---	149	123	136	159	149	154	153	142	148
17	---	---	---	152	126	144	159	145	153	153	145	149
18	---	---	---	157	139	150	158	147	153	177	144	153
19	---	---	---	159	130	154	160	149	151	157	148	153
20	---	---	---	160	143	155	154	147	150	157	151	155
21	---	---	---	158	139	154	154	141	150	159	152	156
22	---	---	---	156	150	153	152	138	149	159	155	158
23	---	---	---	155	150	153	152	145	151	161	151	158
24	---	---	---	155	132	150	153	146	149	161	157	159
25	---	---	---	153	144	150	156	149	152	161	157	158
26	---	---	---	151	146	149	157	148	153	160	156	159
27	---	---	---	151	145	148	156	147	153	163	139	160
28	---	---	---	152	143	148	155	143	150	163	160	162
29	---	---	---	150	136	146	155	142	150	163	157	162
30	---	---	---	150	140	146	156	146	152	163	157	161
31	---	---	---	149	130	144	---	---	---	163	157	160
MONTH	143	122	136	163	123	149	160	128	150	177	123	151

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	162	160	157									
2	162	157	160									
3	161	158	160									
4	162	158	159									
5	161	155	158									
6	161	156	159									
7	162	157	159									
8	163	137	154									
9	164	152	157									
10	156	145	153									
11	154	142	152									
12	158	150	154									
13	152	147	151									
14	156	146	150									
15	162	144	150									
16	151	144	148									
17	152	145	148									
18	152	145	148									
19	150	144	148									
20	---	---	---									
21	---	---	---									
22	---	---	---									
23	---	---	---									
24	---	---	---									
25	---	---	---									
26	---	---	---									
27	---	---	---									
28	---	---	---									
29	---	---	---									
30	---	---	---									
31	---	---	---									
MONTH	164	137	154									

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	NOV 17,77	MAR 9,78	MAY 4,78	JUN 21,78
TIME	1100	1000	1300	1400
TOTAL CELLS/ML	240	2000	480	3500
DIVERSITY: DIVISION	0.2	0.7	0.4	1.2
.CLASS	0.2	0.7	0.4	1.2
..ORDER	0.8	1.0	0.4	1.6
...FAMILY	0.9	1.1	0.4	1.7
....GENUS	1.4	1.6	0.4	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	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	220	11	--	-	--	-
....MICRACTINIUM	--	-	31	2	--	-	57	2
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	23	1	--	-	*	0
....CHODATELLA	7	3	--	-	--	-	--	-
....QUADRIGULA	--	-	15	1	--	-	--	-
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	--	-	--	-
....SCENEDESMUS	--	-	--	-	40	8	29	1
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	--	-	--	-
...POLYBLEPHARIDACEAE								
....DUNALIELLA	--	-	--	-	--	-	43	1
...VOLVOCACEAE								
....PANDORINA	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	22	9	170	8	--	-	230	7
....MELOSIRA	170#	72	1400#	71	440#	92	1800#	53
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	--	-	29	1
....COCCONEIS	--	-	*	0	--	-	--	-
...CYMBELLACEAE								
....CYMBELLA	7	3	--	-	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	77	4	--	-	--	-
....SYNEDRA	--	-	*	0	--	-	--	-
...NAVICULACEAE								
....NAVICULA	--	-	--	-	--	-	--	-
...NITZSCHIACEAE								
....NITZSCHIA	30	13	15	1	--	-	*	0
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...OCHROMONADACEAE								
....OCHROMONAS	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	NOV 17,77		MAR 9,78		MAY 4,78		JUN 21,78	
TIME	1100		1000		1300		1400	
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	--	-	--	-	--	-	800#	23
..HORMOGONALES								
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	--	-	--	-
....OSCILLATORIA	--	-	--	-	--	-	390	11
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	--	-	--	-	--	-	--	-
...PERIDINIACEAE								
....PERIDINIUM	--	-	23	1	--	-	*	0

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	JUL 18,78		AUG 3,78		SEP 14,78	
TIME	1230		1120		1230	
TOTAL CELLS/ML	710		950		910	
DIVERSITY: DIVISION	1.6		1.7		1.9	
.CLASS	1.6		1.8		1.9	
..ORDER	2.1		1.9		2.7	
...FAMILY	2.2		2.1		3.0	
....GENUS	2.2		2.1		3.4	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	22	3	--	-	--	-
...MICRACTINIACEAE						
....GOLENKINIA	22	3	22	2	--	-
....MICRACTINIUM	--	-	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	--	-	14	2
....CHODATELLA	--	-	--	-	--	-
....QUADRIGULA	--	-	--	-	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	--	-	--	-	28	3
....SCENEDESMUS	--	-	270#	28	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	67	9	--	-	41	5
...POLYBLEPHARIDACEAE						
....DUNALIELLA	--	-	--	-	--	-
...VOLVOCACEAE						
....PANDORINA	--	-	--	-	110	12
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	270#	38	110	12	83	9
....MELOSIRA	--	-	--	-	55	6
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	--	-	--	-
....COCCONEIS	--	-	--	-	--	-
...CYMBELLACEAE						
....CYMBELLA	--	-	--	-	--	-
...FRAGILARIACEAE						
....ASTERIONELLA	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	--	-
...NAVICULACEAE						
....NAVICULA	--	-	--	-	28	3
...NITZSCHIACEAE						
....NITZSCHIA	67	9	22	2	14	2
.CHRYSOPHYCEAE						
..CHRYSOMONADALES						
...OCHROMONADACEAE						
....OCHROMONAS	--	-	44	5	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOMONADACEAE						
....CRYPTOMONAS	--	-	44	5	41	5

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

03571850 TENNESSEE RIVER AT SOUTH PITTSBURG, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	JUL 18,78 1230		AUG 3,78 1120		SEP 14,78 1230	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	--	-	110	12
....ANACYSTIS	240#	34	440#	47	150#	17
..HORMOGONALES						
...OSCILLATORIACEAE						
....LYNGBYA	--	-	--	-	180#	20
....OSCILLATORIA	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	--	-	--	-	28	3
...PERIDINIACEAE						
....PERIDINIUM	22	3	--	-	28	3

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

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 mi^2 (169.9 km^2).

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

AVERAGE DISCHARGE.--27 years, 143 ft^3/s (4.050 m^3/s), 29.60 in/yr (752 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft^3/s (447 m^3/s) Mar. 16, 1973, gage height, 14.08 ft (4.292 m); minimum, 1.0 ft^3/s (0.028 m^3/s) Sept. 27, 28, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,500 ft^3/s (42.5 m^3/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)
Oct. 9	1430	1570	44.5	9.58	2.920	Nov. 29	1200	*3450	97.7	11.15	3.399
Nov. 22	0030	2170	61.5	10.22	3.115	May 1	0430	1980	56.1	10.05	3.063

Minimum discharge, 2.1 ft^3/s (0.059 m^3/s) Sept. 30.

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	76	59	682	111	105	65	65	1590	27	12	5.7	3.2
2	76	52	388	99	98	65	63	781	31	11	5.0	3.1
3	77	48	281	81	88	126	60	348	89	13	4.9	2.9
4	60	355	246	71	81	140	57	290	56	13	5.8	2.8
5	47	700	264	67	80	106	56	248	40	12	6.0	2.7
6	38	1060	231	133	74	94	54	177	32	11	8.9	2.7
7	32	735	194	191	67	86	51	176	29	10	10	2.7
8	209	341	169	250	64	86	49	453	417	9.0	6.9	2.6
9	1250	218	190	419	63	114	47	1120	845	8.7	6.1	2.5
10	684	235	184	262	63	841	47	470	269	8.7	5.5	2.5
11	249	186	156	185	61	665	54	255	138	8.4	5.1	2.2
12	162	131	140	155	60	326	72	180	90	7.4	5.1	2.6
13	107	92	129	138	65	225	62	299	84	7.4	5.2	2.5
14	78	70	123	114	83	789	58	278	64	8.4	5.3	3.0
15	62	57	112	90	74	705	55	208	50	7.7	7.1	4.1
16	52	53	99	77	72	342	53	172	41	7.7	7.7	3.9
17	45	347	102	211	70	229	51	136	36	7.4	7.4	3.4
18	39	285	151	306	68	175	77	106	32	7.1	5.9	3.3
19	35	175	130	180	65	146	205	84	29	6.5	5.2	3.0
20	31	123	116	130	62	119	141	70	28	6.3	4.7	2.9
21	28	781	106	110	60	105	100	61	26	6.0	4.3	2.6
22	26	1870	94	95	59	144	81	54	23	6.0	3.9	2.6
23	24	1470	85	82	57	125	71	48	21	5.7	3.8	2.5
24	22	660	130	200	57	107	66	43	19	5.7	3.6	2.5
25	75	345	606	650	57	100	64	39	18	6.3	3.5	2.4
26	360	233	399	1120	59	102	85	36	17	7.1	3.9	2.4
27	247	186	237	574	56	91	105	32	15	6.3	3.6	2.3
28	165	407	162	304	57	82	88	30	14	6.5	3.4	2.3
29	118	2550	125	209	---	76	79	43	13	6.3	3.4	2.2
30	88	1530	117	153	---	71	346	39	13	5.7	3.9	2.3
31	71	---	128	126	---	67	---	31	---	5.2	3.3	---
TOTAL	4633	15354	6278	6893	1925	6514	2462	7897	2606	249.5	164.1	82.7
MEAN	149	512	203	222	68.8	210	82.1	255	86.9	8.05	5.29	2.76
MAX	1250	2550	682	1120	105	841	346	1590	845	13	10	4.1
MIN	22	48	85	67	56	65	47	30	13	5.2	3.3	2.2
CFSM	2.27	7.81	3.10	3.38	1.05	3.20	1.25	3.89	1.33	.12	.08	.04
IN.	2.63	8.71	3.56	3.91	1.09	3.69	1.40	4.48	1.48	.14	.09	.05

CAL YR 1977 TOTAL 70020.9 MEAN 192 MAX 6590 MIN 4.5 CFSM 2.93 IN 39.71
WTR YR 1978 TOTAL 55058.3 MEAN 151 MAX 2550 MIN 2.2 CFSM 2.30 IN 31.22

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 mi^2 (712 km^2).

WATER-DISCHARGE RECORDS

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.--Record good. Flow regulated by Woods Reservoir (station 03579000) 2.7 mi (4.3 km) upstream.

AVERAGE DISCHARGE.--58 years, 491 ft^3/s (13.91 m^3/s), 24.25 in/yr (616 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,100 ft^3/s (1,080 m^3/s) Mar. 16, 1973, gage height, 20.33 ft (6.197 m); minimum, 10 ft^3/s (0.28 m^3/s) Oct. 9, 10, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,090 ft^3/s (172 m^3/s) Nov. 29, gage height, 10.46 ft (3.188 m); minimum, 24 ft^3/s (0.68 m^3/s) Sept. 14, 19, 20, 21.

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	111	186	2590	501	604	213	224	3410	167	87	44	64
2	640	304	1370	500	603	213	299	2400	168	88	42	62
3	231	420	1240	497	482	215	356	1060	182	378	41	59
4	91	580	1030	281	431	213	311	908	190	84	47	59
5	326	1650	1030	260	431	213	220	791	193	84	50	55
6	387	2420	752	529	352	213	220	784	186	82	53	51
7	158	2340	634	374	225	326	220	793	223	79	54	51
8	1180	1290	633	1150	225	370	220	2170	1980	78	52	50
9	2360	948	725	1060	223	344	222	2290	1640	81	52	47
10	1780	816	577	833	222	1790	220	1570	523	92	52	45
11	1310	808	575	707	256	1810	221	936	821	91	50	44
12	429	803	576	589	358	1350	220	1090	611	88	50	42
13	408	803	532	612	463	793	220	1180	641	85	53	37
14	494	801	522	527	394	1880	220	969	224	87	57	25
15	534	744	293	516	292	2230	220	817	231	85	56	25
16	536	408	293	261	286	1170	220	579	233	90	59	26
17	380	674	334	403	286	925	220	495	234	90	65	26
18	115	999	678	812	289	644	273	358	236	84	64	26
19	162	956	688	1150	289	434	552	356	877	81	66	25
20	239	797	387	800	289	432	360	352	239	82	70	24
21	239	2260	336	599	289	433	356	349	226	82	71	25
22	239	4220	259	598	241	431	356	349	221	79	69	25
23	239	3930	259	529	147	431	356	264	213	79	70	27
24	211	2510	752	861	145	431	270	150	141	63	72	27
25	751	1090	1540	1830	143	432	223	111	72	38	75	29
26	429	1040	1350	2180	141	430	222	181	76	39	75	28
27	562	1030	794	2030	283	427	220	217	77	40	74	27
28	707	1580	787	1200	303	339	308	253	81	41	73	27
29	701	5600	385	869	---	249	356	285	83	41	72	27
30	421	5170	500	881	---	225	1030	246	89	42	69	27
31	162	---	497	416	---	225	---	169	---	43	67	---
TOTAL	16532	47177	22918	24355	8692	19831	8935	25882	11078	2583	1864	1112
MEAN	533	1573	739	786	310	640	298	835	369	83.3	60.1	37.1
MAX	2360	5600	2590	2180	604	2230	1030	3410	1980	378	75	64
MIN	91	186	259	260	141	213	220	111	72	38	41	24
(†)	-1000	-1600	-100	0	-100	+2900	+700	-800	+100	-100	-600	-300
MEAN‡	501	1519	736	786	307	733	321	809	373	80.1	40.8	27.1
CFSM†	1.82	5.52	2.68	2.86	1.12	2.66	1.17	2,94	1.36	0.29	0.15	0.10
IN.‡	2.10	6.16	3.09	3.29	1.16	3.07	1.30	3.39	1.51	0.34	0.17	0.11

CAL YR 1977 TOTAL 240238 MEAN 658 MAX 17300 MIN 24 MEAN‡ 657 CFSM‡ 2.39 IN.‡ 32.45
WTR YR 1978 TOTAL 190959 MEAN 523 MAX 5600 MIN 24 MEAN‡ 521 CFSM‡ 1.90 IN.‡ 25.70

† Change in contents, in cfs-days, in Woods Reservoir.
‡ Adjusted for change in contents.

03579100 ELK RIVER NEAR ESTILL SPRINGS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: July 1971 to January 1977 (discontinued).

INSTRUMENTATION.--Temperature recorder since July 1971.

COOPERATION.--Records furnished by Tennessee Valley Authority

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 34.0°C Sept. 8, 1973; minimum, 3.0°C Jan. 14-18, 27, 1977.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	ALKALINITY (MG/L AS CACO3)
OCT										
12...	0925	--	--	283	--	--	--	--	--	--
12...	0950	50	2.0	275	160	7.4	18.0	6	3	62
JAN										
18...	0930	50	2.0	915	150	7.4	3.0	11	12	61
25...	1355	--	--	1840	115	--	6.0	--	--	--
MAR										
07...	1635	--	--	442	160	--	7.0	--	--	--
APR										
12...	1215	50	2.0	222	160	6.8	13.0	7	2	57
JUN										
06...	1750	--	--	188	150	--	26.0	--	--	--
JUL										
25...	1345	50	1.0	--	140	8.1	24.4	7	3	63
AUG										
01...	1600	--	--	46	170	--	25.0	--	--	--

DATE	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	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)	SULFATE DISSOLVED (MG/L AS SO4)
OCT										
12...	8.6	6	<1.0	6200	10	23	4.0	1.5	.8	7.0
JAN										
18...	13.5	4	<1.0	200	<10	23	3.2	1.1	1.0	8.0
APR										
12...	12.2	4	1.4	1100	<10	30	3.7	8.6	.3	8.0
JUL										
25...	8.0	6	2.5	15000	74	21	3.3	1.6	1.2	4.0

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	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)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)
OCT										
12...	4.0	90	.12	66	.17	.09	.11	.03	<200	<1
JAN										
18...	4.0	90	.12	222	.90	.04	.10	.03	240	<1
APR										
12...	2.0	90	.12	53	.76	<.01	.06	<.01	120	<1
JUL										
25...	4.0	80	.11	--	.36	.12	.18	.01	100	<1

03579100 ELK RIVER NEAR ESTILL SPRINGS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 12...	40	100	<50	<10	60	30	<.2	60	.8
JAN 18...	<10	320	80	<10	26	18	<.2	20	1.7
APR 12...	8	160	16	<10	43	21	<.2	180	1.6
JUL 25...	50	160	30	<10	90	60	<.2	<10	2.6

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 mi^2 (1,383 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES.--May 1971 to current year.

INSTRUMENTATION.--Temperature recorder since May 1971.

REMARKS.--Temperature recorder clock stopped Oct. 1-3, Apr. 15-17 (range in temperature 5.0°C to 11.0°C), Aug. 26 to Sept. 5.

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, 1978.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 19.5°C July 2; minimum, 2.0°C Feb. 7, 8, Mar. 4, 5.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

03580750 ELK RIVER BELOW TIMS FORD DAM, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	5.5	4.5	5.0	4.5	4.0	4.5	18.0	13.5	13.0	11.5	10.0	11.0
2	5.5	4.5	5.0	5.0	4.0	4.5	18.0	14.0	15.5	13.5	9.5	11.0
3	5.0	3.5	4.5	4.5	3.0	4.0	18.0	13.0	15.5	10.5	9.5	10.0
4	5.0	4.0	4.5	6.0	2.0	3.5	15.0	11.5	13.5	12.0	10.0	11.0
5	5.0	4.0	4.5	7.0	2.0	4.5	18.0	11.5	14.5	11.5	10.0	10.5
6	4.5	3.0	4.0	5.0	3.5	4.5	18.0	3.5	12.0	14.0	9.5	11.0
7	4.5	2.0	4.0	5.0	4.0	4.5	11.5	6.5	8.5	11.5	10.0	11.0
8	4.0	2.0	3.5	6.0	4.5	5.0	11.0	6.0	8.5	15.5	4.5	12.0
9	5.0	3.5	4.0	5.0	4.5	5.0	10.5	5.5	8.5	15.0	11.0	13.5
10	6.0	5.0	4.0	7.0	5.0	6.0	10.5	6.0	8.5	15.0	10.5	12.0
11	7.0	3.0	4.5	8.5	5.0	6.5	8.5	6.0	8.0	10.5	5.5	6.5
12	7.0	3.5	5.0	8.5	5.0	6.5	9.0	5.5	7.0	12.0	5.5	10.0
13	5.0	4.0	4.5	11.0	5.0	6.5	11.5	6.0	8.0	13.5	10.5	11.5
14	4.5	4.0	4.0	11.0	9.0	10.0	11.0	5.5	8.0	12.0	10.0	11.0
15	4.5	4.0	4.0	10.0	4.5	9.0	---	---	---	10.0	6.0	7.0
16	7.0	4.0	5.0	8.0	5.0	6.0	---	---	---	9.0	6.0	6.5
17	6.5	4.0	5.0	6.0	5.0	5.5	---	---	---	8.5	5.5	6.5
18	4.5	3.5	4.0	5.5	5.0	5.0	11.5	8.0	10.0	8.5	5.0	6.0
19	7.0	3.0	4.5	11.0	5.5	8.5	10.0	8.0	9.0	8.0	5.0	6.0
20	5.5	3.0	4.5	7.0	4.5	5.0	9.5	7.0	8.5	8.0	5.0	6.0
21	4.5	3.5	4.0	6.5	4.5	5.0	11.0	7.0	8.5	13.0	9.0	10.0
22	6.0	3.0	4.5	7.0	5.0	6.0	12.0	6.5	9.0	9.0	5.0	6.5
23	4.5	3.5	4.0	8.0	6.0	6.5	10.5	8.0	9.0	12.0	5.0	7.0
24	5.0	3.5	4.0	8.0	6.0	6.5	12.0	8.0	10.0	12.0	5.0	6.5
25	8.5	3.5	5.0	9.0	8.0	8.5	10.5	8.5	9.5	13.0	7.0	10.0
26	8.0	3.5	5.0	8.5	7.0	8.0	8.5	8.0	8.5	13.0	5.0	7.0
27	6.0	3.0	4.5	11.5	5.5	10.0	13.0	7.0	10.0	14.5	5.5	8.0
28	5.0	4.5	4.5	16.0	10.0	13.5	13.0	8.0	10.0	8.5	5.5	7.0
29	---	---	---	17.0	12.0	14.5	10.5	8.0	9.0	8.0	5.5	6.5
30	---	---	---	16.0	13.0	14.5	13.5	8.5	10.0	10.0	5.5	6.5
31	---	---	---	18.0	13.0	15.5	---	---	---	11.5	5.0	6.5
MONTH	8.5	2.0	4.5	18.0	2.0	7.0	18.0	3.5	10.0	15.5	4.5	9.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	11.0	5.0	6.5	9.5	6.0	8.0	14.0	5.0	10.0	---	---	---
2	7.0	4.0	5.0	19.5	5.5	9.0	12.0	5.0	7.0	---	---	---
3	6.5	5.0	5.5	14.0	5.5	9.5	12.0	5.0	8.5	---	---	---
4	6.5	5.0	5.5	10.5	5.5	8.0	11.0	5.0	7.0	---	---	---
5	11.5	5.0	7.0	14.0	5.0	9.5	6.0	5.0	5.5	---	---	---
6	11.0	5.0	7.0	14.0	5.0	9.5	5.5	5.0	5.0	15.0	8.0	9.5
7	10.0	5.0	7.0	14.5	5.0	9.5	13.0	5.0	7.0	14.0	8.0	10.0
8	17.0	7.0	11.5	9.5	5.5	8.0	11.0	5.0	7.0	15.0	8.0	10.0
9	13.0	10.5	12.0	9.5	5.0	8.0	11.5	5.0	7.0	15.0	8.0	8.5
10	10.5	5.5	8.0	14.5	5.0	15.0	12.0	5.0	8.0	8.5	8.0	8.0
11	10.5	5.0	8.0	13.5	5.5	9.5	12.0	5.0	7.0	14.5	8.0	8.5
12	10.5	5.0	6.0	15.0	5.0	9.5	6.0	5.0	5.0	14.5	8.0	10.5
13	10.5	5.0	6.0	12.0	5.5	9.0	5.5	5.0	5.0	13.5	8.0	9.5
14	11.0	5.0	6.5	14.0	5.5	9.5	11.0	5.0	6.5	13.5	8.0	10.0
15	11.0	5.0	6.5	9.5	5.5	8.0	12.0	5.5	8.0	13.5	8.0	10.0
16	11.0	5.0	6.5	9.5	5.5	8.0	13.0	5.5	8.5	8.5	8.0	8.0
17	10.0	5.5	8.0	15.5	5.5	9.0	13.0	5.5	8.5	8.5	8.0	8.0
18	11.5	5.5	8.0	15.5	5.5	9.0	10.5	5.0	6.5	11.0	8.0	8.5
19	14.0	5.5	10.0	15.0	5.5	9.0	5.5	5.0	5.0	13.5	8.0	9.5
20	14.5	5.5	9.0	13.0	5.5	8.5	5.5	5.0	5.0	14.5	8.0	10.0
21	14.0	5.5	9.0	14.5	5.5	9.5	14.0	5.0	8.5	12.0	8.0	10.0
22	14.5	5.5	10.0	8.5	5.5	7.0	10.5	5.5	7.0	12.0	8.5	10.0
23	14.0	5.5	8.5	9.0	5.5	7.0	11.5	5.5	7.0	8.5	8.0	8.0
24	10.0	5.5	8.5	15.0	5.5	9.0	13.0	5.5	8.0	8.5	8.0	8.0
25	10.0	5.5	8.0	17.0	5.5	9.5	13.0	5.5	7.0	14.5	8.0	9.0
26	16.0	5.5	10.0	14.5	5.5	9.5	---	---	---	13.5	8.5	10.0
27	16.0	5.5	10.0	13.0	5.5	9.0	---	---	---	13.0	8.5	10.0
28	16.0	5.5	9.5	14.0	5.5	9.5	---	---	---	13.5	8.5	10.0
29	14.0	5.5	8.5	9.0	5.5	7.0	---	---	---	13.5	8.5	10.5
30	13.5	5.5	8.0	8.5	5.5	6.0	---	---	---	8.5	8.0	8.5
31	---	---	---	13.0	5.5	9.0	---	---	---	---	---	---
MONTH	17.0	4.0	8.0	19.5	5.0	9.0	14.0	5.0	7.0	15.0	8.0	9.5
YEAR	19.5	2.0	9.0									

03580990 JACK DANIEL SPRING AT LYNCHBURG, TN

LOCATION.--Lat 35°17'01", long 86°21'58", Moore County, Hydrologic Unit 06030003, at mouth of Jack Daniel Cave at Jack Daniel Distillery, 0.5 mi (0.8 km) east of Lynchburg.

PERIOD OF RECORD.--April 1970 to June 1978 (discontinued).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 805.35 ft (245.471 m) Tennessee Valley Authority datum.

REMARKS.--Records good. Recording rain gages located at station.

AVERAGE DISCHARGE.--7 years, 2.55 ft^3/s (0.072 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 184 ft^3/s (5.21 m^3/s) Mar. 16, 1973, gage height, 3.69 ft (1.125 m); no flow for part of Sept. 12, 1971, Dec. 6, 7, 1976, caused by drainage of reservoir; minimum discharge unaffected by regulation, 0.45 ft^3/s (0.013 m^3/s) several days in September and October 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 10 ft^3/s (0.283 m^3/s) and maximum (*) during period October 1977 to June 1978:

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)
Nov. 21	1530	14	0.396	1.90	0.579	Mar. 14	0930	15	0.425	1.97	0.600
Nov. 29	1600	19	0.538	2.16	0.658	May 8	2130	*29	0.821	2.48	0.756
Mar. 10	0900	12	0.340	1.85	0.564						

Minimum discharge, 0.71 ft^3/s (0.02 m^3/s) Apr. 18, gage height, 1.31 ft (0.399 m).

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER 1977 TO JUNE 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.0	7.6	1.9	3.0	1.1	1.7	2.4	1.2			
2	2.5	1.0	5.5	1.8	2.7	1.1	1.6	2.9	1.2			
3	2.1	1.0	4.6	1.6	2.5	1.5	1.6	2.5	1.2			
4	1.9	1.0	4.0	1.5	2.3	1.6	1.6	2.4	1.2			
5	1.7	6.4	3.6	1.5	2.1	1.6	1.5	2.2	1.1			
6	1.5	5.1	2.9	1.6	1.9	1.5	1.5	2.0	1.1			
7	1.3	3.6	2.6	1.6	1.8	1.5	1.4	2.4	1.2			
8	2.9	2.9	2.4	1.9	1.8	1.5	1.4	13	4.4			
9	6.6	2.5	2.2	2.3	1.7	1.9	1.4	14	3.9			
10	3.8	2.2	2.0	2.3	1.6	10	1.3	7.1	2.8			
11	3.0	1.9	1.9	2.3	1.6	6.9	1.4	5.0	2.3			
12	2.4	1.7	1.8	2.3	1.5	4.8	1.4	4.1	2.2			
13	2.1	1.6	1.8	2.3	1.6	3.9	1.3	3.8	2.1			
14	1.8	1.5	1.8	2.1	1.5	12	1.2	3.3	1.9			
15	1.7	1.4	1.6	1.9	1.4	9.0	1.2	2.9	1.7			
16	1.5	1.4	1.6	1.8	1.4	6.0	1.2	2.7	1.6			
17	1.4	1.9	1.5	2.2	1.3	4.5	1.2	2.4	1.5			
18	1.3	1.9	1.5	2.7	1.3	3.7	1.4	2.1	1.4			
19	1.2	1.9	1.5	2.9	1.3	3.5	1.6	2.0	2.0			
20	1.1	1.8	1.5	2.9	1.2	3.2	1.5	1.9	2.0			
21	.97	7.7	1.4	2.5	1.2	3.0	1.4	1.8	1.9			
22	.94	9.2	1.4	2.4	1.2	2.8	1.3	1.7	1.8			
23	.88	7.4	1.3	2.3	1.2	2.6	1.3	1.6	1.8			
24	.88	5.2	1.5	3.2	1.2	2.5	1.2	1.5	1.5			
25	1.3	4.2	2.3	7.5	1.2	2.3	1.2	1.5	1.5			
26	1.5	3.4	2.6	8.4	1.1	2.2	1.3	1.4	1.4			
27	1.4	3.2	2.6	6.2	1.1	2.1	1.2	1.4	1.4			
28	1.3	3.9	2.3	4.7	1.1	1.9	1.2	1.4	1.2			
29	1.2	15	2.1	3.9	---	1.9	1.2	1.3	1.2			
30	1.2	13	2.1	3.5	---	1.8	1.3	1.2	1.2			
31	1.1	---	2.0	3.1	---	1.8	---	1.2	---			
TOTAL	55.67	115.9	75.5	89.1	44.8	105.7	41.0	97.1	52.9			
MEAN	1.80	3.86	2.44	2.87	1.60	3.41	1.37	3.13	1.76			
MAX	6.6	15	7.6	8.4	3.0	12	1.7	14	4.4			
MIN	.88	1.0	1.3	1.5	1.1	1.1	1.2	1.2	1.1			

CAL YR 1977 TOTAL 898.14 MEAN 2.46 MAX 71 MIN .55

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 mi^2 (2,142 km^2).

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.--44 years, 1,449 ft^3/s (41.04 m^3/s), 23.79 in/yr (604 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41,600 ft^3/s (1,180 m^3/s) Mar. 16, 1973, gage height, 28.63 ft (8.726 m); minimum, 67 ft^3/s (1.90 m^3/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 ft^3/s (1,050 m^3/s), and flood of Mar. 23, 1929, reached a stage of 27.2 ft (8.29 m), discharge, 36,000 ft^3/s (1,020 m^3/s), from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,200 ft^3/s (346 m^3/s) at 2100 hours Nov. 29, gage height, 17.60 ft (5.364 m); minimum, 129 ft^3/s (3.65 m^3/s) Aug. 2.

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	1320	2820	2630	587	1400	332	279	993	1320	1440	276	415
2	4030	3060	4840	479	1040	611	259	844	1540	270	261	450
3	2240	2760	6370	839	1000	1060	245	551	2030	2340	458	203
4	1940	2950	6940	1770	1250	790	235	547	314	765	446	185
5	2000	9700	6330	2070	2150	442	230	487	261	376	508	270
6	1780	4960	5780	2130	2140	611	223	389	479	431	240	415
7	1670	2250	6570	1830	2560	854	332	815	520	382	208	415
8	2680	2730	5350	834	2740	650	220	4220	2760	351	450	415
9	3600	3270	4100	1720	2580	726	210	7060	1310	225	619	423
10	1880	3550	4020	3000	917	3580	215	1560	583	305	595	203
11	2060	4310	3940	2850	603	1930	235	1200	434	446	595	193
12	2780	3520	3920	2810	323	1180	238	2510	849	344	619	438
13	2890	3020	3870	2760	659	849	210	1030	2610	341	238	430
14	2810	2950	2770	1840	1250	4310	193	711	2290	366	223	415
15	2630	2860	3900	531	2150	2280	183	805	2100	338	454	450
16	2610	1720	3890	780	1450	1700	178	2490	2090	329	454	450
17	2580	2670	3930	2400	968	3150	170	2530	2010	243	1020	200
18	2550	2450	4040	1340	571	3010	287	2450	332	320	520	180
19	2550	3100	4000	1320	284	2510	376	2420	1150	555	632	1040
20	2550	2250	3960	1370	512	993	276	2390	1440	344	245	943
21	2510	4530	3930	1580	863	2740	225	2110	1250	983	220	450
22	1610	6040	3890	607	1250	2810	200	583	1190	632	446	450
23	2050	5220	3860	863	587	2730	185	1240	740	183	512	446
24	624	4040	3400	3020	487	2610	178	1420	1090	173	454	205
25	2170	3570	3810	3780	780	2370	259	1440	261	844	434	188
26	1770	4320	2790	4780	228	512	323	299	238	917	450	450
27	2240	4500	3390	4920	259	415	259	1370	628	805	210	407
28	2180	5380	4080	3720	454	373	220	760	678	785	190	411
29	1880	9950	3980	2550	---	332	200	351	937	780	442	411
30	458	6380	3270	1120	---	308	240	305	1540	193	407	438
31	571	---	2100	2440	---	287	---	1280	---	193	434	---
TOTAL	67213	120830	129650	62640	31455	47055	7083	47160	34974	16999	13260	11989
MEAN	2168	4028	4182	2021	1123	1518	236	1521	1166	548	428	400
MAX	4030	9950	6940	4920	2740	4310	376	7060	2760	2340	1020	1040
MIN	458	1720	2100	479	228	287	170	299	238	173	190	180

CAL YR 1977 TOTAL 722985 MEAN 1981 MAX 18700 MIN 164 MEAN‡ 1987 CFSM‡ 2.40 IN‡ 32.62
WTR YR 1978 TOTAL 590308 MEAN 1617 MAX 9950 MIN 170 MEAN‡ 1573 CFSM‡ 1.90 IN‡ 25.83

‡ Adjusted for change in contents in Woods Reservoir and Tims Ford Lake.

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 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	ALKA-LINITY (MG/L AS CACO3)
OCT									
04...	1450	1120	250	--	14.5	--	--	--	--
DEC									
05...	1453	6490	--	--	19.7	--	--	--	--
12...	0930	3900	170	8.0	17.0	5	3	13	72
MAR									
07...	1550	414	220	--	8.0	--	--	--	--
27...	1100	415	230	7.9	14.0	7	5	2	100
APR									
28...	1300	256	--	--	--	--	--	--	--
JUN									
13...	0945	--	180	7.8	25.0	5	15	6	73
AUG									
01...	1630	266	200	--	24.5	--	--	--	--
SEP									
07...	1450	590	200	--	19.0	--	--	--	--
12...	1145	--	190	7.6	24.0	9	5	5	81

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)	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)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)
DEC										
12...	25	3.2	1.6	1.0	7.0	--	100	.14	1050	.48
MAR										
27...	42	4.5	2.2	.4	8.0	7.0	130	.18	146	.99
JUN										
13...	27	3.1	1.3	.8	13	3.0	--	--	--	.74
SEP										
12...	32	3.7	1.3	1.5	10	4.0	110	.15	--	.41

DATE	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (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)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)
DEC									
12...	.05	.03	90	<2	50	<1	<5	20	120
MAR									
27...	.12	.04	90	<2	130	<1	<5	6	190
JUN									
13...	.10	.08	380	<2	100	<1	<5	20	550
SEP									
12...	.15	.05	390	<2	100	2	<5	40	380

DATE	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)
DEC									
12...	<10	<10	70	<10	<.2	<50	<1	70	.8
MAR									
27...	13	<10	36	21	<.2	<10	<1	60	<.2
JUN									
13...	30	<10	120	20	<.2	<10	<1	20	2.3
SEP									
12...	<50	<10	60	30	<.2	<10	<1	80	1.7

03582400 ELK RIVER AT FAYETTEVILLE, TN

LOCATION.--Lat 35°08'32", long 86°34'10", Lincoln County, Hydrologic Unit 06030003, on right bank of U. S. Highway 231 and 431 bridge at Fayetteville, and at mile 89.8 (144.5 km).

DRAINAGE AREA.--895 mi^2 (2,318 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1975 to February 1978 (discontinued).

INSTRUMENTATION.--Temperature recorder since Oct. 1, 1975.

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 28.0°C July 17, 1977; minimum, 0.0°C several days in winter months 1976-78.

EXTREMES FOR CURRENT PERIOD.--
WATER TEMPERATURES: Maximum, October to February, 21.0°C Oct. 1, 2; minimum 0.0°C Feb. 6-8, 19-24.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977 TO FEBRUARY 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.0	17.0	18.0	15.5	14.0	14.5	14.5	11.0	13.0	10.5	6.5	9.5
2	21.0	19.0	20.0	15.0	14.5	15.0	13.0	10.5	12.0	6.5	4.0	5.5
3	19.0	16.5	18.0	15.0	14.0	14.5	13.5	12.0	13.0	6.5	3.0	4.5
4	17.0	14.5	15.0	15.5	14.0	15.0	14.5	13.5	14.0	9.5	3.0	6.5
5	16.0	14.5	15.0	16.5	15.5	16.0	14.5	12.0	14.0	10.0	8.0	9.5
6	15.5	14.5	15.0	16.0	15.5	16.0	13.0	10.0	11.0	10.0	8.5	9.5
7	16.0	14.5	15.0	16.0	15.5	16.0	13.0	10.0	11.5	11.0	8.5	10.5
8	18.0	15.0	16.5	15.5	14.5	15.0	13.0	11.0	12.0	11.0	5.0	9.5
9	18.0	16.0	16.5	15.0	14.5	15.0	12.0	8.5	10.0	9.0	4.0	6.0
10	16.5	15.0	16.0	14.5	12.0	13.5	11.0	8.5	9.5	8.5	2.0	4.0
11	15.5	14.5	15.0	13.5	11.5	13.0	11.5	8.0	9.5	8.0	2.0	6.0
12	14.5	14.0	14.0	13.5	11.0	12.0	12.0	8.0	11.0	9.0	6.5	8.5
13	14.0	13.5	14.0	13.5	11.0	12.0	12.0	11.5	11.5	9.5	6.5	8.5
14	14.5	13.0	13.5	13.5	11.0	13.0	12.0	11.5	12.0	7.0	5.5	6.0
15	14.5	13.0	14.0	14.0	11.5	13.5	12.0	9.5	11.0	7.0	3.0	4.5
16	14.5	13.0	14.0	14.5	13.0	14.0	11.5	9.5	10.5	6.5	3.5	5.5
17	14.5	13.0	13.5	14.5	12.0	14.0	11.5	10.5	11.0	8.0	5.5	6.5
18	14.5	13.5	14.0	13.5	11.5	13.0	11.5	9.5	11.0	6.0	5.0	5.5
19	14.5	13.5	14.0	14.0	11.5	13.5	11.5	9.0	11.0	6.0	4.0	5.0
20	14.5	13.5	14.0	14.5	14.0	14.5	11.5	9.0	10.5	5.5	4.0	4.5
21	14.5	13.5	14.0	14.5	13.5	14.0	10.0	8.0	9.0	6.0	3.0	4.5
22	15.0	13.5	14.5	14.0	13.0	13.5	10.0	8.0	9.0	7.0	3.0	5.0
23	15.0	14.0	14.5	14.5	14.0	14.5	11.0	9.0	10.0	8.5	1.0	5.0
24	15.5	14.5	15.0	15.0	14.5	15.0	11.5	10.5	11.0	9.0	5.5	8.0
25	16.0	15.0	15.5	14.5	12.0	13.5	11.0	7.0	9.0	10.0	4.5	8.5
26	16.0	15.5	16.0	13.5	10.5	11.5	10.0	5.0	6.0	9.0	3.0	7.0
27	16.0	15.0	15.5	14.0	11.0	12.0	9.5	5.0	6.0	8.0	3.0	5.0
28	16.0	15.0	15.0	13.5	11.5	13.0	10.5	6.0	8.5	8.0	2.0	3.5
29	15.5	15.0	15.0	13.5	11.5	12.0	10.5	6.0	8.5	7.0	2.0	3.0
30	16.0	15.0	15.5	15.0	13.5	14.5	11.0	6.0	11.0	4.5	1.5	3.5
31	16.0	15.5	15.5	---	---	---	11.0	10.0	10.5	7.0	4.5	5.5
MONTH	21.0	13.0	15.0	16.5	10.5	14.0	14.5	5.0	10.5	11.0	1.0	6.5

03582400 ELK RIVER AT FAYETTEVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977 TO FEBRUARY 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.0	4.0	6.0									
2	7.0	4.5	6.0									
3	7.0	4.0	5.5									
4	8.5	3.5	6.0									
5	5.5	2.0	4.5									
6	3.0	.0	1.5									
7	3.5	.0	1.0									
8	6.0	.0	3.5									
9	6.5	1.0	3.0									
10	5.5	.5	3.0									
11	6.0	.5	3.5									
12	7.0	1.0	4.0									
13	8.0	5.0	6.5									
14	6.0	3.0	4.5									
15	4.5	2.0	3.5									
16	7.0	3.5	5.0									
17	8.0	3.5	5.5									
18	5.0	1.0	3.5									
19	6.5	.0	2.0									
20	5.5	.0	3.0									
21	4.5	.0	1.5									
22	6.0	.0	1.5									
23	4.5	.0	3.5									
24	6.0	.0	3.5									
25	7.0	2.0	5.5									
26	8.0	1.5	4.5									
27	6.5	1.0	4.5									
28	6.5	4.0	5.5									
29	---	---	---									
30	---	---	---									
31	---	---	---									
MONTH	8.5	.0	4.0									

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 mi^2 (4,621 km^2).

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 temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--62 years (1905-7, 1920-78), 3,077 ft^3/s (87.14 m^3/s), 23.42 in/yr (595 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 117,000 ft^3/s (3,310 m^3/s) Mar. 17, 1973, gage height, 40.12 ft (12.229 m), from rating curve extended above 63,000 ft^3/s (1,780 m^3/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 ft^3/s (2.21 m^3/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 ft^3/s, (3,680 m^3/s), and may have been equaled by a flood in March 1897, from reports of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34,300 ft^3/s (971 m^3/s), at 1530 hours May 9, gage height, 29.24 ft (8.912 m); minimum, 257 ft^3/s (7.28 m^3/s) Sept. 5, 6.

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	2720	1810	19000	2860	3790	1010	1130	1020	1880	1910	392	523
2	5200	3480	8930	1750	3070	975	1050	2160	1970	1580	391	523
3	6170	3870	9000	1520	2400	2750	978	1640	2510	3660	434	530
4	3500	8360	9490	2370	2440	3730	910	1710	2200	3260	787	375
5	2940	19000	9490	2680	2930	2710	859	2180	828	1360	762	268
6	2710	23400	8330	3210	3310	2150	819	1750	662	861	778	287
7	2420	16900	8080	3560	3320	2210	780	3470	970	819	523	428
8	3530	6250	8130	2750	3590	2240	845	15700	8080	762	385	462
9	10800	5380	6570	2750	3720	3330	729	32600	8450	700	572	467
10	6940	5190	5800	3970	2970	13000	687	26200	3400	731	828	467
11	4260	5100	5500	4440	1710	12000	777	7070	2090	787	795	356
12	3600	5670	5340	4280	1290	6390	857	4970	1750	778	795	268
13	3850	4560	5310	4260	1100	4360	801	5290	3010	685	811	428
14	3840	4090	4980	3780	1780	13400	674	4440	3670	770	496	551
15	3630	3970	4780	2590	2650	15900	600	3070	3060	901	366	551
16	3370	3340	5370	1620	2730	8090	561	3440	2920	746	516	609
17	3280	5190	5390	5180	1960	5990	541	4110	2830	677	1290	572
18	3210	5470	5690	2890	1800	5870	707	3970	2140	544	1280	401
19	3140	4720	5730	2850	1190	5250	1050	3880	1750	530	819	279
20	3100	4640	5610	2960	914	3780	1170	3740	2570	770	828	970
21	3070	10400	5420	3410	1160	3540	887	3650	2150	654	445	954
22	2730	19500	5270	1230	1530	4600	725	2960	1940	1080	343	544
23	2330	18300	5130	1820	1820	4440	633	1780	1700	828	484	510
24	1860	10400	5150	4610	1140	4250	587	2050	1380	450	647	496
25	2190	7430	6780	12400	1110	4150	714	2260	1450	406	587	370
26	4510	6340	5700	14600	1190	3310	937	1990	778	1560	523	279
27	3460	6880	4490	12700	707	1830	884	1060	631	1710	530	396
28	3360	8800	5080	9080	702	1600	751	1930	885	1630	370	456
29	3240	16000	5460	6640	---	1440	632	1330	939	1240	272	462
30	2260	22200	5380	4110	---	1300	568	923	1550	1070	434	467
31	1170	---	4330	3750	---	1200	---	1040	---	537	503	---
TOTAL	112390	266640	204710	136620	58023	146795	23843	153383	70143	33996	18986	14249
MEAN	3625	8888	6604	4407	2072	4735	795	4948	2338	1097	612	475
MAX	10800	23400	19000	14600	3790	15900	1170	32600	8450	3660	1290	970
MIN	1170	1810	4330	1230	702	975	541	923	631	406	272	268

CAL YR 1977 TOTAL 1491121 MEAN 4085 MAX 38300 MIN 187 MEAN‡ 4092 CFSM‡ 2.29 IN.‡ 31.13
WTR YR 1978 TOTAL 1239778 MEAN 3397 MAX 32600 MIN 268 MEAN‡ 3353 CFSM‡ 1.88 IN.‡ 25.51

‡ Adjusted for change in contents in Woods Reservoir and Tims Ford Lake.

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 mi^2 (143.5 km^2).

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 5 ft^3/s (0.14 m^3/s) was 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.--12 years (water years 1933, 1968-78), 110 ft^3/s (3.115 m^3/s), 26.96 in/yr (685 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,200 ft^3/s (430 m^3/s) Mar. 15, 1973, gage height, 18.71 ft (5.703 m), from rating curve extended above 6,700 ft^3/s (190 m^3/s) on basis of computation of peak flow over dam; minimum daily, 19 ft^3/s (0.54 m^3/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 ft^3/s (651 m^3/s); flood of Mar. 21, 1955, reached a stage of 17.2 ft (5.24 m), present site and datum, discharge 18,000 ft^3/s (510 m^3/s), from report of Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft^3/s (60.0 m^3/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)
Nov. 5	0600	3500	99.1	6.99	2.131	Jan. 25	2030	1990	56.4	5.42	1.652
Nov. 21	1015	2770	78.4	6.38	1.945	Mar. 14	0315	4190	119	7.63	2.326
Nov. 29	1545	2390	67.7	5.88	1.792	May 8	1230	*6350	180	9.60	2.926

Minimum daily discharge, 19 ft^3/s (0.54 m^3/s) Nov. 2.

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	58	21	499	88	95	64	73	70	54	45	32	38
2	65	19	237	82	94	71	71	49	53	50	33	38
3	47	260	173	74	89	151	68	56	53	90	37	37
4	43	235	163	67	88	95	67	150	51	44	37	36
5	39	1770	165	67	88	82	66	72	49	44	56	31
6	39	245	111	72	80	79	66	61	54	43	42	23
7	38	146	96	73	75	76	62	604	76	43	37	24
8	257	119	95	113	73	75	56	1950	296	43	39	23
9	143	102	123	88	73	277	71	362	80	47	39	24
10	73	88	98	73	71	357	65	171	66	42	38	25
11	60	79	92	69	72	156	88	130	61	40	38	27
12	55	73	89	71	71	130	69	118	62	39	38	26
13	52	70	89	71	86	151	61	239	73	42	39	25
14	49	50	101	70	80	1380	57	115	56	40	37	26
15	47	31	92	67	74	221	55	100	53	42	36	26
16	44	94	85	71	72	161	58	93	53	42	40	25
17	43	245	110	173	72	136	55	87	51	39	92	25
18	40	67	126	103	72	121	70	86	49	38	40	26
19	39	51	95	91	69	110	75	107	67	37	38	25
20	36	56	89	84	66	101	52	80	55	37	37	25
21	29	1240	86	81	64	107	52	76	50	36	36	25
22	30	338	88	78	62	109	53	72	69	37	36	26
23	29	182	86	76	62	94	55	69	50	37	36	26
24	27	110	350	366	62	97	55	65	49	36	37	26
25	312	91	191	884	63	162	60	62	47	43	36	25
26	103	77	108	388	61	99	53	126	48	40	37	26
27	58	181	97	168	59	91	50	87	45	40	36	27
28	30	138	90	136	67	84	49	64	44	37	34	27
29	29	1300	86	118	---	81	52	60	43	36	34	26
30	25	577	91	106	---	77	58	56	43	37	44	32
31	22	---	92	98	---	74	---	56	---	34	38	---
TOTAL	1961	8055	4093	4166	2060	5069	1842	5493	1900	1300	1229	821
MEAN	63.3	269	132	134	73.6	164	61.4	177	63.3	41.9	39.6	27.4
MAX	312	1770	499	884	95	1380	88	1950	296	90	92	38
MIN	22	19	85	67	59	64	49	49	43	34	32	23
CFSM	1.14	4.86	2.38	2.42	1.33	2.96	1.11	3.20	1.14	.76	.72	.50
IN.	1.32	5.41	2.75	2.80	1.38	3.40	1.24	3.69	1.28	.87	.83	.55

CAL YR 1977 TOTAL 39785 MEAN 109 MAX 3020 MIN 19 CFSM 1.97 IN 26.71
WTR YR 1978 TOTAL 37989 MEAN 104 MAX 1950 MIN 19 CFSM 1.88 IN 25.51

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 mi^2 (111 km^2).

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.--16 years, 84.4 ft^3/s (2.390 m^3/s) 26.65 in/yr (677 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,900 ft^3/s (507 m^3/s) Mar. 15, 1973, gage height, 14.74 ft (4.493 m), from rating curve extended above 4,100 ft^3/s (116 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 8.4 ft^3/s (0.24 m^3/s) July 28, 29, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1200 ft^3/s (34.0 m^3/s) (revised) and maximum (*), from rating curve extended above 4,100 ft^3/s (116 m^3/s) on basis of contracted-opening measurement:

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)	Date	Time	Dicharge (ft^3/s)	Dicharge (m^3/s)	Gage height (ft)	Gage height (m)
Nov. 5	1200	1700	48.1	7.57	2.307	Jan. 26	0015	1240	35.1	6.70	2.042
Nov. 21	1445	1880	53.2	7.84	2.390	Mar. 14	0700	*3930	111	9.74	2.969
Nov. 29	1645	2900	82.1	8.91	2.716	May 8	1500	2630	74.5	8.66	2.640

Minimum discharge, 17 ft^3/s (0.48 m^3/s) Sept. 7.

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	89	52	604	57	84	44	67	84	39	33	25	23
2	67	47	332	52	78	50	62	66	38	31	25	23
3	52	154	216	49	70	98	58	66	40	244	27	22
4	44	363	168	47	64	90	56	147	38	53	28	20
5	39	1120	147	48	61	83	53	115	36	40	29	20
6	36	485	115	51	56	77	52	93	36	35	32	19
7	33	247	95	48	52	71	50	692	78	33	29	18
8	133	145	87	70	51	67	48	1540	135	31	29	18
9	197	107	93	80	50	154	49	728	84	31	30	18
10	108	84	76	76	48	313	52	321	59	31	29	18
11	80	70	70	70	47	256	73	192	49	31	28	19
12	64	61	67	71	46	178	58	141	45	31	32	41
13	53	53	66	68	56	163	56	137	47	31	29	26
14	47	48	66	62	50	1740	52	103	40	36	27	29
15	42	45	59	57	46	498	51	87	37	34	26	26
16	39	83	56	56	45	286	50	78	36	32	27	23
17	36	180	58	149	44	180	49	68	35	30	50	23
18	34	127	62	135	44	133	70	71	34	28	25	21
19	33	100	57	121	43	110	59	100	46	27	23	20
20	31	95	56	105	42	95	56	63	40	27	43	20
21	30	1180	53	89	43	93	53	58	53	27	27	20
22	29	664	51	78	41	84	51	53	40	25	24	20
23	29	321	49	71	42	74	52	52	40	25	23	21
24	29	195	89	137	41	74	52	48	36	25	23	21
25	437	135	127	482	40	161	58	45	34	27	21	20
26	366	103	95	776	40	125	55	43	33	67	21	19
27	173	141	83	332	39	108	51	46	32	33	21	19
28	112	158	71	203	45	95	49	42	31	31	20	20
29	87	1370	66	141	---	84	48	59	30	29	20	20
30	71	945	67	112	---	77	51	45	32	28	25	20
31	61	---	62	97	---	71	---	40	---	24	24	---
TOTAL	2681	8878	3363	3990	1408	5732	1641	5423	1353	1210	842	647
MEAN	86.5	296	108	129	50.3	185	54.7	175	45.1	39.0	27.2	21.6
MAX	437	1370	604	776	84	1740	73	1540	135	244	50	41
MIN	29	45	49	47	39	44	48	40	30	24	20	18
CFSM	2.01	6.88	2.51	3.00	1.17	4.30	1.27	4.07	1.05	.91	.63	.50
IN.	2.32	7.68	2.91	3.45	1.22	4.96	1.42	4.69	1.17	1.05	.73	.56

CAL YR 1977 TOTAL 37857 MEAN 104 MAX 3130 MIN 11 CFSM 2.42 IN 32.75
WTR YR 1978 TOTAL 37168 MEAN 102 MAX 1740 MIN 18 CFSM 2.37 IN 32.15

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 mi^2 (901 km^2).

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 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.--53 years, 644 ft^3/s (18.24 m^3/s) 25.13 in/yr (638 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 132,000 ft^3/s (3,740 m^3/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 ft^3/s (1,416 m^3/s) on basis of slope-area measurement made 1,500 ft (457 m) downstream; minimum, 38 ft^3/s (1.08 m^3/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 ft^3/s (184 m^3/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)
Nov. 5	2045	9160	259	13.20	4.023	Jan. 26	0915	6850	194	11.28	3.438
Nov. 21	2315	11000	312	14.22	4.334	Mar. 14	1445	12700	360	15.08	4.596
Nov. 30	0200	12300	348	14.89	4.538	May 8	2230	*15200	430	16.01	4.880

Minimum discharge, 98 ft^3/s (2.78 m^3/s) Sept. 9, gage height, 2.21 ft (.674 m).

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	653	433	3980	529	754	413	551	655	398	292	170	153
2	505	377	2360	497	707	418	525	604	386	289	168	150
3	407	495	1670	468	646	783	503	574	396	1100	168	140
4	325	1790	1350	447	609	844	484	1140	376	516	183	130
5	284	5590	1230	441	582	738	473	1130	361	332	196	123
6	251	3770	1020	472	549	679	464	853	355	272	237	118
7	229	1710	821	472	518	632	451	2780	597	251	203	110
8	509	1200	739	548	498	603	435	9980	1610	242	183	105
9	1390	926	785	753	489	879	434	7490	1120	232	206	100
10	857	747	704	689	474	2320	579	2350	724	269	186	100
11	622	628	640	631	462	1870	634	1570	586	232	178	113
12	506	557	620	618	450	1420	597	1230	524	226	186	168
13	426	502	606	607	495	1130	528	1410	525	216	178	155
14	370	463	618	561	501	8430	488	1070	464	296	173	165
15	333	436	590	520	458	3430	466	866	418	248	158	163
16	300	547	554	498	441	1900	450	770	396	237	145	153
17	274	1670	559	1060	430	1400	440	694	375	213	675	140
18	259	1260	644	1180	423	1110	537	650	358	198	299	135
19	247	922	605	1020	411	945	536	855	420	191	198	125
20	235	787	579	891	401	824	487	662	422	186	196	120
21	226	5760	548	749	408	779	462	613	416	178	181	120
22	219	5450	523	668	386	748	445	566	417	173	160	120
23	211	2240	502	618	394	673	444	544	454	173	155	125
24	206	1520	503	905	387	639	450	515	372	170	150	130
25	1370	1160	1190	2590	379	947	508	484	341	168	143	128
26	2140	925	798	5190	369	893	495	464	321	306	138	120
27	1160	909	676	2310	358	775	461	598	307	232	133	120
28	812	1300	604	1570	404	706	437	484	292	232	128	125
29	649	5040	561	1210	---	653	422	482	280	196	123	125
30	553	7710	568	982	---	610	436	449	274	178	155	120
31	488	---	555	843	---	577	---	420	---	173	175	---
TOTAL	17016	56824	27702	30537	13383	38768	14622	42952	14285	8217	5927	3899
MEAN	549	1894	894	985	478	1251	487	1386	476	265	191	130
MAX	2140	7710	3980	5190	754	8430	634	9980	1610	1100	675	168
MIN	206	377	502	441	358	413	422	420	274	168	123	100
CFSM	1.58	5.44	2.57	2.83	1.37	3.60	1.40	3.98	1.37	.76	.55	.37
IN.	1.82	6.07	2.96	3.26	1.43	4.14	1.56	4.59	1.53	.88	.63	.42

CAL YR 1977 TOTAL 292023 MEAN 800 MAX 21800 MIN 93 CFSM 2.30 IN 31.22
WTR YR 1978 TOTAL 274132 MEAN 751 MAX 9980 MIN 100 CFSM 2.16 IN 29.30

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 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	ALKALINITY (MG/L AS CACO3)
OCT										
06...	1320	--	--	250	130	--	17.5	--	--	--
11...	0945	50	2.0	629	120	7.5	15.0	5	3	46
JAN										
17...	1000	50	2.0	1115	93	7.4	4.0	8	13	45
APR										
11...	1020	50	2.0	593	110	8.0	18.0	8	6	50
MAY										
02...	1345	--	--	605	130	--	14.5	--	--	--
JUL										
06...	1330	--	--	271	125	--	23.5	--	--	--
25...	0935	60	1.0	--	130	8.1	25.0	7	6	55
AUG										
04...	1315	--	--	183	140	--	23.5	--	--	--
SEP										
12...	1625	--	--	198	--	--	24.5	--	--	--

DATE	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	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)	SULFATE DISSOLVED (MG/L AS SO4)
OCT										
11...	8.9	--	2.0	8200	60	30	2.5	.9	1.1	4.0
JAN										
17...	11.9	2	1.8	20000	600	14	1.7	1.8	.9	6.0
APR										
11...	8.5	11	1.6	6400	1300	17	1.9	2.3	.5	6.0
JUL										
25...	8.8	4	1.4	10000	40	20	2.2	2.7	1.5	4.0

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	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)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)
OCT										
11...	4.0	70	.10	119	.64	.04	.07	.05	<200	<1
JAN										
17...	2.0	50	.07	151	.60	.03	.07	.06	300	<1
APR										
11...	3.0	70	.10	112	.64	.01	.09	.11	160	<1
JUL										
25...	4.0	80	.11	--	.46	.02	.08	.03	120	<1

DATE	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)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT									
11...	20	160	140	<10	40	40	<.4	520	.7
JAN									
17...	<10	310	40	<10	34	12	<.2	70	1.6
APR									
11...	38	160	54	<10	27	15	<.2	60	1.3
JUL									
25...	30	190	<10	<10	40	--	<.2	<10	1.1

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 mi^2 (85,000 km^2), approximately.

PERIOD OF RECORD.--Water years 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, 119 micromhos Aug. 16-18, 1976.
WATER TEMPERATURE: Maximum, 31.5°C July 7, 1978; minimum, 2.0°C Feb. 8, 9, 1978.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 326 micromhos Sept. 18, 19, 1978; minimum, 124 micromhos May 10, June 7, 1978.
WATER TEMPERATURE: Maximum, 31.5°C July 7, 1978; minimum, 2.0°C Feb. 8, 9, 1978.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	TUR-BID-ITY (JTU)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, CHEM-ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT												
19...	1415	63000	158	7.8	17.5	--	6	--	7.8	--	--	--
NOV												
16...	1000	88400	142	7.3	15.0	--	7	--	8.9	--	--	--
DEC												
21...	0930	89600	160	6.4	8.0	17	8	--	12.0	4	<1.0	--
JAN												
24...	1330	102000	170	--	3.5	--	15	--	13.2	--	--	--
MAR												
08...	0930	43700	155	6.2	5.5	--	15	--	13.6	--	--	--
30...	0845	43200	148	7.4	11.0	19	--	--	10.0	8	--	400
APR												
13...	0845	27500	148	7.2	16.5	--	9	--	8.7	--	--	--
MAY												
12...	0900	116000	140	7.3	19.0	--	30	--	8.3	--	--	--
JUN												
06...	1200	87000	145	7.2	24.0	7	10	--	7.8	10	2.6	4100
JUL												
12...	0830	18900	175	7.1	28.5	--	--	5.0	7.2	--	--	--
AUG												
15...	1330	61200	170	7.2	29.0	--	--	5.0	6.4	--	--	--
SEP												
12...	0900	49800	195	7.7	27.0	8	3	4.0	6.8	8	1.1	1900

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM TOTAL RECOVERABLE (MG/L AS CA)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)	SODIUM, TOTAL RECOVERABLE (MG/L AS NA)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO	POTASSIUM, TOTAL RECOVERABLE (MG/L AS K)
OCT 19...	K7	K900	64	5	--	20	--	--	5.0	14	.3	--
NOV 16...	K17	49	57	10	--	18	--	--	4.1	13	.2	--
DEC 21...	57	40	65	16	20	20	3.4	3.4	4.5	13	.2	1.4
JAN 24...	40	90	71	9	--	22	--	--	4.5	12	.2	--
MAR 08...	K19	K90	63	12	--	19	--	--	4.5	13	.2	--
30...	K4	K1	69	19	20	22	3.1	3.1	3.6	10	.2	.8
APR 13...	K1	26	60	9	--	19	--	--	3.5	11	.2	--
MAY 12...	46	K28	57	9	--	18	--	--	4.2	13	.2	--
JUN 06...	190	K13	59	4	20	19	2.8	3.5	3.7	12	.2	1.4
JUL 12...	K2	K5	65	15	--	20	--	--	5.0	14	.3	--
AUG 15...	34	230	67	15	--	20	--	--	6.2	16	.3	--
SEP 12...	K4	190	69	8	22	20	4.5	6.8	7.0	18	.4	1.5

DATE	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)	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)
OCT 19...	1.9	71	0	58	12	6.3	.1	6.0	84	90	.11
NOV 16...	2.1	57	0	47	11	5.3	.1	4.6	88	76	.12
DEC 21...	1.8	60	0	49	13	5.4	.1	5.6	--	84	.12
JAN 24...	1.5	75	0	62	13	5.4	.1	5.4	93	93	.13
MAR 08...	1.2	62	0	51	12	5.4	.1	3.2	89	80	.12
30...	1.3	61	0	50	16	3.6	.1	4.3	--	84	.11
APR 13...	1.4	62	0	51	9.3	4.5	.1	3.4	98	75	.13
MAY 12...	1.3	59	0	48	11	5.6	.1	3.1	83	75	.11
JUN 06...	1.4	67	0	55	10	3.9	.1	4.2	74	78	.10
JUL 12...	1.6	--	--	50	11	6.3	.1	3.8	99	81	.13
AUG 15...	2.0	--	--	52	11	7.1	.1	12	98	94	.13
SEP 12...	1.4	--	--	61	14	8.1	.0	4.8	97	97	.13

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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, AMMONIA + ORGANIC DIS. (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)
OCT 19...	14300	.52	.01	--	.33	.07	.04	--	--	--	--
NOV 16...	21000	.48	.01	--	.34	.07	.03	--	0	0	0
DEC 21...	21300	.58	.05	--	.29	.04	.03	250	--	--	--
JAN 24...	25600	.59	.03	--	.37	.08	.05	--	0	0	0
MAR 08...	10500	.54	.02	.32	.23	.03	.00	--	--	--	--
30...	9800	.63	.09	.35	.32	.05	.03	200	--	--	--
APR 13...	7280	.64	.04	--	.40	.03	.01	--	0	0	0
MAY 12...	26000	.43	.11	.35	.17	.07	.03	--	--	--	--
JUN 06...	17400	.48	.06	.24	.23	.07	.02	760	--	--	--
JUL 12...	5050	.28	.04	--	1.1	.02	.01	--	1	1	0
AUG 15...	16200	.22	.02	--	.73	.06	.03	--	--	--	--
SEP 12...	13000	.19	.06	.32	.17	.03	.01	<100	--	--	--

DATE	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)	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)
OCT 19...	--	--	--	--	--	--	--	--	--	--	--
NOV 16...	0	1	0	<10	0	4	2	4	4	390	50
DEC 21...	--	0	--	--	--	--	--	0	--	320	0
JAN 24...	0	1	1	<10	0	17	8	11	3	1200	10
MAR 08...	--	--	--	--	--	--	--	--	--	--	--
30...	--	<1	--	--	--	--	--	8	--	220	67
APR 13...	0	2	2	<10	1	0	0	5	1	400	10
MAY 12...	--	--	--	--	--	--	--	--	--	--	--
JUN 06...	--	<1	--	--	--	--	--	20	--	520	30
JUL 12...	0	0	1	10	0	2	0	3	1	280	0
AUG 15...	--	--	--	--	--	--	--	--	--	--	--
SEP 12...	--	<1	--	--	--	--	--	<10	--	140	<50

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
OCT 19...	--	--	--	--	--	--	--	--	--	--
NOV 16...	5	0	50	20	<.5	<.5	--	0	0	20
DEC 21...	0	--	0	0	.0	--	<50	--	--	30
JAN 24...	8	3	110	10	<.5	<.5	--	0	0	20
MAR 08...	--	--	--	--	--	--	--	--	--	--
30...	<10	70	20	20	<.2	--	<10	--	--	20
APR 13...	6	0	20	0	<.5	<.5	--	0	0	20
MAY 12...	--	--	--	--	--	--	--	--	--	--
JUN 06...	<10	--	40	20	<.2	--	<10	--	--	30
JUL 12...	0	0	60	10	.5	.5	--	0	0	10
AUG 15...	--	--	--	--	--	--	--	--	--	--
SEP 12...	<10	--	20	<10	<.2	--	<10	--	--	<10

DATE	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	PHYTO-PLANK-TON, TOTAL (CELLS PER ML)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 19...	--	8.4	--	--	72.9	95.7	10	1700	72
NOV 16...	10	--	4.6	73	--	--	17	4060	82
DEC 21...	--	11	--	--	--	--	13	3150	90
JAN 24...	10	--	1.0	--	106	164	92	25300	62
MAR 08...	--	2.4	--	--	--	--	22	2600	59
30...	--	2.7	--	1100	--	--	23	2680	80
APR 13...	0	--	9.0	--	14.2	22.4	8	594	82
MAY 12...	--	5.0	--	140	--	--	20	6260	100
JUN 06...	--	8.1	--	4700	--	--	12	2820	92
JUL 12...	0	--	8.4	790	--	--	30	1530	86
AUG 15...	--	3.3	--	2600	--	--	11	1820	83
SEP 12...	--	3.8	--	6500	--	--	19	2560	32

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	158	157	157	161	159	160	158	130	155			
2	158	158	158	161	160	160	---	---	---			
3	159	159	159	161	159	160	---	---	---			
4	160	158	159	159	156	158	---	---	---			
5	159	158	159	157	155	156	---	---	---			
6	160	159	160	156	154	155	---	---	---			
7	162	161	162	158	155	156	---	---	---			
8	162	159	161	157	155	157	---	---	---			
9	162	161	162	155	153	154	---	---	---			
10	161	161	161	154	153	154	---	---	---			
11	162	160	160	155	153	154	---	---	---			
12	161	161	161	153	147	149	---	---	---			
13	162	161	161	146	143	145	---	---	---			
14	162	161	161	143	141	142	---	---	---			
15	161	159	161	143	139	140	---	---	---			
16	160	158	159	139	138	138	---	---	---			
17	159	158	158	139	137	138	---	---	---			
18	159	157	158	140	139	139	---	---	---			
19	160	158	159	141	140	140	---	---	---			
20	161	159	160	141	140	141	---	---	---			
21	162	160	161	140	139	140	---	---	---			
22	162	160	161	139	137	139	---	---	---			
23	161	161	161	137	130	133	---	---	---			
24	161	160	160	134	129	132	---	---	---			
25	160	158	158	136	133	135	---	---	---			
26	159	157	158	143	136	139	---	---	---			
27	160	158	159	144	141	143	---	---	---			
28	160	158	159	159	140	154	---	---	---			
29	161	159	160	160	159	159	---	---	---			
30	161	160	161	160	158	159	---	---	---			
31	161	160	160	---	---	---	---	---	---			
MONTH	162	157	160	161	129	148	---	---	---			

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	144	143	144	158	153	154
2	---	---	---	---	---	---	144	143	143	155	153	154
3	161	160	161	---	---	---	143	143	143	156	154	154
4	160	159	160	---	---	---	144	143	143	155	153	154
5	159	157	158	---	---	---	144	143	143	157	155	156
6	157	155	156	---	---	---	143	142	143	158	157	157
7	156	155	156	---	---	---	143	142	143	159	154	157
8	155	155	155	---	---	---	143	142	143	155	147	152
9	155	153	154	---	---	---	144	142	143	149	138	143
10	155	152	154	---	---	---	145	143	144	138	124	130
11	154	153	154	---	---	---	146	145	145	130	127	129
12	154	153	153	---	---	---	145	144	145	129	126	127
13	154	152	153	---	---	---	147	145	146	129	126	127
14	154	152	153	---	---	---	147	146	146	133	128	131
15	155	153	154	---	---	---	147	145	146	134	131	133
16	155	153	154	---	---	---	147	146	147	138	134	136
17	156	154	155	---	---	---	148	147	147	139	136	138
18	156	155	156	---	---	---	149	147	148	139	138	139
19	157	155	156	---	---	---	150	149	150	139	137	138
20	156	155	155	---	---	---	151	149	150	138	136	137
21	156	152	154	---	---	---	151	150	150	138	137	138
22	151	151	151	---	---	---	152	150	151	138	138	138
23	---	---	---	---	---	---	154	151	152	139	137	138
24	---	---	---	---	---	---	156	152	152	141	138	139
25	---	---	---	---	---	---	155	151	152	140	135	137
26	---	---	---	---	---	---	153	151	152	138	134	137
27	---	---	---	---	---	---	154	152	152	138	135	136
28	---	---	---	---	---	---	155	152	153	139	132	136
29	---	---	---	142	141	142	158	152	154	140	135	138
30	---	---	---	144	143	143	155	153	153	140	135	138
31	---	---	---	144	143	144	---	---	---	141	136	139
MONTH	---	---	---	---	---	---	158	142	147	159	124	141

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	143	139	141	172	160	163	166	162	164	188	181	184
2	143	140	142	165	162	163	164	162	163	195	186	191
3	145	141	142	170	163	165	164	162	163	200	195	198
4	146	143	144	170	164	165	163	161	163	205	201	203
5	148	146	147	170	165	166	164	162	163	210	204	207
6	150	147	148	171	165	167	164	162	163	208	175	180
7	150	124	145	177	166	170	166	163	165	177	174	176
8	151	148	150	177	167	170	171	165	166	179	177	178
9	155	150	152	178	169	172	168	165	166	180	178	179
10	158	155	156	177	169	172	168	165	167	181	178	180
11	158	156	157	201	169	180	168	166	167	188	179	183
12	158	154	156	240	203	222	169	167	168	198	188	191
13	155	154	154	258	241	251	170	167	169	194	188	191
14	156	153	154	269	259	264	171	169	170	210	191	198
15	156	154	155	272	268	270	193	172	178	243	211	233
16	158	155	157	285	273	279	223	195	206	262	244	253
17	159	156	158	293	284	287	211	185	199	270	260	265
18	160	156	158	306	294	302	198	190	194	326	268	308
19	158	155	156	309	278	295	194	192	193	326	221	244
20	160	153	156	275	258	267	194	185	189	315	207	225
21	160	154	155	267	254	261	190	186	188	314	197	269
22	162	153	155	259	234	248	193	188	190	202	191	195
23	158	153	155	239	211	224	195	190	194	---	---	---
24	158	154	155	218	210	214	200	193	197	---	---	---
25	159	154	156	212	202	207	202	196	199	---	---	---
26	162	157	159	208	193	200	198	187	193	---	---	---
27	163	158	160	198	191	195	195	189	193	---	---	---
28	161	158	160	200	174	187	202	193	198	---	---	---
29	162	160	161	185	169	178	206	199	202	---	---	---
30	165	160	161	182	161	166	204	188	193	---	---	---
31	---	---	---	165	162	163	197	181	185	---	---	---
MONTH	165	124	154	309	160	211	223	161	181	---	---	---

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	23.5	23.5	23.5	18.0	17.0	17.5	12.5	8.5	9.5			
2	23.5	23.0	23.5	18.0	17.5	17.5	---	---	---			
3	23.0	22.5	23.0	18.0	18.0	18.0	---	---	---			
4	22.5	22.0	22.5	18.0	18.0	18.0	---	---	---			
5	22.5	22.0	22.5	18.5	18.0	18.0	---	---	---			
6	22.5	22.0	22.0	18.5	18.0	18.0	---	---	---			
7	22.0	21.5	21.5	18.5	18.0	18.5	---	---	---			
8	21.5	21.0	21.0	18.5	18.0	18.5	---	---	---			
9	21.5	21.0	21.0	18.5	18.0	18.5	---	---	---			
10	21.0	21.0	21.0	18.0	16.5	17.0	---	---	---			
11	21.0	20.0	20.5	16.5	16.5	16.5	---	---	---			
12	19.5	19.0	19.5	16.5	15.5	16.0	---	---	---			
13	19.0	19.0	19.0	16.0	15.5	15.5	---	---	---			
14	19.0	18.5	18.5	16.0	15.5	15.5	---	---	---			
15	18.5	18.0	18.5	15.5	15.5	15.5	---	---	---			
16	18.0	17.5	18.0	15.5	15.5	15.5	---	---	---			
17	18.0	17.5	17.5	15.5	15.5	15.5	---	---	---			
18	17.5	17.5	17.5	15.5	15.0	15.5	---	---	---			
19	18.0	17.5	17.5	15.0	15.0	15.0	---	---	---			
20	17.5	17.5	17.5	15.0	14.5	15.0	---	---	---			
21	17.5	17.5	17.5	15.0	14.5	14.5	---	---	---			
22	18.0	17.5	17.5	14.5	14.5	14.5	---	---	---			
23	18.0	17.5	17.5	14.5	14.5	14.5	---	---	---			
24	18.0	17.5	17.5	14.5	14.5	14.5	---	---	---			
25	17.5	17.5	17.5	14.5	14.0	14.5	---	---	---			
26	18.0	17.5	17.5	14.0	13.5	13.5	---	---	---			
27	18.0	17.5	17.5	13.5	13.0	13.0	---	---	---			
28	18.0	17.5	17.5	13.0	10.5	11.5	---	---	---			
29	18.0	17.5	17.5	11.0	9.5	10.5	---	---	---			
30	18.0	17.0	17.5	10.0	8.5	9.5	---	---	---			
31	17.5	17.5	17.5	---	---	---	---	---	---			
MONTH	23.5	17.0	19.5	18.5	8.5	15.5	---	---	---			

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	13.0	12.0	12.5	---	---	---
2	---	---	---	---	---	---	14.0	13.0	13.5	---	---	---
3	3.5	3.0	3.0	---	---	---	14.5	14.0	14.5	22.0	21.5	21.5
4	3.5	3.0	3.0	---	---	---	15.5	15.0	15.0	---	---	---
5	3.0	3.0	3.0	---	---	---	16.0	15.5	16.0	22.0	22.0	22.0
6	3.0	2.5	3.0	---	---	---	17.0	16.0	16.5	---	---	---
7	3.0	2.5	2.5	---	---	---	17.5	16.5	17.0	---	---	---
8	2.5	2.0	2.5	---	---	---	17.0	16.5	17.0	---	---	---
9	2.5	2.0	2.5	---	---	---	18.0	17.0	17.5	---	---	---
10	3.0	2.5	2.5	---	---	---	20.0	18.0	19.0	---	---	---
11	3.0	2.5	3.0	---	---	---	20.0	18.0	19.5	---	---	---
12	3.5	3.0	3.0	---	---	---	18.5	18.0	18.0	---	---	---
13	3.5	3.5	3.5	---	---	---	18.5	18.0	18.0	---	---	---
14	3.5	3.5	3.5	---	---	---	18.5	18.0	18.0	---	---	---
15	4.0	3.5	3.5	---	---	---	19.0	18.5	19.0	---	---	---
16	4.0	3.5	4.0	---	---	---	19.5	19.0	19.0	---	---	---
17	4.0	4.0	4.0	---	---	---	20.0	19.5	19.5	---	---	---
18	4.0	3.5	3.5	---	---	---	---	---	---	---	---	---
19	3.5	3.5	3.5	---	---	---	---	---	---	---	---	---
20	4.0	3.5	3.5	---	---	---	---	---	---	---	---	---
21	4.0	3.5	3.5	---	---	---	19.5	19.5	19.5	---	---	---
22	3.5	3.5	3.5	---	---	---	20.0	19.0	19.5	---	---	---
23	---	---	---	---	---	---	20.0	20.0	20.0	---	---	---
24	---	---	---	---	---	---	21.0	20.0	20.5	---	---	---
25	---	---	---	---	---	---	20.5	20.0	20.5	---	---	---
26	---	---	---	---	---	---	20.5	20.0	20.5	---	---	---
27	---	---	---	---	---	---	21.0	20.5	20.5	---	---	---
28	---	---	---	---	---	---	21.0	20.5	20.5	---	---	---
29	---	---	---	11.5	11.0	11.5	21.5	20.5	21.0	---	---	---
30	---	---	---	11.5	11.0	11.5	---	---	---	24.5	24.0	24.0
31	---	---	---	12.0	11.5	11.5	---	---	---	24.0	23.0	24.0
MONTH	---	---	---	---	---	---	21.5	12.0	18.0	---	---	---

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	24.0	23.5	24.0	29.5	28.5	29.0	30.0	30.0	30.0	27.5	27.5	27.5
2	24.0	23.0	24.0	30.5	29.0	29.5	30.0	30.0	30.0	27.5	27.5	27.5
3	24.0	23.0	23.5	30.5	29.5	30.0	30.0	30.0	30.0	27.5	27.0	27.0
4	24.0	23.0	23.5	30.0	29.0	29.5	30.0	30.0	30.0	27.0	27.0	27.0
5	24.5	23.5	24.0	30.0	29.0	29.5	30.0	30.0	30.0	27.0	27.0	27.0
6	25.0	24.0	24.5	31.0	30.0	30.5	30.0	29.5	29.5	27.0	27.0	27.0
7	25.5	23.5	25.0	31.5	31.0	31.0	29.5	29.5	29.5	27.0	27.0	27.0
8	26.0	25.0	25.5	31.0	31.0	31.0	29.5	29.0	29.5	27.0	27.0	27.0
9	25.0	24.5	25.0	31.0	31.0	31.0	29.5	29.0	29.0	27.5	27.0	27.0
10	25.5	25.0	25.0	31.0	30.5	31.0	29.5	29.0	29.0	27.0	27.0	27.0
11	26.0	25.0	25.5	30.5	28.5	29.5	29.0	29.0	29.0	27.0	27.0	27.0
12	26.0	25.5	25.5	29.0	28.5	29.0	29.5	29.0	29.0	27.0	27.0	27.0
13	25.5	25.0	25.5	29.5	29.0	29.0	29.5	29.0	29.0	27.5	27.0	27.0
14	25.5	25.0	25.5	29.5	29.0	29.0	29.5	29.0	29.0	27.0	27.0	27.0
15	26.0	25.5	25.5	29.0	29.0	29.0	29.5	29.5	29.5	27.0	27.0	27.0
16	27.0	26.0	26.5	29.0	28.5	29.0	30.0	29.5	29.5	27.5	27.0	27.0
17	27.0	27.0	27.0	29.0	28.5	28.5	29.5	29.5	29.5	27.5	27.0	27.5
18	27.5	27.0	27.0	29.0	28.5	28.5	30.0	29.5	29.5	27.5	23.5	25.0
19	27.5	27.0	27.0	29.5	28.5	29.0	30.0	30.0	30.0	28.5	23.0	27.0
20	27.5	27.0	27.5	30.0	29.0	29.5	30.0	29.0	29.5	28.0	27.0	27.5
21	27.5	27.0	27.5	30.0	29.5	30.0	29.5	29.0	29.5	---	---	---
22	27.0	27.0	27.0	30.0	29.5	30.0	29.0	28.5	29.0	26.5	26.0	26.5
23	27.0	27.0	27.0	30.0	30.0	30.0	29.5	28.5	29.0	---	---	---
24	27.5	27.0	27.0	30.5	30.0	30.0	29.5	29.0	29.5	---	---	---
25	28.5	27.0	27.5	30.5	30.0	30.0	30.0	29.5	29.5	---	---	---
26	29.0	28.0	28.5	30.5	30.0	30.0	30.0	29.5	29.5	---	---	---
27	29.0	28.5	28.5	30.0	30.0	30.0	30.0	29.5	29.5	---	---	---
28	29.5	28.5	28.5	30.0	30.0	30.0	30.0	29.5	30.0	---	---	---
29	29.0	28.5	28.5	30.0	29.5	30.0	29.5	29.0	29.5	---	---	---
30	29.0	28.5	28.5	30.5	30.0	30.0	29.0	28.5	29.0	---	---	---
31	---	---	---	30.5	30.0	30.0	28.5	28.0	28.0	---	---	---
MONTH	29.5	23.0	26.0	31.5	28.5	29.5	30.0	28.0	29.5	---	---	---

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	NOV 16,77		MAR 30,78		MAY 12,78		JUN 6,78	
TIME	1000		0845		0900		1200	
TOTAL CELLS/ML	73		1100		140		4700	
DIVERSITY: DIVISION	1.0		1.8		0.0		1.5	
.CLASS	1.0		1.8		0.0		1.5	
..ORDER	1.3		1.8		0.0		1.9	
...FAMILY	1.3		1.8		0.0		2.0	
....GENUS	1.7		1.8		0.0		2.7	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	--	-	--	-
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	220	5
...HYDRODICTYACEAE								
....PEDIASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	--	-	--	-	--	-
....MICRACTINIUM	--	-	460#	40	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	--	-	--	-	--	-	89	2
....KIRCHNERIELLA	--	-	--	-	--	-	67	1
....SELENASTRUM	--	-	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	--	-	--	-	--	-	89	2
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	--	-	490	10
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	12#	17	110	10	--	-	1300#	28
....MELOSIRA	18#	25	--	-	--	-	1100#	24
..PENNALES								
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	--	-	45	1
...NAVICULACEAE								
....GYROSIGMA	6	8	--	-	--	-	--	-
...NITZSCHIACEAE								
....NITZSCHIA	--	-	--	-	--	-	45	1
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...MALLOMONADACEAE								
....MALLOMONAS	--	-	--	-	--	-	*	0
.XANTHOPHYCEAE								
..HETEROCOCCALES								
...CHLOROTHECIACEAE								
....OPHIOCYTIUM	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTO.ONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	45	1

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 16,77 1000		MAR 30,78 0845		MAY 12,78 0900		JUN 6,78 1200	
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	--	-	--	-	--	-	1100#	23
....ANACYSTIS	37#	50	340#	30	140#	100	67	1
..HORMOGONALES								
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	--	-	--	-
....OSCILLATORIA	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....TRACHELOMONAS	--	-	230#	20	--	-	--	-

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

03593005 TENNESSEE RIVER AT PICKWICK LANDING DAM (LL), TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	JUL 12,78		AUG 15,78		SEP 12,78	
TIME	0830		1330		0900	
TOTAL CELLS/ML	790		26000		6500	
DIVERSITY: DIVISION	1.5		0.2		1.0	
.CLASS	1.5		0.2		1.0	
..ORDER	1.9		0.4		1.1	
...FAMILY	1.9		0.4		1.3	
....GENUS	2.5		0.6		1.5	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	--	-	*	0	*	0
...COELASTRACEAE						
....COELASTRUM	--	-	--	-	--	-
...HYDRODICTYACEAE						
....PEDIASTRUM	--	-	--	-	110	2
...MICRACTINIACEAE						
....GOLENKINIA	--	-	*	0	--	-
....MICRACTINIUM	--	-	--	-	320	5
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	270	1	--	-
....KIRCHNERIELLA	--	-	*	0	--	-
....SELENASTRUM	--	-	*	0	--	-
....TREUBARIA	--	-	--	-	*	0
...SCENEDESMACEAE						
....SCENEDESMUS	120	15	250	1	190	3
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	*	0	69	1
..ZYGNEMATALES						
...DESMIDIACEAE						
....COSMARIUM	15	2	--	-	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	--	-	--	-	55	1
....MELOSIRA	88	11	--	-	550	9
..PENNALES						
...FRAGILARIACEAE						
....ASTERIONELLA	180#	22	--	-	--	-
....SYNEDRA	44	6	--	-	110	2
...NAVICULACEAE						
....GYROSIGMA	--	-	--	-	--	-
...NITZSCHIACEAE						
....NITZSCHIA	--	-	--	-	--	-
.CHRYSOPHYCEAE						
..CHRYSOMONADALES						
...MALLOMONADACEAE						
....MALLOMONAS	--	-	--	-	--	-
.XANTHOPHYCEAE						
..HETEROCOCCALES						
...CHLOROTHECIACEAE						
....OPHIOCYTIUM	--	-	--	-	*	0
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOMONADACEAE						
....CRYPTOMONAS	--	-	--	-	--	-

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	JUL 12,78 0830		AUG 15,78 1330		SEP 12,78 0900	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	24000#	93	4800#	75
....ANACYSTIS	--	-	590	2	180	3
..HORMOGONALES						
...OSCILLATORIACEAE						
....LYNGBYA	180#	22	290	1	--	-
....OSCILLATORIA	180#	22	210	1	--	-
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....TRACHELOMONAS	--	-	*	0	--	-

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

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 mi^2 (85,830 km^2), 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. Since Oct. 1, 1948, auxiliary water-stage recorder on downstream end of lock wall in lower pool at 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. 327 and Water Resources Data for adjoining states, 1978). Flow now almost completely regulated.

AVERAGE DISCHARGE.--48 years, 54,875 ft^3/s (1,554 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 585,000 ft^3/s (16,600 m^3/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 ft^3/s (1.70 m^3/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 ft^3/s (12,700 m^3/s), from rating curve extended above 320,000 ft^3/s (9,060 m^3/s). Flood of Jan. 2, 1927, reached a stage of 92.7 ft (28.25 m), present datum, discharge, 349,000 ft^3/s (9,880 m^3/s). Minimum stage since 1905, 38.8 ft (11.83 m) present datum, Sept. 8, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 221,000 ft^3/s (6,260 m^3/s) Dec. 1; maximum gage height, 79.41 ft (24.204 m) Dec. 1; minimum daily discharge, 14,400 ft^3/s (408 m^3/s) Apr. 18; minimum gage height, 54.82 ft (16.709 m) Sept. 26.

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	59800	78300	217000	80700	144000	52100	22900	21900	33300	34200	29700	31200
2	62000	69800	204000	84800	125000	51700	22100	27800	36900	27300	35000	36000
3	64300	69800	178000	73700	110000	52100	29100	48200	25000	26000	35800	35100
4	61600	70300	159000	73500	93700	59600	28100	58700	16300	36100	31600	34500
5	54700	79500	165000	75000	84200	59300	28100	61200	27800	44100	38400	33200
6	51600	97000	154000	73500	80100	61900	28000	52700	40600	46200	45600	31900
7	52300	109000	144000	64300	72800	69300	28300	70700	33900	40000	36200	29700
8	50400	125000	136000	62000	67100	53300	23200	133000	62000	35000	35900	27400
9	55600	129000	126000	72000	61200	47100	20600	193000	85300	35500	40100	27600
10	73100	124000	120000	90100	61900	67900	23100	156000	78300	35500	45000	26200
11	78800	115000	116000	95600	56000	83400	23900	115000	67300	27300	44600	29700
12	74600	109000	109000	107000	61300	82500	22500	99700	55400	25900	43700	45800
13	70700	108000	104000	103000	55300	87900	27700	83600	58600	29300	46100	32600
14	71800	104000	99800	87000	52300	108000	25000	62100	54200	35700	41700	36900
15	67700	94100	99800	82900	48000	119000	28300	40300	40200	44400	42400	38400
16	61700	88900	96000	82100	57100	119000	23100	53000	30100	40800	42500	41700
17	58000	90400	93000	88100	54200	118000	17600	54100	34800	28300	40000	27100
18	54300	91400	94400	90400	52300	117000	14400	45700	38000	32500	43600	35200
19	47700	94600	93900	94000	51700	116000	22900	42800	30500	34100	45800	38600
20	47300	96600	92400	100000	48900	103000	21600	27400	32100	34400	45600	36800
21	39200	105000	89000	100000	52100	77400	21500	14800	29100	37300	38100	38900
22	45400	123000	86700	99800	52300	61600	20000	22300	32900	34500	38000	36200
23	44900	131000	82100	100000	45700	50900	22200	27700	32800	28300	38700	22200
24	46300	139000	81900	105000	48500	61700	17700	23900	34200	27800	38000	20700
25	56000	142000	83000	120000	48500	53200	19400	31300	31500	26200	42400	22500
26	69900	144000	87800	134000	44800	43400	28000	32200	28500	27300	38900	31400
27	70100	143000	97700	140000	51700	42000	22400	27000	38500	27100	30300	28000
28	72600	147000	101000	145000	49800	42100	22200	24400	42100	29400	36200	32100
29	75800	167000	101000	156000	---	37600	20500	33300	35200	35600	34500	26300
30	78700	212000	98400	156000	---	36500	18100	34000	30300	36000	34600	22200
31	83400	---	87900	155000	---	31800	---	35000	---	33700	35600	---
TOTAL	1900300	3396700	3597800	3090500	1830500	2166300	692500	1752800	1215700	1035800	1214600	956100
MEAN	61300	113200	116100	99690	65380	69880	23080	56540	40520	33410	39180	31870
MAX	83400	212000	217000	156000	144000	119000	29100	193000	85300	46200	46100	45800
MIN	39200	69800	81900	62000	44800	31800	14400	14800	16300	25900	29700	20700

CAL YR 1977 TOTAL 24478700 MEAN 67060 MAX 259000 MIN 19300
WTR YR 1978 TOTAL 22849600 MEAN 62600 MAX 217000 MIN 14400

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 mi^2 (277 km^2).

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

AVERAGE DISCHARGE.--44 years, 187 ft^3/s (5.296 m^3/s), 23.73 in/yr (603 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 38,000 ft^3/s (1,080 m^3/s) May 27, 1973, gage height, 20.95 ft (6.386 m), from rating curve extended above 12,000 ft^3/s (340 m^3/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 ft^3/s (0.23 m^3/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 ft^3/s (1,420 m^3/s). Flood in March 1902 reached approximately same stage.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,500 ft^3/s (70.8 m^3/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)
Nov. 29	2200	2860	81.0	7.47	2.277	May 8	2315	*5050	143	10.24	3.121
Mar. 14	1500	2850	80.7	7.46	2.274	June 8	1515	4310	122	9.40	2.865
May 1	0230	2560	72.5	7.00	2.134						

Minimum discharge, 16 ft^3/s (0.45 m^3/s) Aug. 3.

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	87	60	681	133	182	133	103	1630	60	64	33	77
2	76	57	442	113	176	132	96	584	57	56	27	48
3	79	57	324	90	164	340	91	307	58	282	17	40
4	58	83	670	77	150	263	87	318	53	95	24	35
5	51	202	838	76	158	175	85	289	50	64	69	32
6	47	356	436	99	138	155	82	194	48	54	118	31
7	46	287	293	103	114	145	79	281	72	50	50	30
8	471	207	224	287	104	142	74	2050	3010	46	39	28
9	1010	162	296	515	123	210	81	1980	1340	53	37	26
10	347	255	258	240	118	1550	149	485	395	79	36	26
11	188	153	177	153	109	654	152	285	209	60	35	25
12	139	111	155	131	105	400	163	219	202	49	40	33
13	103	93	151	131	140	313	120	560	666	50	85	29
14	87	83	151	120	207	1950	95	374	250	74	52	27
15	77	76	139	99	175	823	84	263	151	59	39	28
16	69	86	116	90	136	422	78	229	116	59	37	27
17	63	347	135	235	132	312	74	181	99	48	90	27
18	58	271	240	392	124	273	198	149	87	43	59	25
19	56	164	175	253	112	227	260	124	330	41	40	24
20	53	131	141	209	103	193	149	107	212	38	35	24
21	51	1040	113	175	102	190	109	97	128	38	33	24
22	49	1450	97	149	98	282	91	87	97	36	31	25
23	50	1090	86	133	97	220	82	79	82	35	30	25
24	52	518	97	353	95	180	77	74	74	34	29	26
25	82	365	491	1100	101	187	74	69	67	46	29	26
26	128	266	293	1010	99	202	80	64	60	77	44	24
27	100	332	185	437	91	168	92	59	57	72	67	24
28	83	896	135	297	100	146	81	82	53	41	39	24
29	72	2070	107	228	---	130	71	380	54	38	33	24
30	65	1470	118	189	---	118	865	103	76	35	32	25
31	63	---	145	202	---	109	---	74	---	34	139	---
TOTAL	3960	12738	7909	7819	3553	10744	3922	11777	8213	1850	1468	889
MEAN	128	425	255	252	127	347	131	380	274	59.7	47.4	29.6
MAX	1010	2070	838	1100	207	1950	865	2050	3010	282	139	77
MIN	46	57	86	76	91	109	71	59	48	34	17	24
CFSM	1.20	3.97	2.38	2.36	1.19	3.24	1.22	3.55	2.56	.56	.44	.28
IN.	1.38	4.43	2.75	2.72	1.24	3.74	1.36	4.09	2.86	.64	.51	.31

CAL YR 1977 TOTAL 76548 MEAN 210 MAX 7890 MIN 29 CFSM 1.96 IN 26.61
WTR YR 1978 TOTAL 74842 MEAN 205 MAX 3010 MIN 17 CFSM 1.92 IN 26.02

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 Aug. 21-31, instrument malfunction.

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, 26.5°C June 30, July 22-25, 31; minimum 3.5°C Feb. 8, 9, Mar. 5.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

03596000 DUCK RIVER BELOW MANCHESTER, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	22.0	21.0	21.5	26.0	24.0	25.0	26.0	23.0	24.5	23.0	21.5	22.0
2	22.0	21.0	21.5	25.5	24.0	24.5	25.0	22.0	24.0	23.0	21.0	22.0
3	21.5	20.5	21.0	25.0	22.0	23.5	25.5	22.0	24.0	23.5	21.0	22.0
4	22.0	20.0	21.0	25.0	23.0	24.0	24.5	21.5	23.0	23.0	20.5	21.5
5	22.0	20.0	21.0	25.0	23.0	24.0	24.5	21.0	23.0	23.5	20.5	22.0
6	22.0	20.5	21.5	25.0	23.5	24.5	24.5	21.0	23.0	23.5	21.0	22.0
7	21.5	20.5	21.0	25.0	23.0	24.0	24.5	22.0	23.5	23.5	21.0	22.0
8	20.5	19.0	20.0	25.5	23.5	24.5	24.0	21.5	23.0	23.5	21.0	22.0
9	20.0	19.0	19.5	25.5	23.5	24.5	24.0	21.5	22.0	24.0	21.5	23.0
10	20.5	18.5	19.5	25.0	23.5	24.5	24.0	21.0	23.0	24.0	21.5	23.0
11	21.0	18.5	20.0	24.5	23.5	24.0	24.5	21.5	23.0	24.0	22.0	23.0
12	21.5	19.5	20.5	25.0	22.0	24.0	24.5	21.5	23.0	24.0	22.0	23.0
13	21.5	20.0	20.5	24.5	23.0	24.0	24.5	21.5	23.5	24.0	22.0	23.0
14	21.0	19.0	20.0	24.5	22.0	23.5	25.0	21.5	23.5	24.0	22.0	23.0
15	21.0	19.0	20.0	24.0	23.0	23.5	25.0	22.0	24.0	24.0	22.0	23.0
16	21.5	19.5	20.5	24.5	22.0	23.5	25.0	22.0	24.0	23.5	22.0	23.0
17	22.0	20.0	21.0	24.5	22.0	24.0	26.0	22.0	24.0	23.5	21.5	22.0
18	23.0	20.5	21.5	24.5	22.0	24.0	25.5	23.0	24.5	24.0	22.0	23.0
19	21.5	20.5	21.0	25.0	23.5	24.0	26.0	23.5	24.5	24.0	22.0	23.5
20	23.0	20.0	21.5	25.5	23.5	24.5	25.0	23.0	24.0	24.0	22.0	23.5
21	23.0	20.5	21.5	26.0	24.0	25.0	---	---	---	24.0	23.0	23.5
22	23.0	21.0	22.0	26.5	24.0	25.0	---	---	---	23.0	21.5	22.0
23	23.5	21.5	22.0	26.5	24.0	25.5	---	---	---	21.5	20.5	21.0
24	23.5	22.0	23.0	26.5	24.0	25.5	---	---	---	21.5	20.0	20.5
25	24.5	22.0	23.5	26.5	24.0	25.0	---	---	---	21.0	19.5	20.0
26	24.5	22.0	24.0	25.5	23.0	24.0	---	---	---	20.5	19.5	20.0
27	25.0	23.0	24.5	26.0	24.0	24.5	---	---	---	20.5	19.5	20.0
28	25.5	23.5	24.5	25.0	23.5	24.0	---	---	---	20.5	19.5	20.0
29	25.5	24.0	24.5	25.5	23.0	24.5	---	---	---	20.5	19.0	20.0
30	26.5	23.5	25.0	26.0	24.0	25.0	---	---	---	20.5	19.0	20.0
31	---	---	---	26.5	24.0	25.0	---	---	---	---	---	---
MONTH	26.5	18.5	21.5	26.5	22.0	24.5	---	--	---	24.0	19.0	22.0
YEAR	26.5	3.5	15.5									

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 mi^2 (1,101 km^2).

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 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	COLOR, TOTAL (PLATINUM COBALT UNITS)	TURBIDITY (JTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)
OCT												
11...	0920	--	--	--	290	7.3	16.0	7	--	8	9.3	2.1
NOV												
08...	0940	--	--	--	180	7.3	16.5	--	--	7	8.2	2.7
JAN												
25...	1155	--	--	3030	210	7.3	6.0	25	100	45	11.7	3.3
FEB												
28...	1255	--	--	206	200	8.4	6.0	10	--	3	14.3	1.4
MAR												
21...	1000	--	--	516	160	8.1	12.0	8	--	7	10.9	2.2
APR												
12...	1745	--	--	--	210	6.5	16.0	10	--	19	8.1	--
18...	1000	95	2.0	--	180	7.2	18.0	10	--	4	8.6	1.6
27...	0750	--	--	--	--	6.6	13.0	--	--	--	8.8	--
MAY												
09...	0618	--	--	--	--	7.5	18.0	--	--	--	8.3	--
10...	1045	--	--	--	200	7.3	15.0	11	--	16	9.1	1.9
30...	1345	--	--	--	--	7.2	19.0	--	--	--	6.1	--
JUN												
08...	0841	--	--	--	130	7.6	19.5	--	--	--	7.5	--
20...	1150	--	--	--	240	7.7	--	6	--	50	7.1	2.5
JUL												
06...	0758	--	--	--	--	7.1	24.0	--	--	--	6.6	--
06...	0759	--	--	--	--	7.1	24.0	--	--	--	6.4	--
11...	1220	--	--	--	180	7.8	24.4	22	--	37	7.2	4.3
AUG												
10...	1438	95	1.0	--	180	7.2	22.3	--	--	--	6.5	--
10...	1445	95	1.0	--	180	7.2	23.3	--	--	--	6.5	--
15...	1345	--	--	--	180	7.8	26.4	17	--	12	7.0	5.8
SEP												
07...	1300	--	--	--	--	7.3	21.0	--	--	--	7.5	--
07...	1305	--	--	--	--	7.3	20.6	--	--	--	7.2	--
19...	1115	--	--	--	150	7.4	25.0	14	--	8	8.2	1.9

03597850 DUCK RIVER AT SHELBYVILLE WATERWORKS, NEAR SHELBYVILLE, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	ALKALINITY (MG/L AS CACO3)	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)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT											
11...	2000	750	120	1.5	.08	.11	.13	370	50	60	40
NOV											
08...	1300	690	73	.50	.21	.12	.06	390	50	440	360
JAN											
25...	1600	650	78	1.2	.11	.28	.19	1900	140	130	10
FEB											
28...	<100	<10	94	.39	.12	.16	.03	<50	<50	10	10
MAR											
21...	1100	50	79	.72	.02	.22	.64	340	<50	70	<10
APR											
12...	--	--	43	--	--	--	--	--	--	--	--
18...	>20000	640	97	.29	.02	.22	.05	160	30	110	83
27...	--	--	70	.45	.05	.17	.01	--	--	--	--
MAY											
09...	--	--	65	.95	.06	.34	.38	--	--	--	--
10...	14000	690	70	.92	.09	.15	.07	410	80	110	30
30...	--	--	35	.66	.09	.15	.10	--	--	--	--
JUN											
08...	--	--	45	--	--	--	--	--	--	--	--
20...	>20000	>2000	99	1.0	.03	.33	.22	1300	90	160	110
JUL											
06...	--	--	66	--	--	--	--	--	--	--	--
06...	--	--	66	--	--	--	--	--	--	--	--
11...	13000	360	76	2.1	.14	.43	.17	790	100	170	110
AUG											
10...	--	--	66	--	--	--	--	--	--	--	--
10...	--	--	65	--	--	--	--	--	--	--	--
15...	10000	200	71	.55	.29	.75	.15	450	60	90	80
SEP											
07...	--	--	68	--	--	--	--	--	--	--	--
07...	--	--	67	--	--	--	--	--	--	--	--
19...	6100	10	70	.45	.07	.23	.09	730	120	120	90

DATE	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)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	PHOSPHORUS, DISSOLVED (MG/L AS P)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)
APR												
18...	7	30	3.2	1.9	.8	9.0	4.0	90	.12	--	100	<2
27...	--	25	2.5	--	--	--	--	--	--	.01	--	--
MAY												
09...	--	26	2.5	--	--	--	--	--	--	.04	--	--
30...	--	25	2.5	--	--	--	--	--	--	--	--	--
JUL												
11...	14	35	3.1	2.7	3.2	10	4.0	120	.16	--	650	<2

DATE	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	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)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
APR											
18...	130	<1	<5	29	<10	<.2	<10	<1	10	2.2	--
27...	--	--	--	--	--	--	--	--	--	2.5	<.2
MAY											
09...	--	--	--	--	--	--	--	--	--	3.3	--
30...	--	--	--	--	--	--	--	--	--	3.5	2.8
JUL											
11...	70	<1	<5	20	<10	<.2	<10	<1	160	7.4	--

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 mi^2 (1,246 km^2)

WATER-DISCHARGE RECORDS

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 temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--45 years, 823 ft^3/s (23.31 m^3/s), 23.24 in/yr (590 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,900 ft^3/s (1,780 m^3/s) Feb. 13, 1948, gage height, 38.40 ft (11.704 m), present datum, from floodmarks, from rating curve extended above 35,000 ft^3/s (991 m^3/s) on basis of slope-area measurement of peak flow; minimum, 5.0 ft^3/s (0.14 m^3/s) Aug. 23, 1936; minimum daily, 20 ft^3/s (0.57 m^3/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 ft^3/s (1,980 m^3/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, 11,900 ft^3/s (337 m^3/s) May 8, gage height, 21.38 ft (6.517 m); minimum, 159 ft^3/s (4.50 m^3/s) July 20; minimum daily, 164 ft^3/s (4.64 m^3/s) July 19.

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	737	369	2420	300	635	236	246	2990	435	246	175	334
2	323	503	2830	278	603	274	233	1300	426	231	175	255
3	260	505	2870	260	552	1250	221	793	274	484	175	227
4	224	1010	3240	248	511	953	209	750	238	328	177	216
5	202	3320	3890	239	504	672	208	651	227	260	239	210
6	200	2550	3240	242	467	568	219	475	218	232	218	204
7	205	1900	2710	255	426	623	216	1420	260	222	197	199
8	1600	1970	2510	271	390	647	210	6240	3730	212	187	193
9	3130	1750	2490	499	291	1220	205	7820	3390	210	334	186
10	1170	1660	2330	425	269	4820	206	3500	2530	375	210	181
11	629	1480	2220	351	264	3220	216	2750	1350	265	189	212
12	376	1400	2110	332	260	2450	229	2310	1390	240	183	213
13	263	1300	827	331	297	2090	214	2770	2400	242	180	197
14	263	1210	683	301	422	6300	200	2020	2030	383	322	195
15	266	805	644	270	345	3580	189	1670	1860	324	216	195
16	248	740	542	257	311	2520	191	849	920	655	423	193
17	230	1240	587	700	299	2130	190	731	381	320	2590	192
18	219	1350	713	1060	288	1520	217	641	216	220	573	190
19	209	1290	655	767	281	1320	287	478	1360	164	347	188
20	201	1180	387	888	268	1200	249	322	778	172	276	187
21	196	4380	301	759	267	755	223	272	1120	169	254	197
22	191	5230	273	696	264	635	203	260	1050	177	229	173
23	187	4300	257	664	242	521	192	282	938	184	218	172
24	183	3060	266	1760	221	453	185	279	370	182	208	173
25	232	2580	939	3580	213	431	194	268	299	179	202	174
26	367	2330	660	3600	210	415	219	259	275	214	360	172
27	296	2400	509	3160	202	358	232	255	258	214	325	172
28	259	3420	399	2450	203	323	215	256	245	202	257	169
29	514	6110	336	1290	---	297	199	310	239	197	240	169
30	569	4630	327	1220	---	277	1170	270	265	187	232	176
31	557	---	327	715	---	262	---	409	---	179	526	---
TOTAL	14506	65972	42492	28168	9505	42320	7387	43600	29472	7869	10437	5914
MEAN	468	2199	1371	909	339	1365	246	1406	982	254	337	197
MAX	3130	6110	3890	3600	635	6300	1170	7820	3730	655	2590	334
MIN	183	369	257	239	202	236	185	255	216	164	175	169
(†)	+1300	-7700	-9700	+5800	+2500	+5600	+4600	+7500	-1500	-700	-1700	-2700
MEAN‡	510	1942	1058	1096	429	1546	400	1648	932	231	282	107
CFSM‡	1.06	4.04	2.20	2.28	0.89	3.21	0.83	3.43	1.94	0.48	0.59	0.22
IN.‡	1.22	4.50	2.54	2.63	0.93	3.70	0.93	3.95	2.16	0.55	0.68	0.25

CAL YR 1977 TOTAL 325501 MEAN 892 MAX 13000 MIN 154 MEAN‡ 878 CFSM‡ 1.82 IN.‡ 24.78
WTR YR 1978 TOTAL 307642 MEAN 843 MAX 7820 MIN 164 MEAN‡ 852 CFSM‡ 1.77 IN.‡ 23.79

† Change in contents, in cfs-days, in Normandy Lake.
‡ Adjusted for change in contents.

03598000 DUCK RIVER NEAR SHELBYVILLE, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: April 1976 to February 1978 (discontinued).

INSTRUMENTATION.--Temperature recorder since April 1976.

REMARKS.--No record Oct. 1-6 (range in temperature 15.5 to 20.5°C).

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 28.0°C July 9, 14-19, 21, 1977; minimum, 0.0°C many days during winter periods.

EXTREMES FOR CURRENT PERIOD.--
WATER TEMPERATURES: Maximum, October to February, 20.5°C (from range line Oct. 1-3); minimum, 0.0°C Feb. 7, 8.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977 TO FEBRUARY 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	16.5	16.0	16.5	14.5	12.0	13.5	5.5	3.5	4.5
2	---	---	---	17.0	16.5	16.5	12.0	11.0	11.0	5.5	5.0	5.5
3	---	---	---	17.0	16.5	17.0	12.0	11.0	11.5	5.0	4.5	4.5
4	---	---	---	18.0	16.5	17.0	13.0	12.0	12.0	4.5	3.5	4.0
5	---	---	---	18.0	16.5	17.0	13.5	12.0	13.0	4.0	3.5	4.0
6	---	---	---	18.0	17.0	18.0	12.0	9.0	10.5	5.5	4.0	5.0
7	17.0	15.5	16.5	17.0	16.5	17.0	9.0	8.5	8.5	8.5	5.0	6.5
8	17.0	16.5	17.0	17.0	16.5	16.5	9.0	8.5	9.0	8.5	6.5	8.0
9	17.0	16.0	16.5	16.5	16.5	16.5	9.0	8.5	9.0	6.5	4.0	6.0
10	16.0	15.0	15.5	16.5	14.0	15.5	8.5	7.0	8.0	4.0	1.0	3.0
11	15.5	14.0	15.0	14.0	13.5	14.0	7.0	6.5	7.0	1.5	1.0	1.0
12	15.0	13.0	14.0	14.0	13.0	13.5	8.0	7.0	8.0	1.0	1.0	1.0
13	14.0	12.0	13.5	13.5	12.0	13.0	9.0	8.0	8.5	1.5	1.0	1.5
14	14.0	12.0	13.5	13.5	12.0	13.0	10.0	9.0	9.5	2.0	1.5	2.0
15	14.0	12.0	13.5	14.0	13.0	13.5	11.0	10.0	10.5	2.0	1.5	2.0
16	13.5	11.5	13.0	14.0	13.5	13.5	10.5	9.5	10.0	3.0	1.5	2.0
17	13.5	11.5	13.0	14.5	14.0	14.0	10.0	9.5	9.5	3.5	2.0	3.0
18	13.5	12.0	13.0	14.0	13.0	13.5	10.0	9.0	9.5	4.0	3.5	4.0
19	13.5	12.0	13.0	13.5	12.0	13.0	9.5	9.0	9.0	4.0	3.5	4.0
20	14.0	12.0	13.0	14.0	13.0	13.5	9.5	8.5	9.0	4.0	3.0	3.5
21	14.0	12.0	13.5	14.0	14.0	14.0	8.5	7.0	8.0	4.0	3.0	3.5
22	14.5	13.0	13.5	14.0	12.0	13.5	7.0	6.0	6.5	4.0	3.0	3.5
23	14.5	13.5	14.0	14.5	13.0	14.0	6.5	5.5	6.0	4.0	3.0	3.5
24	15.0	14.0	15.0	15.0	14.0	14.5	8.0	6.5	7.0	4.5	3.5	4.0
25	15.5	15.0	15.5	14.0	13.0	13.5	9.0	7.0	8.0	8.0	4.5	6.0
26	16.0	15.5	16.0	13.0	11.0	11.5	8.0	5.5	6.5	8.0	5.0	6.0
27	16.0	16.0	16.0	11.0	10.5	11.0	5.5	3.5	4.5	5.0	4.0	4.5
28	16.5	16.0	16.0	11.5	9.5	10.5	4.0	3.0	3.5	4.0	3.5	3.5
29	16.0	16.0	16.0	11.5	10.5	11.0	3.0	2.0	3.0	4.0	3.0	3.5
30	16.0	16.0	16.0	14.5	11.0	13.5	3.5	3.0	3.0	3.5	2.0	3.0
31	16.0	16.0	16.0	---	---	---	3.5	3.5	4.0	3.5	2.0	3.0
MONTH	---	---	---	18.0	9.5	14.5	14.5	2.0	8.5	8.5	1.0	4.0

03598000 DUCK RIVER NEAR SHELBYVILLE, TN--Continued

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977 TO FEBRUARY 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.0	3.0	3.5									
2	4.0	3.0	3.5									
3	4.0	3.0	3.5									
4	4.0	2.0	3.5									
5	3.5	2.0	3.0									
6	3.5	1.0	2.0									
7	2.0	.0	1.0									
8	1.5	.0	1.0									
9	2.0	.5	1.5									
10	3.5	1.0	2.0									
11	4.0	1.5	3.0									
12	5.0	2.0	4.0									
13	5.0	4.0	5.0									
14	5.5	5.0	5.0									
15	5.5	4.5	5.0									
16	5.5	4.5	5.0									
17	5.0	4.0	4.5									
18	4.5	3.5	4.0									
19	4.5	3.0	4.0									
20	4.5	2.0	3.5									
21	4.0	3.0	3.5									
22	4.5	2.0	3.5									
23	3.5	3.0	3.5									
24	5.0	2.0	4.0									
25	5.5	3.5	4.5									
26	6.0	4.0	5.0									
27	6.5	4.5	5.5									
28	6.0	5.5	6.0									
29	---	---	---									
30	---	---	---									
31	---	---	---									
MONTH	6.5	.0	3.5									

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 mi^2 (3,046 km^2).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: November 1973 to current year.

INSTRUMENTATION.--Temperature recorder since November 1973.

REMARKS.--Temperature recorder clock stopped Jan. 20-31, (range in temperature 4.5°C to 6.5°C), Feb. 1, 12-16, (range in temperature 3.5°C to 6.0°C), Feb. 25 to Mar. 8. Sept. 9-13, (range in temperature 23.5°C to 25.5°C), 16-30, (range in temperature 19.0°C to 25.5°C).

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, 29.5°C July 24; minimum, 1.5°C Feb. 22, 24.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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

03599460 DUCK RIVER NEAR COLUMBIA, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	---	---	---	---	---	---	16.5	15.0	15.5	16.5	15.0	15.5
2	5.5	4.5	5.0	---	---	---	17.0	16.0	16.5	15.0	14.0	14.5
3	5.5	4.0	5.0	---	---	---	18.0	16.0	17.0	14.5	13.5	14.0
4	5.5	4.5	5.0	---	---	---	18.5	18.0	18.0	13.5	13.5	13.5
5	5.5	4.5	5.0	---	---	---	19.0	18.0	18.5	14.0	13.5	13.5
6	5.0	3.5	4.0	---	---	---	19.5	19.0	19.5	15.0	13.5	14.5
7	4.5	3.0	3.5	---	---	---	20.0	19.5	20.0	15.5	15.0	15.0
8	4.0	2.0	3.5	---	---	---	20.5	19.5	20.0	16.5	15.0	15.5
9	4.0	3.0	3.5	9.5	8.5	9.5	20.5	20.0	20.0	18.0	16.0	16.5
10	4.0	3.0	3.5	9.5	8.5	9.0	20.5	19.5	20.0	17.0	16.0	16.5
11	4.5	3.5	4.0	9.0	8.5	8.5	20.5	19.5	20.0	16.0	15.5	16.0
12	---	---	---	10.5	9.0	9.5	19.5	18.5	19.0	16.0	15.5	16.0
13	---	---	---	10.5	10.0	10.0	18.5	18.0	18.0	16.5	15.5	16.0
14	---	---	---	12.0	10.5	11.5	18.5	17.0	18.0	16.0	15.5	16.0
15	---	---	---	12.0	12.0	12.0	18.5	18.0	18.5	15.5	14.5	15.0
16	---	---	---	13.0	11.5	12.0	18.5	18.0	18.5	14.5	14.0	14.0
17	4.5	3.5	4.0	11.5	10.5	11.0	19.5	18.5	19.0	15.0	14.5	14.5
18	3.5	3.0	3.5	10.5	9.0	9.5	20.5	19.0	20.0	16.5	15.5	15.5
19	3.5	2.0	3.0	10.5	9.0	9.5	20.5	18.0	19.5	19.0	17.0	17.0
20	3.5	2.0	3.0	11.5	10.5	11.0	18.0	16.5	16.5	19.0	18.0	18.0
21	3.0	2.0	3.0	13.0	11.5	12.0	16.5	15.5	16.0	20.5	19.0	19.0
22	2.0	1.5	2.0	13.0	11.5	12.0	16.0	15.0	15.5	20.5	20.0	20.0
23	2.0	2.0	2.0	13.5	12.0	13.0	16.5	16.0	16.5	21.0	20.5	20.5
24	3.5	1.5	2.0	14.5	13.5	14.0	18.0	16.5	17.0	23.0	21.5	21.5
25	---	---	---	14.0	13.5	14.0	18.0	18.0	18.0	23.5	23.0	23.0
26	---	---	---	13.5	11.5	13.0	18.0	16.0	16.5	24.0	23.5	23.5
27	---	---	---	11.5	11.0	11.0	16.5	15.0	16.0	24.5	24.0	24.0
28	---	---	---	13.0	10.5	11.0	17.0	16.0	16.5	24.5	24.5	24.5
29	---	---	---	14.0	11.5	12.0	18.0	17.0	17.0	24.5	24.0	24.5
30	---	---	---	14.5	13.5	13.5	18.0	16.5	17.0	24.5	24.5	24.5
31	---	---	---	15.5	13.5	14.5	---	---	---	25.0	24.5	---
MONTH	---	---	---	15.5	8.5	11.5	20.5	15.0	18.0	25.0	13.5	17.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.5	24.5	25.0	29.0	28.0	28.0	26.5	25.5	26.0	24.5	23.5	24.0
2	25.0	24.5	25.0	28.5	28.0	28.0	26.5	25.5	26.0	23.5	23.0	23.5
3	24.5	24.0	24.0	27.0	26.5	26.5	26.5	25.5	26.0	24.0	23.0	23.5
4	24.0	23.5	24.0	28.0	27.0	27.0	25.5	24.0	25.0	23.5	23.0	23.5
5	24.0	23.5	23.5	28.0	27.0	27.0	24.0	23.0	23.5	24.0	23.5	23.5
6	24.0	23.5	23.5	27.0	26.5	26.5	23.5	23.0	23.5	24.0	24.0	24.0
7	24.0	23.5	23.5	26.0	26.5	26.5	24.0	23.0	23.5	24.5	24.0	24.0
8	23.5	23.0	23.0	28.0	26.5	26.5	24.5	24.0	24.0	25.0	24.0	24.5
9	23.0	20.0	21.5	28.0	27.0	27.0	24.5	23.5	24.0	---	---	---
10	20.0	19.0	19.5	27.0	25.5	25.5	25.5	24.0	24.5	---	---	---
11	19.0	18.0	18.5	26.0	25.5	25.5	25.5	24.0	25.0	---	---	---
12	19.5	19.0	19.0	25.5	25.0	25.0	25.0	24.5	24.5	---	---	---
13	21.0	19.5	20.0	25.0	25.0	25.0	26.0	24.5	25.0	---	---	---
14	20.5	20.0	20.5	25.0	24.5	24.5	26.5	24.5	25.5	25.5	24.0	24.5
15	20.5	19.0	19.5	24.5	24.5	24.5	27.0	25.0	26.0	25.5	24.5	25.0
16	20.5	19.5	20.0	24.5	24.5	24.5	26.5	25.5	26.0	---	---	---
17	21.5	20.0	20.5	25.0	24.5	24.5	26.5	24.0	24.5	---	---	---
18	23.0	21.0	21.5	25.0	24.5	24.5	25.0	24.0	24.5	---	---	---
19	24.0	23.0	23.0	25.5	25.0	25.0	24.5	23.0	24.0	---	---	---
20	23.5	23.0	23.5	27.0	26.0	26.0	24.5	24.0	24.5	---	---	---
21	24.0	23.0	23.5	28.0	26.5	26.5	24.5	23.0	23.5	---	---	---
22	24.0	23.0	23.5	29.0	28.0	28.0	24.5	24.0	24.0	---	---	---
23	24.0	23.0	23.5	29.0	28.0	28.0	25.0	24.5	24.5	---	---	---
24	24.5	23.0	24.0	29.5	28.5	28.5	25.5	25.0	25.0	---	---	---
25	24.5	23.5	24.0	28.5	28.0	28.0	26.5	25.5	25.5	---	---	---
26	25.5	24.0	24.5	28.0	27.0	27.0	26.5	26.0	26.0	---	---	---
27	26.0	25.5	26.0	27.0	26.0	26.0	28.5	26.5	26.5	---	---	---
28	27.0	26.0	26.5	25.0	24.0	24.0	26.5	26.5	26.5	---	---	---
29	28.5	27.0	28.0	26.0	25.5	25.5	26.5	26.0	26.0	---	---	---
30	28.5	28.0	28.0	26.5	26.5	26.5	25.5	25.5	25.5	---	---	---
31	---	---	---	27.0	26.5	26.5	---	---	---	---	---	---
MONTH	28.5	18.0	23.0	29.5	24.0	26.0	28.5	23.0	25.0	---	---	---
YEAR	29.5	1.5	16.5									

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 mi^2 (3,095 km^2).

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 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	COLOR, TOTAL (PLATINUM COBALT UNITS)	TURBIDITY (JTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)
OCT												
11...	1125	--	--	3330	270	7.4	16.0	29	--	33	9.0	3.2
NOV												
08...	1145	--	--	--	300	7.8	17.0	20	--	18	8.1	1.6
JAN												
25...	1350	--	--	9500	290	7.5	5.0	10	100	50	12.0	4.0
FEB												
28...	1030	--	--	575	290	7.4	6.0	8	--	4	14.0	1.6
MAR												
22...	1100	--	--	2227	270	8.4	13.0	7	--	22	10.8	1.6
JUN												
08...	1130	--	--	--	270	7.6	--	8	--	10	7.4	2.2
20...	0930	50	1.0	--	170	8.2	24.2	25	--	13	8.5	3.6
JUL												
11...	0955	50	1.0	--	220	7.9	28.1	5	--	18	8.8	2.7
AUG												
15...	1120	50	1.0	--	210	8.3	28.3	18	--	8	8.0	6.2
SEP												
19...	1245	--	--	--	230	7.9	26.0	9	--	6	7.8	2.7

DATE	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	ALKALINITY (MG/L AS CACO3)	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)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)
OCT											
11...	980	640	120	1.1	.10	.23	.33	570	80	100	10
NOV											
08...	2100	570	140	1.1	.02	.19	.19	970	90	60	10
JAN											
25...	720	690	86	.92	.05	.15	.19	3200	60	240	10
FEB											
28...	200	<10	140	.35	<.01	.16	.04	<50	<50	10	10
MAR											
22...	--	--	120	1.0	.05	.44	.15	340	<50	70	20
JUN											
08...	95	3	120	.66	.02	.20	.14	390	<50	70	20
20...	8200	300	71	.51	.05	.23	.11	390	60	60	20
JUL											
11...	9300	350	98	.90	.07	.33	.19	620	30	170	150
AUG											
15...	6100	240	96	.50	.30	.62	.12	430	<50	120	120
SEP											
19...	9900	150	95	.45	.04	.25	.15	780	<50	50	30

03599482 DUCK RIVER AT COLUMBIA WATERWORKS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)
JUL 11...	9	37	3.4	3.0	2.4	2.0	5.0	120	.16	410	<2

DATE	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	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)
JUL 11...	320	<1	<5	60	<10	<.2	<10	<1	120	5.4

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) downstream 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 mi^2 (3,129 km^2).

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.--62 years, 1905-8, 1921-78, 1,994 ft^3/s (56.47 m^3/s), 22.41 in/yr (569 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,500 ft^3/s (1,740 m^3/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 ft^3/s (1,440 m^3/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,500 ft^3/s (609 m^3/s) May 10, gage height, 30.38 ft 9.260 m); minimum, 198 ft^3/s (5.61 m^3/s) Sept. 29, 30.

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	1050	942	15200	1200	2010	618	899	1680	519	272	261	762
2	1700	877	7510	1110	1650	842	816	6200	601	299	232	731
3	1270	742	5510	1010	1490	2770	743	3280	618	466	261	480
4	894	1780	5460	905	1370	4510	679	3470	593	526	321	348
5	683	6740	8430	836	1260	3230	630	3780	453	680	337	300
6	541	12500	8840	831	1210	2230	586	2540	383	433	489	274
7	444	8250	6250	913	1120	1810	568	3160	387	321	407	257
8	1260	4850	4750	1140	998	1600	546	11500	532	276	314	242
9	5900	3720	4210	1590	936	1730	523	20400	2450	330	279	232
10	7110	3100	3920	1700	873	6890	498	19700	3730	554	268	223
11	3420	2660	3510	1470	766	11200	509	9520	3060	763	347	220
12	1910	2270	3140	1280	720	7320	502	5220	2150	623	299	367
13	1360	2030	2930	1180	720	5240	512	6240	1210	394	257	375
14	1040	1840	2350	1110	821	12700	491	7840	2260	394	239	321
15	814	1690	1910	1020	1080	15500	436	4680	2170	402	229	268
16	716	1530	1770	928	1050	9940	401	3400	1930	521	340	276
17	633	1720	1630	1650	941	5890	380	2430	1480	693	797	279
18	549	2480	1610	3390	884	4420	460	1860	879	726	2580	254
19	487	2390	1870	3340	826	3420	489	1580	517	433	1370	230
20	441	2070	1730	2500	781	2750	612	1360	726	299	712	218
21	400	4630	1480	2120	737	2390	609	1160	1330	229	542	209
22	363	11800	1200	1880	711	2180	499	948	1040	215	397	202
23	342	12700	1060	1670	680	1990	441	824	1170	212	332	209
24	324	9180	990	2080	654	1720	400	731	1110	203	299	221
25	750	5760	1560	8830	618	1630	373	704	855	206	274	210
26	1740	4370	2620	15300	596	1610	360	657	473	330	279	208
27	1770	4260	2090	10500	588	1520	375	605	372	740	257	205
28	1320	6890	1600	6530	583	1340	401	579	327	618	358	202
29	1030	13500	1340	4960	---	1210	397	648	302	433	386	199
30	876	18300	1210	3250	---	1090	566	606	279	337	305	211
31	985	---	1180	2520	---	981	---	597	---	289	273	---
TOTAL	42122	155571	108860	88743	26675	122271	15701	127899	33906	13217	14041	8733
MEAN	1359	5186	3512	2863	953	3944	523	4126	1130	426	453	291
MAX	7110	18300	15200	15300	2010	15500	899	20400	3730	763	2580	762
MIN	324	742	990	831	583	618	360	579	279	203	229	199
(†)	+1300	-7700	-9700	+5800	+2500	+5600	+4600	+7500	-1500	-700	-1700	-2700
MEAN‡	1401	4929	3199	3050	1042	4125	677	4368	1080	404	398	201
CFSM‡	1.16	4.08	2.65	2.52	0.86	3.41	0.56	3.62	0.89	0.33	0.33	0.17
IN.‡	1.34	4.55	3.05	2.91	0.90	3.94	0.62	4.17	1.00	0.38	0.38	0.19

CAL YR 1977 TOTAL 840527 MEAN 2303 MAX 24600 MIN 137 MEAN‡ 2289 CFSM‡ 1.89 IN‡ 25.72
WTR YR 1978 TOTAL 757739 MEAN 2076 MAX 20400 MIN 199 MEAN‡ 2085 CFSM‡ 1.73 IN‡ 23.43

† Change in contents, in cfs-days, in Normandy Lake.
‡ Adjusted for change in contents.

NOTE.--No gage-height record Feb. 6 to Mar. 22.

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 mi^2 (45.3 km^2).

PERIOD OF RECORD.--September 1953 to current year.

REVISED RECORDS.--WRD Tenn. 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.--25 years, 28.1 ft^3/s (0.796 m^3/s), 21.81 in/yr (554 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,700 ft^3/s (218 m^3/s) Mar. 15, 1973, gage height, 11.55 ft (3.520 m), from rating curve extended above 1,400 ft^3/s (39.6 m^3/s) on basis of contracted-opening measurement of peak flow; minimum, 1.0 ft^3/s (0.028 m^3/s) Sept. 10, 1958, and July 9, 1959, caused by removal of gravel 0.2 mi (0.3 km) usptream; minimum natural discharge, 1.5 ft^3/s (0.042 m^3/s) Sept. 4-7, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft^3/s (17 m^3/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)
Nov. 29	0815	1060	30.0	5.93	1.807	May 8	1215	772	21.9	5.29	1.612
Mar. 14	0115	*1690	47.9	7.09	2.161						

Minimum discharge, 5.2 ft^3/s (0.147 m^3/s) Sept. 7, 8, 9, 10.

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	12	12	94	21	24	23	26	29	14	8.3	6.0	6.2
2	9.5	11	56	19	23	33	24	26	15	8.3	6.0	6.2
3	8.0	58	41	18	21	74	23	27	15	12	6.2	6.0
4	7.1	89	61	17	20	50	23	87	14	8.3	6.5	5.7
5	6.5	373	64	18	19	40	22	53	14	8.0	6.8	5.5
6	6.5	74	45	19	18	37	22	38	14	7.4	6.8	5.5
7	6.2	39	35	18	17	34	21	154	17	7.7	6.2	5.5
8	40	27	31	36	17	33	21	323	17	7.4	6.8	5.2
9	39	21	33	37	17	59	21	117	16	7.4	6.8	5.2
10	20	17	28	30	17	109	20	58	14	8.0	6.5	5.2
11	14	15	26	26	17	70	24	41	13	7.7	6.8	5.7
12	11	14	24	25	17	55	21	34	14	7.4	6.5	6.8
13	9.5	13	24	24	21	65	21	42	15	8.0	6.2	6.0
14	8.9	12	24	21	20	479	20	32	13	8.3	6.0	6.2
15	8.3	12	22	20	20	87	19	27	12	8.0	5.7	6.5
16	8.0	19	22	20	20	63	19	24	12	7.7	7.4	6.2
17	7.7	52	23	53	20	50	19	22	12	7.1	21	6.2
18	7.4	31	26	41	19	42	29	21	11	6.8	7.7	6.0
19	7.1	23	24	35	19	38	24	20	12	6.5	6.8	6.2
20	7.1	22	23	30	19	36	23	19	13	6.2	6.5	6.2
21	6.8	206	22	26	20	38	22	19	13	6.0	6.2	6.2
22	7.1	96	20	24	19	37	20	17	12	6.0	6.0	6.2
23	7.1	53	19	23	20	32	20	17	11	6.0	6.0	6.5
24	7.1	38	23	51	20	32	21	17	11	5.7	6.0	6.8
25	97	30	31	204	20	49	21	16	9.8	8.0	5.7	6.8
26	57	24	26	152	20	41	21	16	9.5	7.4	6.0	6.5
27	30	51	23	64	20	37	20	16	9.2	8.3	5.7	6.5
28	21	59	21	43	23	34	19	15	8.9	7.4	5.5	6.8
29	17	491	20	35	---	31	18	15	8.6	6.5	5.7	6.8
30	14	146	22	29	---	29	26	15	8.6	6.2	7.7	15
31	13	---	21	26	---	27	---	15	---	6.2	6.5	---
TOTAL	520.9	2138	974	1205	547	1864	650	1372	378.6	230.2	212.2	192.3
MEAN	16.8	71.3	31.4	38.9	19.5	60.1	21.7	44.3	12.6	7.43	6.85	6.41
MAX	97	491	94	204	24	479	29	323	17	12	21	15
MIN	6.2	11	19	17	17	23	18	15	8.6	5.7	5.5	5.2
CFSM	.96	4.07	1.79	2.22	1.11	3.43	1.24	2.53	.72	.43	.39	.37
IN.	1.11	4.54	2.07	2.56	1.16	3.96	1.38	2.92	.80	.49	.45	.41

CAL YR 1977 TOTAL 12662.8 MEAN 34.7 MAX 1120 MIN 3.7 CFSM 1.98 IN 26.92
WTR YR 1978 TOTAL 10284.2 MEAN 28.2 MAX 491 MIN 5.2 CFSM 1.61 IN 21.86

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 mi^2 (523 km^2).

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 (0.996 m) higher, and 2.17 ft (0.661 m) higher thereafter.

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

AVERAGE DISCHARGE.--53 years, 309 ft^3/s (8.751 m^3/s), 20.77 in/yr (528 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,500 ft^3/s (920 m^3/s) Dec. 21, 1926, gage height, 16.5 ft (5.03 m), site and datum then in use; minimum, 35 ft^3/s (0.991 m^3/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 ft^3/s (1,050 m^3/s), from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 4,000 ft^3/s (113 m^3/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)
Nov. 30	2045	*7200	204	12.44	3.792	May 8	1630	5110	145	10.88	3.316
Jan. 26	0030	6410	182	11.89	3.624						

Minimum discharge, 85 ft^3/s (2.41 m^3/s) Sept. 25, 26-28.

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	164	174	4650	283	505	313	361	1020	230	147	114	112
2	217	160	1640	270	471	335	343	967	233	145	109	107
3	176	225	1080	258	428	701	323	722	221	245	143	102
4	158	1180	906	249	397	664	310	979	204	164	145	140
5	146	984	2250	249	374	571	295	860	195	149	120	130
6	138	978	1400	260	351	514	288	674	191	145	118	128
7	129	750	800	255	333	468	273	1200	194	141	112	122
8	605	572	700	800	318	434	260	2910	204	138	112	115
9	1080	450	600	960	300	406	270	1890	190	138	114	104
10	594	362	550	650	283	412	293	1050	186	139	109	100
11	390	291	800	600	278	388	313	767	180	136	143	99
12	288	247	600	542	268	385	300	691	182	134	138	98
13	228	217	550	489	320	391	285	763	184	156	118	100
14	198	195	500	440	364	2300	270	650	174	187	118	104
15	174	181	500	394	333	1290	260	571	170	153	112	112
16	160	188	468	369	323	997	253	511	168	147	109	97
17	146	284	480	610	318	807	249	452	166	138	120	96
18	136	256	739	674	315	708	273	409	201	132	107	96
19	125	231	657	617	303	637	260	374	241	130	109	95
20	120	228	584	561	295	574	249	359	180	126	124	90
21	114	1400	508	486	298	552	241	340	170	126	103	87
22	109	1480	449	440	278	520	233	315	176	124	100	87
23	103	1010	415	406	273	480	239	298	168	122	100	87
24	100	778	391	545	265	462	230	280	162	124	100	87
25	386	619	391	2880	275	577	224	263	158	145	102	87
26	624	484	356	2740	280	565	218	255	153	141	143	85
27	418	479	335	1210	278	536	210	305	149	126	107	85
28	314	556	315	937	295	480	201	260	145	124	100	85
29	260	2140	305	753	---	434	201	325	143	120	99	87
30	220	4930	300	637	---	403	356	270	143	118	143	90
31	193	---	293	558	---	379	---	247	---	116	122	---
TOTAL	8213	22029	24512	21122	9119	18683	8081	20977	5461	4376	3613	3014
MEAN	265	734	791	681	326	603	269	677	182	141	117	100
MAX	1080	4930	4650	2880	505	2300	361	2910	241	245	145	140
MIN	100	160	293	249	265	313	201	247	143	116	99	85
CFSM	1.31	3.63	3.92	3.37	1.61	2.99	1.33	3.35	.90	.70	.58	.50
IN.	1.51	4.06	4.51	3.89	1.68	3.44	1.49	3.86	1.01	.81	.67	.56

CAL YR 1977 TOTAL 137633 MEAN 377 MAX 10400 MIN 72 CFSM 1.87 IN 25.35
WTR YR 1978 TOTAL 149200 MEAN 409 MAX 4930 MIN 85 CFSM 2.03 IN 27.48

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 mi^2 (6,623 km^2).

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.

AVERAGE DISCHARGE.--53 years, 4,070 ft^3/s (115.3 m^3/s), 21.62 in/yr (549 mm/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 122,000 ft^3/s (3,460 m^3/s) Feb. 14, 1948, gage height, 30.70 ft (9.357 m), from floodmark in gage house, present site and datum; minimum, 185 ft^3/s (5.24 m^3/s) Sept. 11, 12, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 41,500 ft^3/s (1,180 m^3/s) Dec. 1, gage height, 21.71 ft (6.617 m); minimum, 692 ft^3/s (19.6 m^3/s) Sept. 30.

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	3000	2610	40500	2640	6720	2060	3070	3390	1890	1110	1020	999
2	2880	2480	38500	2580	5920	2160	2800	7150	1810	1100	934	927
3	3070	2490	24200	2480	5160	3340	2600	9990	1760	1320	871	1220
4	3150	4920	12400	2340	4660	7420	2470	8400	1760	1560	977	1290
5	2520	7210	13700	2240	4200	8700	2340	9110	1730	1450	984	1110
6	2080	15100	18200	2230	3820	7520	2250	8740	1670	1370	1020	970
7	1790	19500	16700	2270	3470	6060	2170	8250	1560	1420	1060	871
8	2060	16000	12600	3670	3200	5190	2070	15100	1550	1240	1120	802
9	4700	9980	10200	7270	2750	4660	2030	29700	1720	1130	1110	760
10	8130	7540	9110	7110	2540	5060	2060	34100	1910	1090	1110	740
11	10200	6300	8150	6230	2430	10000	2070	33200	4870	1140	1070	734
12	6990	5370	7480	5460	2310	15200	2060	24800	4770	1310	1110	747
13	4570	4680	6820	4870	2320	12700	2010	11400	3920	1450	1110	795
14	3430	4150	6400	4280	2500	14100	1920	10500	2610	1530	1040	892
15	2790	3760	5900	3730	2560	27000	1870	11700	2440	1600	942	1040
16	2360	3510	5040	3300	2560	27500	1810	9020	3220	1340	871	977
17	2060	3590	4750	3860	2610	21700	1750	6960	2880	1270	913	885
18	1870	3880	4920	6010	2530	12600	1790	5780	2590	1290	1040	836
19	1690	4280	5090	7380	2430	9650	2150	4760	2250	1330	1740	829
20	1530	4530	5060	7510	2340	8060	2160	4080	1890	1380	2750	781
21	1400	5530	4840	6380	2290	6880	2030	3640	1670	1180	1780	734
22	1320	12900	4340	5460	2230	6270	2010	3190	2070	1040	1350	728
23	1250	17600	3670	4920	2140	5750	1940	2740	2100	920	1160	716
24	1200	19300	3220	4710	2100	5240	1860	2480	1960	885	1030	704
25	1500	15400	3020	9390	2060	5070	1790	2310	1940	878	934	704
26	4010	10400	3150	24100	2050	5210	1720	2190	1870	878	920	716
27	5980	8160	4290	30600	2010	5000	1640	2140	1640	892	927	710
28	5040	8630	4370	23700	2010	4670	1580	2100	1350	949	885	698
29	4120	12900	3510	13500	---	4200	1560	2010	1220	1340	885	698
30	3370	31100	3030	10300	---	3740	1660	2100	1150	1280	949	716
31	2910	---	2790	8150	---	3370	---	2060	---	1110	1070	---
TOTAL	102970	273800	295950	228670	83920	266080	61240	283090	65770	37782	34682	25329
MEAN	3322	9127	9547	7376	2997	8583	2041	9132	2192	1219	1119	844
MAX	10200	31100	40500	30600	6720	27500	3070	34100	4870	1600	2750	1290
MIN	1200	2480	2790	2230	2010	2060	1560	2010	1150	878	871	698

CAL YR 1977 TOTAL 1807392 MEAN 4952 MAX 40500 MIN 578 MEAN‡ 4938 CFSM‡ 1.93 IN‡ 26.21
WTR YR 1978 TOTAL 1759283 MEAN 4820 MAX 40500 MIN 698 MEAN‡ 4829 CFSM‡ 1.89 IN‡ 25.64

‡ Adjusted for change in contents in Normandy Lake.

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 1977 TO SEPTEMBER 1978

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (% FROM L BANK)	SAMPLING DEPTH (FT)	STREAMFLOW, INSTANTANEOUS (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	ALKALINITY (MG/L AS CACO3)
OCT 25...	1330	50	1.0	1520	280	7.8	15.5	5	7	92
JAN 24...	1330	50	1.0	4700	260	8.1	4.4	7	4	120
MAR 28...	1130	--	--	4410	255	--	9.5	--	--	--
APR 18...	1500	50	1.0	1960	230	7.9	18.9	6	6	110
JUN 06...	1130	--	--	1580	175	--	--	--	--	--
JUL 18...	1315	50	1.0	--	180	8.0	26.1	12	27	80
AUG 07...	1630	--	--	1040	205	--	--	--	--	--

DATE	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, CHEMICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./100 ML)	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)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 25...	6.4	32	1.7	4600	1000	43	4.6	3.3	1.3	13
JAN 24...	12.3	3	1.8	700	40	51	3.8	2.2	.9	14
APR 18...	11.2	3	1.1	1800	10	39	3.6	2.8	.7	12
JUL 18...	7.4	4	1.2	>20000	50	30	3.0	3.2	1.9	9.0

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	SOLIDS, DISSOLVED (TONS PER DAY)	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)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)
OCT 25...	2.0	180	.24	739	.75	.08	.04	.22	<200	<1
JAN 24...	4.0	140	.19	1780	.91	.04	.18	.16	140	<1
APR 18...	4.0	130	.18	688	.17	.01	.13	.11	120	<1
JUL 18...	6.0	100	.14	--	.61	.05	.15	.35	830	<1

DATE	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)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 25...	20	520	70	<10	40	20	<.2	<10	1.9
JAN 24...	15	190	87	<10	24	24	<.2	20	2.2
APR 18...	32	120	20	<10	20	7	<.2	<10	2.9
JUL 18...	40	1200	20	<10	66	8	<.2	10	2.0

TENNESSEE RIVER BASIN

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 (0.7 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 mi^2 (1,158 km^2).

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 Tenn. 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.--58 years, 744 ft^3/s (21.07 m^3/s), 22.60 in/yr (574 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 90,000 ft^3/s (2,550 m^3/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 ft^3/s (1,420 m^3/s) on basis of slope-area and contracted-opening measurements of peak flow and rainfall-runoff study; minimum, 65 ft^3/s (1.84 m^3/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 ft^3/s (127 m^3/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)
Nov. 6	0530	8360	237	14.66	4.468	Jan. 26	Unknown	a10000	283	Unknown	
Nov. 22	0900	7190	204	13.60	4.145	Mar. 15	0700	8230	233	14.55	4.435
Nov. 30	0930	*14400	408	18.91	5.764	May 9	0600	10300	292	16.19	4.935

a On basis of runoff comparison with nearby stations.

Minimum discharge, 172 ft^3/s (4.87 m^3/s) Sept. 26, 27.

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	714	540	6560	602	926	466	720	608	416	301	251	239
2	615	493	3510	578	890	500	673	633	408	301	242	237
3	566	541	2280	553	830	952	612	601	415	465	245	228
4	503	1340	1720	536	787	1160	581	917	405	488	282	216
5	453	4000	1870	535	710	985	565	1220	388	381	282	207
6	420	7270	2010	556	655	883	550	1010	364	319	290	198
7	396	3070	1510	562	615	824	531	1870	374	302	296	189
8	527	1910	1260	920	598	777	510	6270	593	297	265	184
9	1350	1390	1180	1620	601	780	497	8430	542	329	267	175
10	1290	1110	1140	1330	584	1450	508	3280	481	321	296	175
11	944	912	993	1080	569	1930	569	1950	414	321	279	178
12	734	762	904	961	548	1550	592	1420	388	306	279	189
13	618	672	854	900	555	1320	540	1280	380	299	287	228
14	546	594	827	815	605	4200	510	1300	397	304	251	242
15	493	543	793	743	574	6410	493	985	372	324	237	242
16	424	562	742	701	530	2620	483	865	355	333	225	245
17	388	1430	759	800	513	1890	473	783	347	310	219	222
18	364	1600	911	930	503	1430	694	714	341	290	395	213
19	351	1160	879	1110	490	1190	844	672	384	277	341	201
20	335	960	812	1020	478	1040	746	654	405	270	305	195
21	315	2470	760	940	481	960	681	621	390	265	262	184
22	300	6350	715	890	472	1010	627	583	440	257	245	184
23	280	3150	676	850	467	903	593	560	528	252	231	178
24	575	2030	662	840	463	806	576	534	421	249	219	184
25	1230	1490	675	1900	456	1120	615	504	378	247	210	178
26	2150	1180	722	7500	450	1300	596	480	353	279	204	173
27	1570	1110	659	4000	437	1110	545	469	336	412	207	173
28	1050	1690	616	1960	440	994	512	507	322	323	198	175
29	827	4540	589	1550	---	904	489	490	313	308	192	175
30	698	12900	600	1300	---	829	486	459	305	279	216	184
31	605	---	616	1060	---	762	---	434	---	262	256	---
TOTAL	21631	67769	38804	39642	16227	43055	17411	41103	11955	9671	7974	5991
MEAN	698	2259	1252	1279	580	1389	580	1326	399	312	257	200
MAX	2150	12900	6560	7500	926	6410	844	8430	593	488	395	245
MIN	280	493	589	535	437	466	473	434	305	247	192	173
CFSM	1.56	5.05	2.80	2.86	1.30	3.11	1.30	2.97	.89	.70	.58	.45
IN.	1.80	5.64	3.23	3.30	1.35	3.58	1.45	3.42	.99	.80	.66	.50

CAL YR 1977 TOTAL 325036 MEAN 891 MAX 15200 MIN 143 CFSM 1.99 IN 27.05
WTR YR 1978 TOTAL 321233 MEAN 880 MAX 12900 MIN 173 CFSM 1.97 IN 26.73

03604000 BUFFALO RIVER NEAR FLAT WOODS, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: June 1964 to January 1978 (discontinued).

INSTRUMENTATION.--Temperature recorder since June 1964.

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

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.

EXTREMES FOR CURRENT PERIOD.--
WATER TEMPERATURES: Maximum, October to January, 21.5°C Oct. 1-2; minimum, 3.5°C several days during Jan.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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, TOTAL, IMMED. (COLS. PER 100 ML)	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)	CALCIUM DIS-SOLVED (MG/L AS CA)
NOV												
28...	1100	1740	95	6.7	8.0	10.4	7200	16000	14000	34	7	11
DEC												
16...	1030	744	85	6.5	9.0	--	240	K80	250	37	9	12
FEB												
01...	0930	968	90	7.5	4.0	10.1	93	40	120	31	8	10
MAY												
16...	1100	870	72	7.0	16.0	8.6	700	270	360	37	3	12
JUN												
13...	1215	376	100	7.3	23.5	8.0	59	22	--	45	--	15
AUG												
08...	1100	264	95	7.7	24.5	7.7	280	--	170	43	6	14

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)	BICAR-BONATE (MG/L AS HCO3)	CAR-BONATE (MG/L AS CO3)	ALKA-LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV												
28...	1.5	1.3	7	.1	1.0	32	0	26	10	4.7	2.4	.0
DEC												
16...	1.6	1.2	6	.1	.9	33	0	27	17	3.8	2.0	.0
FEB												
01...	1.4	1.2	8	.1	.7	28	0	23	1.4	4.9	1.5	.1
MAY												
16...	1.7	2.4	12	.2	.7	41	0	34	6.6	4.8	1.2	.0
JUN												
13...	1.9	1.4	6	.1	.9	--	--	37	--	4.3	3.6	.0
AUG												
08...	1.9	1.8	8	.1	1.1	--	--	37	--	2.5	1.3	.0

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 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)	SOLIDS, RESIDUE AT 105 DEG. C, SUS-PENDED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)
NOV												
28...	6.7	52	--	44	.07	244	--	.45	.03	1	12	56
DEC												
16...	9.6	60	--	47	.08	121	--	.38	.02	1	0	.00
FEB												
01...	5.9	47	--	39	.06	123	--	.51	.01	1	1	2.6
MAY												
16...	6.7	49	45	50	.07	115	16	.51	.04	1	36	85
JUN												
13...	5.7	72	--	--	.10	73	--	.24	.03	1	3	3.0
AUG												
08...	6.7	50	--	52	.07	38	--	.16	.02	1	12	8.6

03604000 BUFFALO RIVER NEAR FLATWOODS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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 (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)
NOV 28...	0	0	1	10	2	540	25	20	<.5	0	0
MAY 16...	0	0	0	<10	1	1000	15	40	<.5	0	0

DATE	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM DIS-SOLVED, EXTRAC-TION (UG/L)	CYANIDE TOTAL (MG/L AS CN)
NOV 28...	10	--	--	--	--	--	--	--	--	.00
MAY 16...	10	<.4	.5	1.0	.8	1.0	.8	.07	.09	.00

DATE	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	NAPH-THA-LENES, POLY-CHLOR, 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)
MAY 16...	.0	17	.00	.0	.0	0	.00	.2	.00	.0	.00	.8

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)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)
MAY 16...	.00	.00	.0	.00	.00	.0	.00	.00	.0	.00	.0	.00

DATE	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL (UG/L)	METHYL PARA-THION, TOTAL (UG/L)	MIREX, 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)
MAY 16...	.0	.00	.00	.00	.00	.00	0	0	.00	.00	.00	.00

03604000 BUFFALO RIVER NEAR FLATWOODS, TN--Continued

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977 TO JANUARY 1978

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

TENNESSEE RIVER BASIN

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 mi^2 (1,831 km^2).

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 observation of water temperature and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--51 years, 1,171 ft^3/s (33.16 m^3/s), 22.49 in/yr (571 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 100,000 ft^3/s (2,830 m^3/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 ft^3/s (1,130 m^3/s) on basis of slope-area measurement of peak flow; minimum, 135 ft^3/s (3.82 m^3/s) Aug. 18, 1953, caused by regulations upstream at unknown location; minimum discharge unaffected by regulation, 142 ft^3/s (4.02 m^3/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 ft^3/s (147 m^3/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)
Nov. 7	1230	9520	270	12.79	3.898	Jan. 27	1700	8540	242	12.25	3.734
Nov. 23	1400	8510	241	12.23	3.728	Mar. 16	0800	9210	261	12.62	3.847
Dec. 1	1230	*20200	572	15.93	4.855	May 9	0930	11900	337	13.81	4.209

Minimum discharge, 326 ft^3/s (9.23 m^3/s) Sept. 28, 29, 30.

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	1290	1020	18600	972	1820	854	1230	1590	739	535	417	427
2	1190	911	11900	941	1640	891	1170	1590	719	525	398	422
3	1050	926	5540	906	1500	1640	1110	1330	719	565	392	413
4	926	1630	3540	872	1400	2120	1030	1410	695	636	428	401
5	780	3180	3640	858	1320	2040	972	1780	677	722	437	389
6	754	6640	3820	906	1260	1810	936	1880	658	636	445	376
7	681	9020	3200	972	1180	1610	906	2610	645	560	437	366
8	921	4770	2570	1920	1140	1480	872	5980	681	513	446	356
9	1490	2820	2310	3370	1100	1400	844	11400	926	558	449	348
10	2000	2160	2100	2950	1060	1740	826	10400	887	587	448	342
11	1880	1760	1930	2350	1030	2450	887	4890	812	556	482	339
12	1500	1470	1730	1980	1000	2690	926	3010	724	533	529	344
13	1230	1260	1570	1750	1040	2370	921	2430	667	521	478	374
14	1060	1130	1490	1550	1050	4020	863	2170	636	543	472	392
15	926	1010	1390	1390	1060	6570	821	1990	636	517	444	418
16	830	961	1320	1280	1010	8050	795	1660	623	524	417	415
17	729	1090	1260	1550	972	3840	774	1450	598	529	594	417
18	654	1760	1530	1840	946	2840	849	1310	586	500	493	398
19	602	1910	1660	1930	921	2310	1110	1210	641	473	513	381
20	561	1580	1550	1810	901	1980	1220	1160	739	453	841	366
21	522	2720	1420	1650	901	1780	1150	1150	849	437	666	354
22	493	5870	1310	1490	877	1630	1080	1080	759	424	526	363
23	466	7980	1230	1380	872	1580	1010	1020	1120	412	464	358
24	440	4530	1170	1380	858	1440	961	972	1010	405	429	342
25	690	2910	1140	2810	858	1480	941	921	826	398	408	338
26	1520	2270	1120	6310	835	1790	946	877	714	418	425	335
27	2440	2010	1120	8110	822	1870	921	840	649	454	398	330
28	2150	2530	1040	5400	835	1700	863	812	606	572	386	327
29	1640	4050	982	3180	---	1540	821	831	574	525	377	326
30	1340	10300	967	2500	---	1420	831	821	552	479	382	332
31	1160	---	977	2080	---	1320	---	774	---	451	400	---
TOTAL	33915	92178	85126	68387	30208	70255	28586	71348	21667	15961	14421	11089
MEAN	1094	3073	2746	2206	1079	2266	953	2302	722	515	465	370
MAX	2440	10300	18600	8110	1820	8050	1230	11400	1120	722	841	427
MIN	440	911	967	858	822	854	774	774	552	398	377	326
CFSM	1.55	4.35	3.88	3.12	1.53	3.21	1.35	3.26	1.02	.73	.66	.52
IN.	1.78	4.85	4.48	3.60	1.59	3.70	1.50	3.75	1.14	.84	.76	.58

CAL YR 1977 TOTAL 522770 MEAN 1432 MAX 18600 MIN 231 CFSM 2.03 IN 27.51
WTR YR 1978 TOTAL 543141 MEAN 1488 MAX 18600 MIN 326 CFSM 2.11 IN 28.58

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 mi^2 (82.6 km^2).

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

AVERAGE DISCHARGE.--15 years, 50.5 ft^3/s (1.430 m^3/s), 21.50 in/yr (546 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,170 ft^3/s (260 m^3/s), Apr. 19, 1973, gage height, 12.43 ft (3.789 m); maximum discharge at prior site and datum, 3,640 ft^3/s (103 m^3/s), May 13, 1967, gage height, 9.08 ft (2.768 m); minimum discharge, 3.0 ft^3/s (0.085 m^3/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 ft^3/s (52.4 m^3/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)
Nov. 21	1130	2170	61.5	7.49	2.283	Dec. 5	0600	*3760	106	9.05	2.758
Nov. 30	1530	2170	61.5	7.49	2.283						

Minimum discharge, 6.9 ft^3/s (0.195 m^3/s) Sept. 21-24.

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	50	35	443	35	57	63	38	120	17	13	10	9.5
2	79	31	182	32	55	67	37	70	17	14	10	9.5
3	53	102	129	31	49	209	33	62	16	26	10	9.8
4	41	259	105	30	46	116	32	86	15	18	9.8	11
5	33	160	1140	33	43	89	27	75	14	15	9.1	10
6	28	131	243	33	39	79	27	63	14	14	9.1	10
7	24	95	142	35	37	72	27	234	23	14	9.1	9.8
8	123	80	113	420	33	67	25	319	21	14	9.5	9.8
9	178	68	150	189	32	62	24	198	18	17	8.8	8.8
10	77	56	105	102	31	67	24	118	17	24	9.1	8.2
11	60	49	88	79	30	63	27	86	17	18	12	7.9
12	47	44	79	72	30	61	26	75	17	17	11	8.2
13	39	40	79	66	75	61	23	79	16	32	10	8.2
14	32	37	100	57	89	540	21	66	15	30	9.8	8.2
15	28	33	86	51	65	173	20	56	14	26	9.8	9.5
16	23	40	77	49	59	114	20	51	14	30	9.5	8.5
17	22	83	75	102	56	92	19	47	14	19	9.8	8.5
18	19	65	75	94	54	75	33	42	17	18	9.8	8.5
19	17	57	67	79	50	66	35	36	19	17	9.1	8.2
20	16	55	61	72	47	59	28	33	17	16	9.5	7.9
21	15	603	55	63	48	56	25	32	15	16	9.5	6.9
22	14	239	51	57	43	54	24	28	22	15	9.5	6.9
23	13	140	50	53	42	50	24	26	18	14	9.1	6.9
24	13	111	48	160	41	48	23	24	14	13	9.5	7.2
25	148	91	44	1070	53	160	22	22	14	23	10	7.2
26	140	76	41	364	61	88	21	20	13	17	17	7.7
27	88	80	39	162	53	69	20	20	13	13	11	8.2
28	68	102	39	113	53	60	19	22	13	12	10	7.9
29	55	303	36	88	---	51	19	22	13	12	9.5	8.2
30	47	716	37	73	---	48	30	21	12	11	12	8.2
31	40	---	37	65	---	44	---	19	---	11	9.8	---
TOTAL	1630	3981	4016	3929	1371	2923	773	2172	479	549	311.7	255.3
MEAN	52.6	133	130	127	49.0	94.3	25.8	70.1	16.0	17.7	10.1	8.51
MAX	178	716	1140	1070	89	540	38	319	23	32	17	11
MIN	13	31	36	30	30	44	19	19	12	11	8.8	6.9
CFSM	1.65	4.17	4.08	3.98	1.54	2.96	.81	2.20	.50	.56	.32	.27
IN.	1.90	4.64	4.68	4.58	1.60	3.41	.90	2.53	.56	.64	.36	.30

CAL YR 1977 TOTAL 22170.6 MEAN 60.7 MAX 1370 MIN 8.8 CFSM 1.90 IN 25.85
WTR YR 1978 TOTAL 22390.0 MEAN 61.3 MAX 1140 MIN 6.9 CFSM 1.92 IN 26.11

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 mi^2 (531 km^2).

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 good. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--49 years, 288 ft^3/s (8.156 m^3/s), 19.08 in/yr (485 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,000 ft^3/s (481 m^3/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 ft^3/s (261 m^3/s); minimum, 28 ft^3/s (0.79 m^3/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 ft^3/s (708 m^3/s), and flood in March 1919 reached a stage of 17 ft (5.2 m), discharge, 21,000 ft^3/s (595 m^3/s), from reports by Tennessee Valley Authority.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 2,000 ft^3/s (56.6 m^3/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. 2	1100	2000	56.6	11.86	3.615	Jan. 8	1815	2130	60.3	12.04	3.670
Dec. 5	1430	2520	71.4	12.50	3.810	Jan. 26	0315	*2620	74.2	12.61	3.844

Minimum discharge 67 ft^3/s (1.897 m^3/s) Sept. 26, 27, 28.

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	577	161	1800	192	550	336	189	1430	181	77	75	116
2	624	154	1940	172	500	433	183	672	167	104	74	105
3	476	436	1390	158	450	1300	177	309	245	120	73	98
4	224	551	601	156	400	1040	174	912	152	90	72	91
5	167	698	2240	182	375	860	173	545	112	82	73	87
6	145	574	1680	226	350	380	175	371	98	77	75	82
7	135	504	1310	209	325	295	174	990	227	78	76	79
8	348	360	925	1640	300	269	160	1700	253	77	74	77
9	359	250	677	1330	275	274	162	1800	273	76	73	76
10	242	204	474	992	250	386	159	1810	154	82	77	76
11	177	177	361	580	225	307	315	1070	120	99	451	83
12	156	164	291	390	250	290	236	352	104	99	163	108
13	143	158	313	273	652	280	182	488	94	503	105	95
14	137	155	507	245	620	1690	159	394	86	731	93	92
15	133	151	458	216	467	1450	154	288	82	212	86	115
16	129	288	374	224	325	1340	151	203	78	139	82	99
17	124	618	313	735	294	635	147	175	76	112	79	90
18	121	383	289	614	263	321	266	157	86	99	77	82
19	118	253	243	570	238	270	222	146	290	92	75	76
20	117	215	221	350	231	244	166	166	156	91	73	73
21	117	1290	201	262	266	329	156	190	150	87	72	72
22	117	1300	190	232	241	395	151	145	216	83	72	72
23	116	1010	189	221	250	299	174	137	157	82	74	72
24	116	839	195	752	268	262	181	134	122	83	72	70
25	796	374	198	2190	393	428	161	114	106	94	86	69
26	749	244	178	1800	349	321	155	106	94	88	261	67
27	558	302	173	1400	263	253	142	105	86	84	119	67
28	375	432	162	1100	299	228	134	101	78	84	93	67
29	225	1100	163	900	---	214	131	100	78	81	88	68
30	186	1570	196	750	---	204	202	216	76	78	255	84
31	170	---	207	650	---	196	---	277	---	75	150	---
TOTAL	8177	14915	18459	19711	9669	15529	5311	15603	4197	3959	3368	2508
MEAN	264	497	595	636	345	501	177	503	140	128	109	83.6
MAX	796	1570	2240	2190	652	1690	315	1810	290	731	451	116
MIN	116	151	162	156	225	196	131	100	76	75	72	67
CFSM	1.29	2.42	2.90	3.10	1.68	2.44	.86	2.45	.68	.62	.53	.41
IN.	1.48	2.71	3.35	3.58	1.75	2.82	.96	2.83	.76	.72	.61	.46

CAL YR 1977 TOTAL 113375 MEAN 311 MAX 3140 MIN 65 CFSM 1.52 IN 20.57
WTR YR 1978 TOTAL 121406 MEAN 333 MAX 2240 MIN 67 CFSM 1.62 IN 22.03

03606500 BIG SANDY RIVER AT BRUCETON, TN--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1970 to February 1978 (discontinued).

INSTRUMENTATION.--Temperature recorder since October 1970.

COOPERATION.--Temperature records furnished by Tennessee Valley Authority.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 26.0°C July 25, 26, 1973, July 7, 14-17, 1977; minimum, 0.0°C Jan. 27, 1978.

EXTREMES FOR CURRENT PERIOD.--
WATER TEMPERATURES: Maximum, October to February, 21.0°C Oct. 1, 2; minimum, 0.0°C Jan. 27.

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977 TO FEBRUARY 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	21.0	19.0	20.0	16.0	14.5	15.5	9.0	8.0	8.5	6.0	5.5	6.0
2	21.0	19.5	20.5	16.0	15.0	15.5	8.5	6.5	8.0	5.5	3.5	4.5
3	19.5	16.0	18.0	16.0	15.5	16.0	9.5	8.0	8.5	4.0	2.0	3.0
4	16.0	14.5	15.0	16.0	15.5	15.5	11.0	9.5	10.0	4.0	2.0	3.5
5	15.0	13.5	14.5	17.0	16.0	16.5	11.5	10.0	11.0	5.0	3.5	4.5
6	15.5	14.5	15.0	18.0	16.5	17.0	10.0	6.5	8.5	7.0	5.0	6.0
7	15.0	14.0	14.5	17.0	16.5	16.5	6.5	3.5	4.5	9.5	6.5	8.0
8	16.5	15.0	15.5	16.5	16.0	16.0	5.5	3.0	4.0	10.0	5.0	8.5
9	16.5	14.5	15.5	16.5	16.0	16.5	6.0	4.5	5.5	5.0	2.0	3.0
10	14.5	14.0	14.0	16.0	11.5	14.0	4.5	1.5	3.0	2.0	.5	1.0
11	14.0	11.5	13.0	11.5	9.5	10.5	3.5	1.5	2.0	1.5	.5	1.0
12	11.5	10.5	11.0	10.0	8.0	9.0	5.0	3.0	4.0	2.0	1.0	1.5
13	11.0	9.0	10.0	8.5	6.5	8.0	7.0	5.0	6.0	3.0	2.0	2.0
14	11.0	9.0	10.0	9.0	6.5	8.0	9.0	7.0	8.5	3.0	2.0	2.0
15	11.5	10.0	11.0	10.5	8.5	9.5	9.0	7.0	8.0	2.0	1.0	1.5
16	11.5	10.0	11.0	12.0	10.5	11.5	9.0	6.5	8.0	3.0	2.0	2.0
17	11.0	9.0	10.0	13.0	11.5	12.0	11.0	9.0	10.0	2.0	1.0	1.5
18	12.0	10.0	11.0	12.0	9.5	10.5	10.5	9.5	10.0	1.0	1.0	1.0
19	12.0	10.0	11.0	10.5	9.0	10.0	9.5	8.0	9.0	1.0	1.0	1.0
20	11.5	10.0	11.0	12.0	10.5	11.0	9.5	7.0	9.0	2.0	1.0	1.5
21	12.0	10.0	11.5	13.0	10.5	11.5	7.0	5.0	6.0	2.0	1.5	2.0
22	13.0	10.5	12.0	10.5	9.5	10.0	5.0	4.0	4.5	3.5	2.0	3.0
23	13.5	11.5	13.0	11.0	10.0	10.5	6.0	4.5	5.5	3.5	1.5	2.0
24	14.0	13.0	13.5	12.0	11.0	11.5	9.0	6.0	7.0	3.5	1.5	2.0
25	14.5	14.0	14.5	12.0	9.5	11.0	9.0	6.0	8.0	1.5	.5	1.0
26	15.5	14.0	15.0	10.0	6.0	8.0	6.0	4.0	5.0	.5	.5	.5
27	15.5	14.5	14.5	6.0	5.0	6.0	4.0	3.5	4.0	.5	.0	.5
28	15.0	13.5	14.0	6.0	5.5	6.0	3.5	2.0	3.0	.5	.5	.5
29	15.0	14.0	14.5	7.0	5.5	6.0	3.5	2.0	3.0	1.0	.5	1.0
30	14.5	13.0	14.0	8.0	6.0	7.0	5.0	3.5	4.0	1.5	1.0	1.0
31	15.5	14.0	15.0	---	---	---	6.0	5.0	5.5	2.0	1.5	1.5
MONTH	21.0	9.0	13.5	18.0	5.0	11.5	11.5	1.5	6.5	10.0	.0	2.5

03606500 BIG SANDY RIVER AT BRUCETON, TN--Continued

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1977 TO FEBRUARY 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.0	2.0	2.0									
2	4.0	2.0	3.0									
3	4.0	2.0	3.0									
4	4.0	3.0	3.5									
5	4.0	3.5	3.5									
6	3.5	1.5	3.0									
7	3.0	1.5	2.0									
8	3.0	1.5	2.0									
9	3.5	2.0	3.0									
10	4.0	2.0	3.0									
11	4.5	2.0	3.5									
12	5.0	3.5	4.0									
13	4.5	3.0	4.0									
14	3.0	2.0	2.0									
15	3.5	1.5	3.0									
16	5.5	3.5	4.5									
17	5.0	4.5	5.0									
18	4.5	3.5	4.0									
19	4.0	2.0	3.5									
20	4.5	3.0	3.5									
21	4.0	3.0	3.5									
22	3.0	1.5	2.0									
23	4.0	3.0	3.5									
24	5.0	2.0	4.0									
25	6.0	4.5	5.0									
26	6.0	5.0	5.5									
27	6.0	5.0	5.5									
28	5.5	5.0	5.0									
29	---	---	---									
30	---	---	---									
31	---	---	---									
MONTH	6.0	1.5	3.5									

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 mi^2 (104,100 km^2), 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 16.4 mi (26.4 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 except Mar. 24 to May 6, which are fair. Slight regulation since 1924 by Wilson Lake and increasing regulation since 1936 as other lakes and reservoirs have been built above station (see p. 327 and Water Resources Data for adjoining states, 1978). Flow now almost completely regulated, and, since June 1966, Barkley-Kentucky Canal 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 ft^3/s (1,814 m^3/s), unadjusted; 13 years (1965-78, since opening of Barkley-Kentucky Canal), 65,620 ft^3/s (1,858 m^3/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 500,000 ft^3/s (14,200 m^3/s) Feb. 17, 1948; maximum gage height, 62.43 ft (19.029 m) Feb. 2, 1937, at Gilbertsville, present datum; minimum daily discharge, 60 ft^3/s (1.70 m^3/s) May 16, 1961.
Maximum discharge since closure of Kentucky Dam on Aug. 30, 1944, 500,000 ft^3/s (14,200 m^3/s) Feb. 27, 1948.
Maximum discharge since opening of Barkley-Kentucky Canal in June 1966, 420,000 ft^3/s (11,900 m^3/s) Mar. 17, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 300,000 ft^3/s (8,500 m^3/s) Dec. 13; maximum gage height, 43.21 ft (13.170 m) Mar. 25; minimum daily discharge, 18,000 ft^3/s (510 m^3/s) Apr. 22, 23, 24; minimum gage height, 13.14 ft (4.005 m) June 17.

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	52100	55700	288000	70000	185000	52900	32000	20000	45000	39800	34400	29100
2	52000	55700	296000	60000	180000	52400	30000	24000	46500	36200	35500	29500
3	51500	56800	293000	55000	155000	54400	28000	34000	45900	30700	35800	28000
4	52300	55900	268000	55000	135000	54700	39000	44000	43400	35900	35600	29100
5	54700	60800	258000	54700	118000	54300	39000	48000	38800	38600	31400	35100
6	55200	73500	251000	54600	96100	54100	38000	44000	34900	39800	28800	33800
7	55000	82600	231000	54900	84400	66600	31000	62800	34900	38300	34100	33900
8	55700	103000	220000	63600	79300	65500	23000	126000	36200	38700	36200	35400
9	56100	115000	198000	83700	62500	53200	23000	196000	42500	40200	40100	35400
10	55300	117000	185000	107000	55700	73000	24000	223000	49100	33700	40900	35100
11	55800	107000	181000	126000	54600	102000	32000	202000	48500	32200	40700	36000
12	55500	97700	170000	136000	53500	104000	27000	156000	49300	31500	41200	38000
13	54500	97900	149000	132000	54200	109000	28000	121000	50000	29400	39200	38500
14	54000	97400	125000	125000	54800	126000	25000	105000	50100	29200	40600	38100
15	55600	89400	114000	123000	53800	150000	19000	102000	39500	28600	42500	38500
16	56500	80000	107000	116000	53900	174000	19000	91000	38000	33700	43400	38700
17	58100	79800	98500	111000	54700	179000	19000	62000	32800	30900	42400	38800
18	57300	78900	98200	112000	55000	158000	19000	40000	38400	35200	42700	40600
19	57400	78100	97300	112000	54600	136000	19000	39000	37600	36700	51100	47300
20	56500	78300	99100	113000	54200	113000	19000	40000	40100	41000	44800	41800
21	55400	92400	97800	115000	54500	98300	19000	41000	40400	41400	43500	40800
22	55200	121000	89100	115000	54900	73400	18000	40000	40000	37300	38600	38500
23	54600	143000	81800	113000	56700	51300	18000	41000	40700	37800	39600	33900
24	56200	151000	81300	117000	49800	50000	18000	41000	41200	32700	39300	29100
25	57000	160000	79400	137000	46600	40000	19000	40000	36800	29800	39300	26600
26	56900	169000	77800	173000	48000	40000	20000	40000	36000	29500	34400	26900
27	54300	168000	79200	196000	50000	40000	20000	41000	38400	33800	34800	26500
28	52900	175000	84400	210000	55300	40000	20000	42000	38500	33900	40500	31300
29	54300	202000	91400	205000	---	39000	19000	43000	38000	34700	36600	26800
30	56100	255000	90700	200000	---	39000	20000	44000	38700	33800	39100	27600
31	55100	---	80000	190000	---	39000	---	44000	---	34000	35000	---
TOTAL	1709100	3296900	4660000	3635500	2110100	2482100	724000	2236800	1230200	1079000	1202100	1028700
MEAN	55130	109900	150300	117300	75360	80070	24130	72150	41010	34810	38780	34290
MAX	58100	255000	296000	210000	185000	179000	39000	223000	50100	41400	51100	47300
MIN	51500	55700	77800	54600	46600	39000	18000	20000	32800	28600	28800	26500

CAL YR 1977 TOTAL 25505900 MEAN 69880 MAX 296000 MIN 21000
WTR YR 1978 TOTAL 25394500 MEAN 69570 MAX 296000 MIN 18000

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 mi^2 (11,761 km^2). PERIOD OF RECORD, February 1943 to current year. GAGE, water-stage recorder. Datum of gage is 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 hm^3), of which 703,100 cfs-days (1,720 hm^3) 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 hm^3) July 25, 1949, elevation, 1,001.79 ft (305.346 m); minimum after first filling, 1,000 cfs-days (2.447 hm^3) Jan. 16, 1956, elevation, 883.7 ft (269.35 m), estimated.

EXTREMES FOR CURRENT YEAR: Maximum contents, 567,100 cfs-days (1,388 hm^3) June 19, elevation, 989.92 ft (301.728 m); minimum, 121,300 cfs-days (296.8 hm^3) Jan. 6, elevation, 941.70 ft (287.030 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 mi^2 (1,821 km^2). 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 hm^3), of which 324,200 cfs-days (793.3 hm^3) 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 hm^3) Apr. 3, 1975, elevation, 1,732.82 ft (528.164 m); minimum after first filling, 57,700 cfs-days (141.2 hm^3) Jan. 13, 1956, elevation, 1,614.15 ft (491.993 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 273,000 cfs-days (668.0 hm^3) June 12, elevation, 1,712.62 ft (522.007 m); minimum, 62,800 cfs-days (153.7 hm^3) Jan. 3, elevation, 1,617.42 ft (492.990 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 mi^2 (1,212 km^2). 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 hm^3), of which 315,000 cfs-days (770.8 hm^3) 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 hm^3) Apr. 6, 1974, elevation, 1,961.07 ft (597.734 m); minimum after first filling, 25,100 cfs-days (61.42 hm^3) Jan. 13, 1956, elevation, 1,813.47 ft (552.746 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 268,100 cfs-days (656.0 hm^3) May 22, elevation, 1,953.19 ft (595.332 m); minimum, 194,400 cfs-days (475.7 hm^3) Mar. 6, elevation, 1,927.45 ft (587.487 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 mi^2 (4,766 km^2). 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 hm^3), of which 74,800 cfs-days (183.0 hm^3) 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 hm^3) May 19, 1964, elevation 1,384.99 ft (422.145 m); minimum after first filling, 21,300 cfs-days (52.12 hm^3) Jan. 23, 1956, elevation, 1,327.06 ft (404.488 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 94,500 cfs-days (231.2 hm^3) June 9, elevation, 1,383.60 ft (421.721 m); minimum, 41,100 cfs-days (100.6 hm^3) Jan. 15, elevation, 1,349.77 ft (411.410 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 mi^2 (4,929 km^2). 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 hm^3), of which 2,200 cfs-days (5.383 hm^3) 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 hm^3) Feb. 11, 1954, elevation, 1,263.80 ft (385.206 m), minimum after first filling, 9,300 cfs-days (22.76 hm^3) Mar. 16, 1954, elevation, 1,252.32 ft (381.707 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 13,600 cfs-days (33.28 hm^3) Dec. 3, elevation, 1,263.00 ft (384.962 m); minimum, 11,200 cfs-days (27.41 hm^3) Sept. 11, elevation, 1,257.35 ft (383.240 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 mi^2 (8,881 km^2). 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 hm^3), of which 736,200 cfs-days (1,801 hm^3) 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 hm^3) 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 hm^3) Jan. 7, 1954, elevation, 980.77 ft (298.939 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 558,200 cfs-days (1,366 hm^3) June 26, elevation, 1,059.17 ft (322.835 m); minimum, 215,500 cfs-days (527.3 hm^3) Mar. 3, elevation, 1,022.71 ft (311.722 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 mi^2 (24,730 km^2). 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 hm^3), of which 55,900 cfs-days (136.8 hm^3) 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, 183,000 cfs-days (447.8 hm^3), May 4; maximum elevation, 813.25 ft (247.879 m) July 1; minimum midnight contents, 144,000 cfs-days (352.4 hm^3) Mar. 24; minimum elevation, 807.00 ft (245.974 m) Mar. 24.

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 mi^2 (5,120 km^2). 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 hm^3), of which 3,400 cfs-days (8.320 hm^3) 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 hm^3) May 28, 1973, elevation, 874.60 ft (266.578 m); minimum after first filling, 18,100 cfs-days (44.29 hm^3) May 18, 1963, elevation, 865.94 ft (263.938 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 24,800 cfs-days (60.69 hm^3) Oct. 13, elevation, 874.00 ft (266.395 m); minimum, 20,500 cfs-days (50.16 hm^3) Dec. 29, elevation, 868.93 ft (264.850 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 mi^2 (7,542 km^2). 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 hm^3), of which 1,140,400 cfs-days (2,791 hm^3) 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 hm^3) Feb. 11, 1937, elevation, 1,031.21 ft (314.313 m); minimum after first filling, 75,500 cfs-days (184.7 hm^3) Jan. 24, 1956, elevation, 909.46 ft (277.203 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 933,800 cfs-days (2,285 hm^3) June 16, elevation, 1,014.37 ft (309.180 m); minimum, 540,800 cfs-days (1,323 hm^3) Sept. 30, elevation, 984.81 ft (300.170 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 mi^2 (8,658 km^2). 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 hm^3), of which 16,100 cfs-days (39.40 hm^3) 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 hm^3) Mar. 16, 1973, elevation, 796.45 ft (242.758 m); minimum after first filling, 35,100 cfs-days (85.89 hm^3) Feb. 9, 1966, elevation, 784.10 ft (238.994 m). (corrected)

EXTREMES FOR CURRENT YEAR: Maximum contents, 61,200 cfs-days (149.8 hm^3) Nov. 18, elevation, 795.25 ft (242.392 m); minimum, 47,200 cfs-days (115.5 hm^3) Feb. 1, elevation, 789.90 ft (240.762 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 mi^2 (44,830 km^2), 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 hm^3), of which 191,100 cfs-days (467.6 hm^3) 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, 533,000 cfs-days (1,304 hm^3) June 9; maximum elevation, 742.40 ft (226.284 m) June 9; minimum midnight contents, 408,000 cfs-days (998.4 hm^3) Mar. 24; minimum elevation, 734.92 ft (224.004 m) Feb. 13.

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 mi^2 (1,541 km^2). 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 elevations NGVD.

Reservoir is formed by concrete dam with 347 ft (110 m) of spillway. Spillway is equipped with four floodgates 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, 1971. Total capacity at elevation 837.55 ft (255.285 m), about top of flashboards, is 43,500 cfs-days (106.4 hm^3), of which 16,900 cfs-days (41.35 hm^3) 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 hm^3) 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 hm^3) 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, 43,200 cfs-days (105.7 hm^3) Nov. 7, elevation, 837.3 ft (255.21 m); minimum contents observed, 33,600 cfs-days (82.22 hm^3) Mar. 20, elevation, 827.2 ft (252.13 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 mi^2 (53,850 km^2), 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 hm^3), of which 175,000 cfs-days (428.2 hm^3) 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, 335,000 cfs-days (819.745 hm^3) June 9; maximum elevation, 683.74 ft (208.404 m) June 10; minimum midnight contents, 203,000 cfs-days (496.7 hm^3) Feb. 13; minimum elevation, 674.58 ft (205.612 m) Feb. 14.

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 mi^2 (56,640 km^2), 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 hm^3), of which 16,200 cfs-days (39.64 hm^3) 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, 130,000 cfs-days (318.1 hm^3) Jan. 26; maximum elevation, 634.28 ft (193.329 m) July 2, minimum midnight contents, 114,000 cfs-days (279.0 hm^3) Mar. 28; minimum elevation, 631.60 ft (192.512 m) Mar. 27.

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 mi^2 (681 km^2). 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 hm^3), of which 9,900 cfs-days (24.22 hm^3) 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 hm^3) Apr. 21, 22, 1956, elevation, 960.98 ft (292.907 m); minimum after first filling, 26,300 cfs-days (64.36 hm^3) Nov. 8-11, 1953, elevation, 951.93 ft (290.148 m).

EXTREMES FOR CURRENT YEAR: Maximum midnight contents, 40,100 cfs-days (98.12 hm^3) Apr. 3, elevation, 959.91 ft (292.581 m); minimum midnight contents, 36,200 cfs-days (88.58 hm^3) Nov. 23, 24, elevation, 957.91 ft (291.971 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 mi^2 (1,370 km^2). 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 hm^3), of which 160,300 cfs-days (392.2 hm^3) 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 hm^3) Mar. 17, 1973, elevation, 893.24 ft (272.260 m); minimum after first filling 154,000 cfs-days (376.8 hm^3) Oct. 15, 1972, elevation, 862.24 ft (262.811 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 272,000 cfs-days (665.6 hm^3) Dec. 1, elevation, 888.90 ft (270.937 m); minimum, 193,900 cfs-days (474.5 hm^3) Jan. 13, elevation, 872.53 ft (265.947 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 mi^2 (85,000 km^2), 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 hm^3), of which 210,200 cfs-days (514.4 hm^3) 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, 551,000 cfs-days (1,348 hm^3) May 8; maximum elevation, 417.76 ft (127.333 m) May 9; minimum midnight contents, 358,000 cfs-days (876.0 hm^3) Feb. 21; minimum elevation, 407.95 ft (124.343 m) Mar. 8.

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 mi^2 (505 km^2). 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 hm^3), of which 30,400 cfs-days (74.39 hm^3) 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 hm^3) Apr. 5, 1977, elevation, 878.66 ft (276.816 m); minimum after first filling, 28,300 cfs-days (69.25 hm^3) Dec. 15, 1977, elevation, 854.48 ft (260.446 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 61,400 cfs- days (150.2 hm^3) June 9, elevation, 878.42 ft (267.742 m); minimum, 28,300 cfs-days (69.25 hm^3) Dec. 15, elevation, 854.48 ft (260.446 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 mi^2 (104,100 km^2), 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 hm^3), of which 2,020,700 cfs-days (4,945 hm^3) 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, 1,702,000 cfs-days (4,165 hm^3) May 9; maximum elevation, 360.28 ft (109.813 m) May 14; minimum midnight contents, 1,081,000 cfs-days (2,645 hm^3) Feb. 23; minimum elevation, 353.72 ft (107.814 m) Dec. 24.

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 hm^3), of which 900 cfs-days (2.202 hm^3) is controlled storage.

03517900 CALDERWOOD LAKE on Little Tennessee River at Calderwood, Tn., with a total capacity of 20,800 cfs-days (50.90 hm^3) of which 2,060 cfs-days (5.041 hm^3) 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 hm^3), of which 1,900 cfs-days (4.649 hm^3) is controlled storage. Records of contents previous to 1971 water year published.

RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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.....	967.80	316000	-	1675.62	165900	-	1936.36	218600	-
Oct. 31.....	963.26	274600	-41400	1660.86	132200	-33700	1939.86	228500	+9900
Nov. 30.....	969.82	335500	+60900	1655.34	121200	-11000	1947.23	249800	+21300
Dec. 31.....	944.50	137000	-198500	1619.92	65900	-55300	1943.79	239700	-10100
CAL YR 1977	-	-	+13300	-	-	-148400	-	-	+45900
Jan. 31.....	958.66	235300	+98300	1646.44	104900	+39000	1935.88	217300	-22400
Feb. 28.....	943.82	133100	-102200	1656.63	123700	+18800	1928.67	197600	-19700
Mar. 31.....	967.21	310400	+177300	1688.54	199600	+75900	1942.82	237000	+39400
Apr. 30.....	969.85	335800	+25400	1700.18	233300	+33700	1947.50	250600	+13600
May 31.....	986.52	523000	+187200	1712.31	271900	+38600	1951.75	263600	+13000
June 30.....	986.75	526000	+3000	1709.96	264100	-7800	1947.05	249300	-14300
July 31.....	977.48	415600	-110400	1707.37	255700	-8400	1941.79	234000	-15300
Aug. 31.....	970.65	343700	-71900	1698.95	229600	-26100	1934.61	213700	-20300
Sept. 30.....	955.38	209400	-134300	1689.57	202400	-27200	1929.97	201100	-12600
WTR YR 1978	-	-	-106600	-	-	+36500	-	-	-17500

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)
	03486800 BOONE LAKE			03487000 FORT PATRICK HENRY LAKE			03493500 CHEROKEE LAKE		
Sept. 30.....	1377.82	82600	-	1260.38	12400	-	1036.36	319000	-
Oct. 31.....	1373.36	74400	-8200	1260.49	12500	+100	1046.70	415100	+96100
Nov. 30.....	1366.15	62400	-12000	1260.58	12500	0	1051.80	470200	+55100
Dec. 31.....	1358.06	51300	-11100	1259.45	12000	-500	1036.62	321200	-149000
CAL YR 1977	-	-	-2000	-	-	-700	-	-	+37300
Jan. 31.....	1361.20	55100	+3800	1261.36	12800	+800	1037.82	331600	+10400
Feb. 28.....	1365.51	61400	+6300	1260.00	12300	-500	1023.36	219800	-111800
Mar. 31.....	1371.56	71300	+9900	1258.97	11800	-500	1042.35	372300	+152500
Apr. 30.....	1378.88	84600	+13300	1260.93	12700	+900	1042.03	369300	-3000
May 31.....	1381.63	90200	+5600	1262.01	13100	+400	1053.34	487800	+118500
June 30.....	1380.74	88400	-1800	1260.14	12300	-800	1057.22	534000	+46200
July 31.....	1381.14	89200	+800	1260.15	12300	0	1050.57	456400	-77600
Aug. 31.....	1381.74	90500	+1300	1259.75	12200	-100	1040.15	352200	-104200
Sept. 30.....	1375.23	77800	-12700	1259.13	11900	-300	1031.04	275200	-77000
WTR YR 1978	-	-	-4800	-	-	-500	-	-	-43800

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)
	03499500 FORT LOUDOUN LAKE‡			03518200 CHILHOWEE LAKE			03532500 NORRIS LAKE		
Sept. 30.....	812.17	177000	-	873.27	24200	-	986.08	554700	-
Oct. 31.....	812.17	177000	0	872.96	23900	-300	991.95	622200	+67500
Nov. 30.....	808.77	154000	-23000	873.00	23900	0	1001.06	738200	+116000
Dec. 31.....	808.08	150000	-4000	873.65	24500	+600	990.82	608800	-129400
CAL YR 1977	-	-	0	-	-	+200	-	-	-64800
Jan. 31.....	808.08	151000	+1000	871.52	22700	-1800	995.51	665900	+57100
Feb. 28.....	807.80	148000	-3000	873.91	24800	+2100	987.61	571700	-94200
Mar. 31.....	807.66	147000	-1000	872.83	23800	-1000	1000.86	735600	+163900
Apr. 30.....	812.29	178000	+31000	873.59	24500	+700	1001.15	739500	+3900
May 31.....	812.50	180000	+2000	873.58	24500	0	1012.21	899900	+160400
June 30.....	812.10	177000	-3000	872.95	23900	-600	1011.66	891400	-8500
July 31.....	812.00	176000	-1000	872.91	23900	0	1005.94	806200	-85200
Aug. 31.....	812.00	176000	0	873.00	24000	+100	998.04	698200	-108000
Sept. 30.....	812.06	176000	0	873.44	24300	+300	984.81	540800	-157400
WTR YR 1978	-	-	-1000	-	-	+100	-	-	-13900

‡ Contents based on backwater profile.

RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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.....	793.33	55800	-	740.80	506000	-	835.3	41300	-
Oct. 31.....	793.64	56600	+800	739.03	472000	-34000	834.4	40400	-900
Nov. 30.....	792.86	54500	-2100	738.24	458000	-14000	830.5	36800	-3600
Dec. 31.....	794.15	58000	+3500	735.69	423000	-35000	827.7	34400	-2400
CAL YR 1977	-	-	-1100	-	-	-11000	-	-	-700
Jan. 31.....	790.51	48700	-9300	737.23	447000	+24000	831.2	37200	+2800
Feb. 28.....	793.82	57100	+8400	735.86	420000	-27000	828.1	34400	-2800
Mar. 31.....	794.50	59000	+1900	735.94	418000	-2000	829.6	35700	+1300
Apr. 30.....	793.72	56900	-2100	740.20	494000	+76000	835.6	41200	+5500
May 31.....	794.50	59000	+2100	741.05	510000	+16000	835.1	40800	-400
June 30.....	793.10	55200	-3800	741.24	515000	+5000	835.4	41000	+200
July 31.....	794.32	58500	+3300	740.10	492000	-23000	835.2	40800	-200
Aug. 31.....	793.20	55400	-3100	740.72	507000	+15000	835.5	41100	+300
Sept. 30.....	793.66	56700	+1300	740.62	502000	-5000	835.0	40700	-400
WTR YR 1978	-	-	+900	-	-	-4000	-	-	-600
	03566500 CHICKAMAUGA LAKE‡			03570520 NICKAJACK LAKE‡			03579000 WOODS RESERVOIR		
Sept. 30.....	681.25	294000	-	632.35	117000	-	959.48	39200	-
Oct. 31.....	678.53	251000	-43000	633.88	124000	+7000	958.93	38200	-1000
Nov. 30.....	677.88	248000	-3000	632.17	124000	0	958.13	36600	-1600
Dec. 31.....	675.94	220000	-28000	632.22	119000	-5000	958.07	36500	-100
CAL YR 1977	-	-	-3000	-	-	-6000	-	-	-300
Jan. 31.....	676.25	229000	+9000	632.30	126000	+7000	958.05	36500	0
Feb. 28.....	675.63	212000	-17000	633.65	124000	-2000	958.02	36400	-100
Mar. 31.....	676.10	214000	+2000	633.08	120000	-4000	959.51	39300	+2900
Apr. 30.....	682.20	311000	+97000	633.82	122000	+2000	959.88	40000	+700
May 31.....	682.44	316000	+5000	633.08	118000	-4000	959.47	39200	-800
June 30.....	681.26	299000	-17000	633.75	124000	+6000	959.53	39300	+100
July 31.....	681.35	296000	-3000	633.40	122000	-2000	959.44	39200	-100
Aug. 31.....	680.63	286000	-10000	633.58	123000	+1000	959.18	38600	-600
Sept. 30.....	680.82	287000	+1000	633.68	121000	-2000	959.00	38300	-300
WTR YR 1978	-	-	-7000	-	-	+4000	-	-	-900
	03580740 TIMS FORD LAKE			03593000 PICKWICK LAKE‡			03596460 NORMANDY LAKE		
Sept. 30.....	885.97	256500	-	411.34	411000	-	869.48	47400	-
Oct. 31.....	883.75	245200	-11300	410.58	405000	-6000	870.34	48700	+1300
Nov. 30.....	888.55	270200	+25000	415.35	517000	+112000	864.87	41000	-7700
Dec. 31.....	873.30	197100	-73100	409.76	390000	-127000	857.11	31300	-9700
CAL YR 1977	-	-	+2600	-	-	+21000	-	-	-5000
Jan. 31.....	874.72	203100	+6000	409.60	398000	+8000	861.92	37100	+5800
Feb. 28.....	873.52	198000	-5100	409.12	371000	-27000	863.84	39600	+2500
Mar. 31.....	877.92	217200	+19200	409.86	384000	+13000	867.96	45200	+5600
Apr. 30.....	881.78	235400	+18200	414.07	468000	+84000	871.07	49800	+4600
May 31.....	885.80	255600	+20200	413.54	457000	-11000	875.84	57300	+7500
June 30.....	885.35	253300	-2300	413.52	456000	-1000	874.92	55800	-1500
July 31.....	885.27	252900	-400	412.19	428000	-28000	874.43	55100	-700
Aug. 31.....	884.35	248200	-4700	412.07	425000	-3000	873.40	53400	-1700
Sept. 30.....	883.00	241400	-6800	411.08	406000	-19000	871.62	50700	-2700
WTR YR 1978	-	-	-15100	-	-	-5000	-	-	+3300

‡ Contents based on backwater profile.

RESERVOIRS IN TENNESSEE RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

Date	Elevation (feet)	Contents (cfs-days)	Change in contents (cfs-days)
	03609000 KENTUCKY LAKE‡		
Sept. 30.....	357.09	1288000	-
Oct. 31.....	355.07	1173000	-115000
Nov. 30.....	354.77	1518000	+345000
Dec. 31.....	354.47	1150000	-368000
CAL YR 1977	-	-	+58000
Jan. 31.....	354.62	1300000	+150000
Feb. 28.....	354.24	1103000	-197000
Mar. 31.....	356.07	1199000	+96000
Apr. 30.....	358.53	1392000	+193000
May 31.....	359.27	1460000	+68000
June 30.....	358.24	1386000	-74000
July 31.....	356.88	1269000	-117000
Aug. 31.....	355.94	1203000	-66000
Sept. 30.....	355.22	1143000	-60000
WTR YR 1978	-	-	-145000

‡ 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 mi^2 (143.7 km^2).

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

AVERAGE DISCHARGE.--16 years, 111 ft^3/s (3.144 m^3/s), 27.16 in/yr (690 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,350 ft^3/s (236 m^3/s) Sept. 9, 1970, gage height, 13.96 ft (4.255 m) from rating curve extended above 3,600 ft^3/s (102 m^3/s) on basis of contracted opening measurement of peak flow; minimum, 19 ft^3/s (0.54 m^3/s) May 17, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,800 ft^3/s (51.0 m^3/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. 5	1315	*3,970	112	12.15	3.703	Jan. 26	unknown	unknown		unknown	

Minimum discharge, 25 ft^3/s (0.71 m^3/s) Aug. 10, 11.

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	154	55	743	59	70	106	58	423	37	29	28	38
2	81	54	256	49	65	191	55	373	70	30	28	36
3	58	218	112	45	62	810	54	144	48	37	28	34
4	51	330	151	46	58	397	55	497	37	29	30	34
5	47	296	2950	60	58	111	52	359	36	29	31	34
6	45	307	1500	76	57	95	51	97	40	29	30	34
7	47	137	295	70	56	91	48	464	56	28	28	33
8	170	91	125	1500	56	89	47	1410	57	28	27	33
9	86	80	285	400	52	95	47	900	58	27	26	32
10	56	70	119	150	50	120	46	214	38	30	25	32
11	50	62	77	100	52	89	96	71	37	34	217	132
12	47	58	81	83	76	95	59	71	36	32	197	276
13	45	56	125	70	356	120	50	338	35	68	51	63
14	45	55	239	65	400	997	46	132	34	102	40	63
15	44	56	114	60	141	645	44	63	34	37	38	46
16	44	190	88	70	128	161	43	57	33	32	36	37
17	43	348	102	400	110	98	42	52	32	31	35	34
18	43	155	85	130	90	81	107	47	31	31	35	32
19	43	84	71	100	76	74	54	45	63	31	34	31
20	43	89	65	110	82	70	47	71	36	31	33	31
21	43	718	59	90	97	134	45	66	36	30	34	31
22	43	1140	56	82	78	112	46	48	37	30	34	30
23	42	325	56	70	94	81	53	45	47	30	34	31
24	44	114	59	140	134	86	47	41	36	36	34	30
25	291	87	61	800	182	180	44	39	34	33	40	30
26	423	72	51	1800	107	94	43	38	33	32	81	30
27	164	128	50	900	80	78	41	39	32	30	36	30
28	78	142	45	350	115	71	40	37	31	30	34	31
29	64	638	47	150	---	67	40	48	30	29	35	31
30	59	1340	66	110	---	63	55	83	30	29	85	46
31	56	---	64	85	---	60	---	41	---	29	43	---
TOTAL	2549	7495	8197	8220	2982	5561	1555	6353	1194	1063	1487	1405
MEAN	82.2	250	264	265	107	179	51.8	205	39.8	34.3	48.0	46.8
MAX	423	1340	2950	1800	400	997	107	1410	70	102	217	276
MIN	42	54	45	45	50	60	40	37	30	27	25	30
CFSM	1.48	4.51	4.76	4.78	1.93	3.23	.93	3.69	.72	.62	.87	.84
IN.	1.71	5.02	5.49	5.51	2.00	3.73	1.04	4.26	.80	.71	1.00	.94

CAL YR 1977 TOTAL 43327 MEAN 119 MAX 2950 MIN 27 CFSM 2.14 IN 29.04
WTR YR 1978 TOTAL 48061 MEAN 132 MAX 2950 MIN 25 CFSM 2.38 IN 32.21

NOTE.--No gage-height record Jan. 7 to Feb. 7.

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 mi^2 (992 km^2).

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.--49 years, 575 ft^3/s (16.28 m^3/s), 20.39 in/yr (518 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,600 ft^3/s (725 m^3/s) Jan. 22, 1937, gage height, 17.82 ft (5.432 m), from floodmarks, from rating curve extended above 14,000 ft^3/s (396 m^3/s); minimum, 61 ft^3/s (1.73 m^3/s) Aug. 21, 1944.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft^3/s (85.0 m^3/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. 7	1300	*8,950	253	16.26	4.956	Jan. 27	Unknown	Unknown		Unknown	
Jan. 10	1300	6,000	170	15.82	4.822						

Minimum discharge, 117 ft^3/s (3.32 m^3/s) Sept. 28.

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	606	272	1740	299	900	710	330	533	431	222	129	176
2	501	230	2230	291	600	915	306	607	353	180	128	163
3	398	562	2950	272	450	1410	295	800	288	152	128	151
4	315	547	2950	258	370	1350	283	1180	256	152	128	143
5	258	638	3320	264	350	1370	272	1170	232	145	127	137
6	213	780	5750	287	340	1390	263	1200	207	140	129	136
7	190	826	8560	490	325	1060	252	1510	196	138	130	135
8	232	816	6900	4290	312	751	241	1930	204	159	129	135
9	271	669	4780	5110	306	588	237	2140	216	135	129	133
10	280	496	3460	5850	298	564	236	2390	227	138	140	130
11	266	383	2320	4960	299	535	312	2490	230	148	217	127
12	230	311	1460	3660	335	539	307	2270	215	150	253	187
13	199	261	911	2490	1120	580	313	1850	193	166	310	287
14	188	236	973	1650	1250	1350	289	1300	176	210	348	465
15	182	223	863	1000	1200	1330	261	851	164	208	292	481
16	177	457	827	600	1290	1460	239	643	157	187	212	398
17	172	532	732	900	1260	1680	229	488	153	162	166	285
18	168	606	624	500	858	1650	235	390	275	148	146	206
19	164	697	541	350	674	958	241	335	846	141	137	163
20	161	624	481	360	595	538	245	369	362	138	133	141
21	158	1330	427	300	578	618	239	434	285	137	130	132
22	155	1570	383	250	531	533	236	461	246	134	128	127
23	152	1630	355	230	551	516	231	413	238	132	127	124
24	150	1920	336	400	662	528	232	343	190	142	126	122
25	206	2440	322	3000	879	626	233	286	178	135	126	120
26	302	2410	302	3700	857	607	230	248	165	136	128	119
27	448	1440	288	4000	781	580	225	232	156	139	142	118
28	643	703	270	3800	773	497	217	214	147	137	139	118
29	583	1360	261	3000	---	431	207	213	143	135	166	118
30	447	1610	275	1800	---	388	209	355	139	133	196	119
31	343	---	291	1300	---	356	---	415	---	131	177	---
TOTAL	8758	26579	55882	55661	18744	26408	7645	28060	7268	4710	5096	5396
MEAN	283	886	1803	1796	669	852	255	905	242	152	164	180
MAX	643	2440	8560	5850	1290	1680	330	2490	846	222	348	481
MIN	150	223	261	230	298	356	207	213	139	131	126	118
CFSM	.74	2.31	4.71	4.69	1.75	2.23	.67	2.36	.63	.40	.43	.47
IN.	.85	2.58	5.43	5.41	1.82	2.56	.74	2.73	.71	.46	.49	.52

CAL YR 1977 TOTAL 194384 MEAN 533 MAX 8560 MIN 110 CFSM 1.39 IN 18.88
WTR YR 1978 TOTAL 250207 MEAN 685 MAX 8560 MIN 118 CFSM 1.79 IN 24.30

NOTE.--No gage-height record Jan. 14 to Feb. 7.

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 mi^2 (4,797 km^2).

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-two discharge measurements furnished by Corps of Engineers.

AVERAGE DISCHARGE.--41 years, (water years 1930-58, 1967-78), 2,651 ft^3/s (75.08 m^3/s), 19.44 in/yr (494 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 99,500 ft^3/s (2,820 m^3/s) Jan. 24, 1937, gage height 40.4 ft (12.31 m), present datum; minimum, under conditions of no backwater, 230 ft^3/s (6.51 m^3/s) Oct. 7-9. 1943; minimum daily discharge, 15 ft^3/s (0.42 m^3/s), backwater from Mississippi River, Feb. 4, 1937; reverse flow of 57 ft^3/s (1.61 m^3/s) measured by current meter on that date.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,600 ft^3/s (470 m^3/s) Jan. 10, gage height, 30.30 ft (9.235 m); minimum, 403 ft^3/s (11.41 m^3/s) Aug. 27.

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	2680	766	8210	1150	6300	6190	1470	2630	1030	598	451	648
2	2280	699	6560	1110	4100	5720	1370	2730	961	1180	455	594
3	1810	971	4710	1030	2600	11400	1280	2140	914	663	451	557
4	1260	3490	3540	976	1850	10800	1240	5080	847	679	451	514
5	1020	2170	6960	991	1550	7650	1180	5060	766	602	451	493
6	905	2480	9540	1130	1360	4650	1130	2900	734	572	459	489
7	823	2420	9870	1200	1250	5800	1050	6630	1060	560	472	480
8	910	1830	11500	12500	1200	9730	961	12700	1460	609	480	472
9	1360	1610	13000	16200	1150	6300	906	13600	1310	625	527	468
10	1100	1390	10900	16200	1050	4050	906	10500	999	864	590	459
11	952	1180	8050	16400	1000	2700	3680	7550	897	927	1330	447
12	877	1030	6150	15100	1050	2100	2560	5150	852	742	1760	484
13	810	938	3850	12600	5450	2050	1410	4750	811	718	1400	632
14	762	873	7850	9800	10600	12400	1080	4050	774	1350	956	782
15	732	832	5700	8100	6850	14000	935	2350	754	815	774	843
16	703	1330	3050	7800	5350	11700	860	1550	738	683	655	815
17	686	2700	2250	11300	4200	8150	815	1300	734	621	568	706
18	678	1840	2100	6000	3250	5450	4660	1150	770	579	510	621
19	662	1420	1750	3000	2200	3850	3780	1050	2900	553	476	564
20	662	1330	1600	2600	1750	2450	1640	1520	1530	542	447	527
21	646	8030	1500	2300	1850	2150	1290	2800	1090	549	431	505
22	638	11000	1390	2050	1650	2750	1200	1670	872	553	431	505
23	638	5000	1310	1850	1550	2000	1290	1340	897	553	443	523
24	621	4100	1270	1800	1700	2150	1370	1180	831	560	443	505
25	662	2650	1230	4000	5190	9730	1870	1070	714	583	443	501
26	1400	2200	1170	7000	8160	7040	1600	978	667	568	427	501
27	1210	2100	1110	14000	6120	3900	1370	918	640	514	419	484
28	1150	2200	1070	15000	4500	2560	1260	885	617	480	435	476
29	1180	5000	1030	14000	---	2010	1240	1380	602	472	687	472
30	1050	8590	1070	12500	---	1710	1440	2320	655	455	1040	468
31	900	---	1150	9200	---	1570	---	1230	---	443	802	---
TOTAL	31767	82169	140440	228887	94830	174710	46843	110161	28426	20212	19664	16535
MEAN	1025	2739	4530	7383	3387	5636	1561	3554	948	652	634	551
MAX	2680	11000	13000	16400	10600	14000	4660	13600	2900	1350	1760	843
MIN	621	699	1030	976	1000	1570	815	885	602	443	419	447
CFSM	.55	1.48	2.45	3.99	1.83	3.04	.84	1.92	.51	.35	.34	.30
IN.	.64	1.65	2.82	4.60	1.90	3.51	.94	2.21	.57	.41	.39	.33

CAL YR 1977 TOTAL 728075 MEAN 1995 MAX 13100 MIN 474 CFSM 1.08 IN 14.62
WTR YR 1978 TOTAL 994644 MEAN 2725 MAX 16400 MIN 419 CFSM 1.47 IN 19.98

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, 0.0°C Jan. 25-30, 1978.

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, 161 micromhos June 19; minimum, 38 micromhos Nov. 29, Jan. 28.
WATER TEMPERATURE: Maximum, 33.5°C June 18; minimum, 0.0°C Jan 25-30.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (JTU)	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)
OCT											
20...	1100	662	80	7.3	13.0	20	--	9.5	K860	--	24
NOV											
17...	1000	2700	85	6.2	12.0	120	--	6.7	29000	K84000	27
DEC											
22...	1000	1400	105	6.3	4.0	20	--	12.1	K310	K820	31
FEB											
03...	1130	2600	85	5.4	1.5	40	--	--	K170	K180	26
MAR											
09...	1030	6300	90	6.5	4.5	250	--	10.6	900	5800	25
31...	1015	1570	98	6.9	16.0	50	--	9.5	K3000	390	32
APR											
14...	1015	1080	80	7.0	16.0	40	--	8.2	3400	1400	29
MAY											
10...	1100	10500	60	6.6	18.5	270	--	--	--	--	21
JUN											
08...	1000	1520	--	6.5	22.5	250	--	6.5	K24000	K4700	22
JUL											
13...	1000	679	98	6.6	27.0	--	60	6.5	380	370	24
AUG											
16...	1045	659	85	6.7	26.0	--	70	7.1	K2300	680	22
SEP											
13...	1030	640	100	6.6	25.0	--	65	--	3400	2000	18

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

07026000 OBION RIVER AT OBION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	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)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT											
20...	0	6.0	2.3	6.8	.6	1.7	32	0	26	4.2	5.3
NOV											
17...	0	6.8	2.5	4.7	.4	6.0	35	0	29	11	6.5
DEC											
22...	5	7.3	3.1	6.3	.5	2.3	32	0	26	9.7	5.3
FEB											
03...	4	6.4	2.4	5.3	.5	2.3	27	0	22	12	5.3
MAR											
09...	11	6.2	2.4	3.7	.3	2.1	17	0	14	11	4.1
31...	6	7.6	3.2	5.7	.4	1.8	32	0	26	9.8	4.2
APR											
14...	0	7.0	2.9	6.2	.5	2.1	37	0	30	6.0	5.5
MAY											
10...	7	5.6	1.8	3.4	.3	2.4	18	0	15	9.1	4.2
JUN											
08...	0	5.8	1.8	5.0	.5	3.1	29	0	24	5.4	3.2
JUL											
13...	0	6.0	2.3	7.0	.6	1.8	--	--	29	4.3	5.5
AUG											
16...	0	5.5	1.9	5.8	.5	2.3	--	--	22	7.0	4.5
SEP											
13...	0	4.3	1.8	6.6	.7	1.2	--	--	20	4.3	4.4

DATE	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)	SOLIDS, DISSOLVED (TONS PER DAY)	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)	PHOSPHORUS, DISSOLVED (MG/L AS P)
OCT											
20...	.0	13	60	55	.08	107	.48	.12	--	.12	.05
NOV											
17...	.1	6.4	76	62	.10	554	.64	.27	--	.61	.07
DEC											
22...	.1	11	67	61	.09	253	.54	.14	--	.11	.04
FEB											
03...	.0	10	63	57	.09	442	.64	.14	--	.27	.18
MAR											
09...	.1	5.2	68	43	.09	1160	.82	.16	.84	.26	.04
31...	.1	8.1	49	56	.07	208	.44	.02	.53	.11	.02
APR											
14...	.1	8.8	75	57	.10	219	.47	.07	--	.14	.04
MAY											
10...	.1	6.5	56	42	.08	1590	.68	.17	--	.41	.03
JUN											
08...	.1	7.0	86	46	.12	353	1.3	.37	3.3	2.1	.07
JUL											
13...	.1	13	69	58	.09	126	.75	.05	--	.20	.04
AUG											
16...	.1	8.4	64	49	.09	114	.42	.05	.56	.23	.06
SEP											
13...	.1	12	54	47	.07	93	.61	.05	.43	.20	.03

07026000 OBION RIVER AT OBION, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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)	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)
NOV												
17...	1	3	100	0	1	0	10	2	17	7	15000	750
FEB												
03...	0	0	0	0	0	0	<10	1	10	7	2600	110
APR												
14...	1	1	0	0	0	0	<10	1	6	2	4000	270
JUL												
13...	1	1	0	0	0	1	20	0	4	2	5900	80

DATE	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)	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												
17...	28	0	1200	280	<.5	<.5	0	0	0	1	50	30
FEB												
03...	25	4	200	130	<.5	<.5	0	0	0	0	30	10
APR												
14...	5	1	240	110	<.5	<.5	0	0	0	0	20	0
JUL												
13...	56	0	300	130	.5	.5	0	0	0	0	20	10

DATE	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	PHYTO-PLANK-TON, TOTAL (CELLS PER ML)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	CHLOR-B PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2)	LENGTH OF EXPO-SURE (DAYS)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
20...	9.0	--	--	--	--	--	--	--	68	122	50
NOV											
17...	--	11	1300	--	--	--	--	--	633	4620	90
DEC											
22...	15	--	--	--	--	--	--	--	138	522	75
FEB											
03...	--	9.2	--	--	--	--	--	--	138	969	83
MAR											
09...	8.0	--	--	--	--	--	--	--	434	7380	85
31...	4.4	--	5600	--	--	--	--	--	83	352	96
APR											
14...	--	12	--	7.34	2.69	14	33.3	36.8	152	443	76
MAY											
10...	7.0	--	1600	--	--	--	--	--	453	12800	86
JUN											
08...	14	--	160	--	--	--	--	--	2590	10600	99
JUL											
13...	--	5.4	730	6.64	2.69	37	45.2	50.5	167	306	98
AUG											
16...	--	--	3300	5.50	1.06	34	14.1	15.8	159	283	99
SEP											
13...	4.4	--	3700	25.1	4.50	28	38.7	42.3	238	411	91

07026000 OBION RIVER AT OBION, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	71	58	61	83	75	79	76	68	73	98	97	97
2	66	58	62	83	79	81	70	68	69	97	94	95
3	69	61	65	119	79	90	69	68	68	96	94	95
4	75	69	72	115	79	87	69	67	68	101	97	98
5	79	75	77	85	83	84	93	62	73	105	100	102
6	81	78	79	88	80	85	61	50	57	109	101	105
7	80	79	80	103	88	94	50	43	46	101	95	98
8	96	79	86	88	86	87	47	43	44	104	62	71
9	91	72	79	88	87	87	75	48	59	62	57	59
10	75	73	74	89	88	89	55	54	54	57	55	56
11	78	75	77	89	88	89	58	55	57	57	54	55
12	80	77	78	92	89	91	64	58	61	56	53	54
13	81	78	80	92	87	90	103	64	74	61	56	58
14	81	80	80	86	84	84	96	79	83	66	61	64
15	82	79	80	88	84	86	80	78	79	76	67	71
16	81	77	79	123	84	96	84	80	82	81	75	77
17	79	71	74	99	70	91	99	84	90	98	82	90
18	78	73	74	78	76	77	96	87	90	80	75	77
19	80	78	79	77	76	77	91	88	89	82	78	81
20	81	79	80	84	76	77	93	92	92	85	82	83
21	82	80	80	99	65	74	94	93	93	87	84	85
22	83	79	81	67	65	66	105	94	105	91	87	89
23	80	77	78	65	63	64	107	104	105	96	91	93
24	76	73	74	68	64	65	107	102	105	122	86	100
25	77	74	76	79	68	74	104	100	102	79	61	66
26	83	70	75	89	63	73	100	99	99	62	48	56
27	75	71	74	121	94	108	100	98	100	58	49	55
28	74	71	72	128	121	124	101	99	101	59	38	49
29	73	70	72	135	38	97	106	100	103	58	53	57
30	75	73	74	68	65	67	107	104	105	62	58	60
31	75	72	74	---	---	---	106	99	103	68	62	65
MONTH	96	58	76	135	38	84	107	43	82	122	38	76
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	77	68	73	107	92	96	97	95	96	114	80	98
2	83	77	80	107	91	96	97	95	96	89	79	85
3	85	83	84	90	74	78	97	95	96	90	84	85
4	90	87	88	77	75	76	99	97	98	104	80	93
5	92	89	91	84	76	80	101	100	101	80	78	79
6	93	89	90	92	85	88	102	100	101	81	79	80
7	95	92	93	104	91	95	104	100	101	103	67	77
8	99	95	97	101	90	94	103	101	102	80	68	74
9	100	98	99	92	89	90	104	100	102	79	70	72
10	100	98	99	102	93	100	107	102	104	72	70	71
11	100	98	98	102	100	101	144	91	107	76	73	75
12	100	98	100	107	100	104	95	88	91	81	77	78
13	127	70	96	114	96	100	102	95	99	111	69	83
14	71	65	68	96	67	73	105	101	103	79	70	75
15	78	71	74	68	67	67	104	103	104	87	80	84
16	82	78	80	74	66	70	104	100	102	94	88	91
17	85	78	81	79	73	76	101	99	100	101	95	97
18	87	80	83	82	79	81	135	69	89	103	101	102
19	95	88	90	86	81	83	84	71	78	106	103	105
20	102	95	98	93	85	90	97	85	91	135	104	110
21	108	98	104	126	93	102	103	96	99	113	91	99
22	104	98	100	96	85	87	103	102	102	103	98	100
23	110	105	108	94	85	91	116	102	108	109	104	107
24	117	108	111	99	93	95	112	97	103	113	111	112
25	119	88	97	84	64	68	131	90	97	115	113	114
26	86	76	79	83	70	78	96	91	94	119	116	118
27	87	83	84	89	83	86	100	97	98	123	120	121
28	109	87	96	94	89	92	99	98	99	123	117	121
29	---	---	---	97	93	95	101	99	100	141	112	127
30	---	---	---	98	95	96	111	99	103	125	109	117
31	---	---	---	99	95	97	---	---	---	115	111	113
MONTH	127	65	91	126	64	88	144	69	99	141	67	96

OBION RIVER BASIN

07026000 OBION RIVER AT OBION, TN--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	115	113	114	---	---	---	---	---	---	100	93	97
2	118	114	116	103	64	76	---	---	---	119	59	97
3	125	120	123	87	71	79	---	---	---	115	99	103
4	123	116	119	90	84	86	---	---	---	131	68	103
5	118	117	117	102	88	96	91	86	89	---	---	---
6	123	119	122	91	88	90	89	85	87	---	---	---
7	142	112	130	100	87	95	83	77	80	---	---	---
8	119	109	115	112	97	103	85	78	80	---	---	---
9	119	115	117	138	103	116	85	78	82	---	---	---
10	119	115	118	133	101	122	83	80	82	---	---	---
11	118	89	98	122	104	112	84	69	77	---	---	---
12	---	---	---	114	99	108	79	69	75	---	---	---
13	---	---	---	113	99	108	94	78	85	---	---	---
14	---	---	---	105	76	85	95	77	84	91	80	84
15	---	---	---	85	81	83	112	89	101	87	84	85
16	---	---	---	90	83	86	89	83	86	85	82	84
17	---	---	---	89	84	86	92	87	91	85	82	84
18	142	---	---	91	88	90	96	90	94	83	82	83
19	161	79	96	96	91	94	98	93	96	87	82	85
20	89	77	81	97	93	95	100	94	96	90	85	88
21	97	88	92	96	93	94	94	87	90	88	86	87
22	94	86	90	96	91	93	95	89	93	91	84	87
23	91	83	88	101	94	97	99	93	96	87	81	84
24	---	---	---	100	90	98	100	94	96	88	83	85
25	---	---	---	---	---	---	100	93	97	81	75	77
26	---	---	---	96	91	93	100	93	97	77	74	76
27	---	---	---	96	91	93	101	95	98	78	75	77
28	---	---	---	94	89	92	95	90	92	77	74	76
29	---	---	---	94	89	91	104	91	95	76	72	75
30	---	---	---	---	---	---	118	88	101	76	71	74
31	---	---	---	---	---	---	105	94	97	---	---	---
MONTH	---	---	---	138	64	95	118	69	90	---	---	---
YEAR	161	38	88									

07026000 OBION RIVER AT OBION, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	22.0	20.0	21.0	17.0	15.5	16.0	7.0	5.5	6.5	6.5	5.5	6.0
2	22.0	19.5	20.5	16.5	16.0	16.0	7.0	6.5	6.5	5.0	3.0	3.5
3	19.5	18.0	19.0	17.0	16.0	16.5	8.0	6.5	7.0	3.5	2.0	3.0
4	18.5	16.0	17.5	17.0	16.0	16.5	9.0	8.0	8.5	4.0	2.5	3.0
5	18.0	15.5	17.0	18.0	16.5	17.5	10.0	9.0	9.5	5.5	4.0	4.5
6	18.5	16.0	17.5	18.0	17.5	18.0	9.5	6.0	8.0	7.5	6.0	7.0
7	18.0	16.0	16.5	18.0	17.5	17.5	6.0	3.5	4.5	10.0	7.5	8.5
8	17.5	16.5	17.0	18.0	17.0	17.5	4.0	3.0	3.0	11.0	6.5	9.5
9	17.0	15.5	16.0	17.5	15.5	17.0	4.0	3.0	3.5	6.5	2.0	4.0
10	16.5	15.0	15.5	15.0	11.5	13.0	3.0	.5	1.5	2.0	1.0	1.0
11	15.5	14.0	14.5	11.5	9.5	10.5	1.0	.5	1.0	1.0	.5	.5
12	14.0	12.5	13.5	10.5	8.5	9.5	2.5	1.0	2.0	.5	.5	.5
13	13.5	11.5	13.0	9.0	7.5	8.5	6.5	2.5	4.0	.5	.5	.5
14	14.0	11.5	13.0	9.0	7.5	8.5	8.0	6.5	7.5	1.0	.5	.5
15	14.0	12.5	13.0	11.5	8.5	9.5	7.5	6.5	7.0	1.5	.5	1.0
16	13.0	11.5	12.5	13.0	11.5	12.0	8.0	6.5	7.0	1.5	1.5	1.5
17	13.5	11.0	12.5	12.5	12.0	12.5	10.0	8.5	9.0	1.5	1.0	1.5
18	14.0	12.0	13.5	11.5	10.5	11.0	10.0	9.0	9.5	1.5	1.0	1.0
19	14.5	12.5	13.5	11.5	10.0	10.5	9.5	8.5	9.0	1.0	.5	1.0
20	15.0	12.5	14.5	12.0	10.5	11.0	9.0	7.0	8.0	1.0	.5	1.0
21	15.5	13.5	14.5	12.0	10.5	11.5	7.0	4.0	5.5	1.5	.5	1.0
22	16.5	14.5	15.5	10.5	9.5	10.0	5.5	3.5	4.5	2.5	1.0	1.5
23	16.5	15.0	16.0	10.0	9.5	9.5	6.0	4.0	5.0	3.0	1.0	2.0
24	16.5	15.5	16.0	10.5	10.0	10.0	8.5	5.5	7.0	3.0	1.0	2.5
25	16.5	16.0	16.0	10.5	10.0	10.5	8.5	5.5	6.5	1.0	.0	.5
26	16.5	15.5	16.0	10.0	7.5	8.5	5.5	3.5	4.5	.0	.0	.0
27	16.0	15.0	15.5	7.5	6.5	7.0	4.5	3.0	3.5	.5	.0	.0
28	16.5	14.5	15.5	6.5	6.0	6.0	3.0	1.5	2.5	.5	.0	.0
29	16.5	15.0	16.0	6.0	4.0	5.0	3.5	2.0	2.5	.5	.0	.5
30	16.5	14.5	15.5	5.5	4.5	5.0	5.0	3.5	4.0	.5	.0	.5
31	17.0	15.5	16.5	---	---	---	6.0	5.0	5.5	1.0	.5	.5
MONTH	22.0	11.0	15.5	18.0	4.0	11.5	10.0	.5	5.5	11.0	.0	2.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.0	.5	1.0	4.0	3.0	3.5	19.0	16.5	18.0	18.5	15.0	16.5
2	2.5	1.0	1.5	3.5	2.0	3.0	19.5	17.5	18.5	16.0	13.5	15.0
3	2.5	1.5	2.0	2.0	1.5	1.5	19.5	18.5	19.0	16.0	13.5	14.0
4	3.0	2.0	2.5	2.0	1.0	1.5	20.5	18.5	19.5	13.5	12.5	13.0
5	3.0	2.5	3.0	3.0	1.0	2.0	22.0	19.5	20.5	14.5	12.5	13.5
6	2.5	1.0	1.5	4.5	2.5	3.5	22.0	20.0	21.5	17.0	14.0	15.0
7	2.0	.5	1.5	6.0	5.0	5.5	22.5	20.0	21.5	17.0	15.5	16.0
8	2.0	.5	1.5	6.5	5.0	6.0	22.5	20.0	21.5	18.5	17.0	17.5
9	3.5	1.0	2.0	5.0	4.0	4.5	23.5	21.0	22.5	19.0	18.5	18.5
10	3.0	1.5	2.5	7.0	4.0	5.0	23.5	20.5	21.5	19.5	18.5	19.0
11	5.0	2.5	3.5	9.0	6.5	7.0	20.5	17.0	18.0	19.5	19.0	19.5
12	6.0	4.0	5.0	9.0	7.5	8.5	19.0	16.5	17.5	20.0	19.5	20.0
13	6.0	1.0	3.0	10.5	8.0	9.0	19.0	17.0	18.0	20.0	17.5	18.5
14	1.0	.5	1.0	11.5	10.0	11.0	19.0	16.5	18.0	18.0	16.0	17.0
15	1.5	.5	1.0	11.0	9.5	10.5	19.0	17.0	17.5	17.5	16.5	17.0
16	2.5	1.5	2.0	10.5	9.5	10.0	18.5	16.0	17.0	17.0	16.0	16.5
17	2.0	1.5	2.0	9.5	8.0	9.0	19.5	16.0	17.5	19.5	16.0	17.5
18	2.5	1.0	1.5	9.0	7.5	8.5	19.0	17.0	17.5	20.0	18.0	19.0
19	2.5	.5	1.5	11.5	8.0	10.0	17.5	15.5	16.5	22.0	19.0	20.0
20	3.5	1.5	2.5	13.5	10.5	12.0	15.0	13.5	14.0	22.0	20.0	21.5
21	3.5	2.0	2.5	15.0	12.5	14.0	14.0	12.5	13.5	23.0	20.0	21.5
22	3.5	1.0	2.0	15.0	13.5	14.0	16.0	12.0	14.0	23.0	21.5	22.0
23	4.0	2.5	3.5	15.0	13.5	14.0	18.5	14.5	16.5	25.5	22.0	23.5
24	4.5	2.5	3.5	15.0	14.5	14.5	18.5	16.0	17.0	26.5	23.5	25.0
25	5.5	2.0	3.0	14.5	11.0	12.5	18.0	15.5	16.0	28.0	24.5	26.0
26	3.5	2.5	3.0	11.0	8.5	9.5	16.5	14.0	15.0	28.5	25.0	27.0
27	4.0	2.5	3.0	9.0	8.0	8.5	18.5	15.0	16.5	28.5	26.0	27.5
28	4.0	3.0	3.5	12.0	8.0	9.5	19.5	16.5	18.0	28.5	26.5	27.0
29	---	---	---	15.0	11.0	12.5	19.5	16.5	18.0	27.0	24.0	25.0
30	---	---	---	17.0	14.0	15.0	18.5	17.0	18.0	25.5	22.0	24.0
31	---	---	---	18.5	15.5	17.0	---	---	---	27.0	24.0	25.5
MONTH	6.0	.5	2.5	18.5	1.0	9.0	23.5	12.0	18.0	28.5	12.5	20.0

07026000 OBION RIVER AT OBION, TN--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.0	25.0	26.5	---	---	---	---	---	---	25.0	21.0	23.0
2	28.0	24.5	25.5	28.5	24.5	27.0	---	---	---	25.0	23.0	24.0
3	26.0	24.5	25.0	30.5	27.0	28.5	---	---	---	26.0	22.5	24.5
4	26.0	23.0	25.0	30.0	27.0	28.5	---	---	---	26.5	23.5	25.5
5	26.0	24.0	24.5	30.0	27.0	28.5	26.0	24.0	25.0	26.5	24.0	25.5
6	26.0	23.5	25.0	30.5	27.0	28.5	26.0	23.5	25.0	26.5	23.5	25.0
7	26.0	23.5	24.5	30.5	27.5	28.5	27.0	23.0	25.0	26.5	24.5	26.0
8	24.0	23.0	23.5	30.5	26.0	28.0	28.0	24.5	26.5	27.0	24.5	26.0
9	24.0	22.0	23.0	30.5	26.5	28.5	28.5	25.5	27.0	27.0	24.5	25.5
10	25.0	21.0	23.0	26.5	24.5	25.5	29.0	26.0	27.5	26.5	24.5	25.5
11	25.0	22.0	24.0	25.0	24.5	25.0	29.0	24.5	26.0	26.5	24.5	25.5
12	29.5	21.0	25.0	28.0	24.0	26.0	26.5	23.0	24.5	25.5	23.5	24.5
13	30.5	19.0	23.0	30.5	26.5	28.5	26.5	24.5	25.5	25.0	23.0	24.0
14	30.0	17.5	22.0	28.5	26.0	27.0	29.0	24.5	26.5	25.0	22.5	24.0
15	33.0	17.5	23.5	29.5	26.5	28.0	29.0	26.0	28.0	25.5	23.0	24.0
16	32.5	20.0	26.5	31.0	27.0	29.0	30.5	26.5	28.5	25.5	23.5	24.5
17	32.5	24.5	28.0	31.5	28.0	30.0	31.0	28.5	30.0	26.5	24.0	25.0
18	33.5	21.5	27.0	31.5	28.5	30.5	31.0	29.0	30.5	26.5	24.5	26.0
19	25.0	22.5	24.0	32.0	29.0	31.0	31.0	28.5	30.0	27.5	24.5	26.0
20	25.0	23.5	24.5	32.0	30.0	31.5	30.0	26.5	28.5	27.0	25.5	26.5
21	27.0	23.5	25.5	---	---	---	28.0	25.0	26.5	26.5	24.5	25.5
22	27.0	24.5	26.0	32.0	30.0	31.0	27.5	24.5	26.5	25.0	22.0	23.0
23	26.5	24.5	25.5	32.0	30.0	31.0	28.0	25.0	27.0	22.0	19.5	21.0
24	27.5	23.0	25.0	32.0	31.5	30.5	29.5	25.5	27.5	21.5	19.0	20.5
25	33.0	24.5	28.0	---	---	---	30.0	27.0	29.0	21.5	19.0	20.5
26	---	---	---	31.5	28.5	30.5	29.5	26.0	28.5	21.5	19.0	20.5
27	---	---	---	31.5	28.0	29.5	29.5	27.0	28.5	22.0	20.0	21.5
28	---	---	---	31.0	27.5	29.0	29.5	26.5	28.0	22.0	20.0	21.0
29	---	---	---	31.5	28.5	30.0	28.5	23.5	25.0	22.0	19.0	21.0
30	---	---	---	---	---	---	23.5	22.5	22.5	22.0	20.0	21.0
31	---	---	---	---	---	---	22.5	21.0	22.0	---	---	---
MONTH	33.5	17.5	25.0	32.0	24.0	29.0	31.0	21.0	27.0	27.5	19.0	24.0
YEAR	33.5	.0	15.5									

07026000 OBION RIVER AT OBION, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	NOV 17,77	MAR 31,78	MAY 10,78	JUN 8,78
TIME	1000	1015	1100	1000
TOTAL CELLS/ML	1300	5600	1600	160
DIVERSITY: DIVISION	1.5	0.4	0.6	0.6
.CLASS	1.5	0.4	0.6	0.6
..ORDER	1.7	1.4	0.6	0.6
...FAMILY	2.6	2.1	0.6	0.6
....GENUS	3.0	2.4	0.6	0.6

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	42	3	--	-	--	-	--	-
...COELASTRACEAE								
....COELASTRUM	--	-	--	-	--	-	--	-
...MICRACTINIACEAE								
....GOLENKINIA	--	-	200	4	--	-	--	-
....MICRACTINIUM	--	-	800	14	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	28	2	--	-	--	-	--	-
....CHODATELLA	--	-	400	7	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	400	7	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	250#	19	--	-	--	-	--	-
....TETRASTRUM	--	-	800	14	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	14	1	2600#	46	--	-	--	-
..ZYGNEMATALES								
...DESMIDIACEAE								
....CLOSTERIUM	14	1	--	-	--	-	--	-
....COSMARIUM	--	-	--	-	--	-	--	-
....STAURASTRUM	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	14	1	200	4	--	-	--	-
....MELOSIRA	--	-	--	-	1400#	86	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	--	-	--	-
...CYMBELLACEAE								
....CYMBELLA	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
....FRAGILARIA	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	200	4	--	-	22	14
...GOMPHONEMATACEAE								
....GOMPHONEMA	28	2	--	-	--	-	--	-
...NAVICULACEAE								
....GYROSIGMA	28	2	--	-	--	-	--	-
....MASTOGLOIA	14	1	--	-	--	-	--	-
....NAVICULA	250#	19	--	-	--	-	--	-
....PINNULARIA	71	5	--	-	--	-	--	-
...NITZSCHIACEAE								
....HANTZSCHIA	14	1	--	-	--	-	--	-
....NITZSCHIA	270#	20	--	-	--	-	--	-
...SURIRELLACEAE								
....SURIRELLA	28	2	--	-	--	-	--	-

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	NOV 17,77		MAR 31,78		MAY 10,78		JUN 8,78	
TIME	1000		1015		1100		1000	
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	--	-	--	-	230	14	130#	86
..HORMOGONALES								
...NOSTOCACEAE								
....ANABAENA	--	-	--	-	--	-	--	-
...OSCILLATORIACEAE								
....LYNGBYA	--	-	--	-	--	-	--	-
....OSCILLATORIA	270#	20	--	-	--	-	--	-
...RIVULARIACEAE								
....RAPHIDIOPSIS	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....EUGLENA	--	-	--	-	--	-	--	-
....TRACHELOMONAS	--	-	--	-	--	-	--	-

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

07026000 OBION RIVER AT OBION, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	JUL 13,78		AUG 16,78		SEP 13,78	
TIME	1000		1045		1030	
TOTAL CELLS/ML	730		3300		3700	
DIVERSITY: DIVISION	1.6		1.3		1.6	
.CLASS	1.6		1.3		1.6	
..ORDER	1.6		2.1		2.1	
...FAMILY	2.4		2.6		2.9	
....GENUS	2.5		2.8		3.4	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHARACIACEAE						
....SCHROEDERIA	--	-	--	-	--	-
...COELASTRACEAE						
....COELASTRUM	88	12	--	-	--	-
...MICRACTINIACEAE						
....GOLENKINIA	--	-	--	-	--	-
....MICRACTINIUM	--	-	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	15	2	55	2	130	4
....CHODATELLA	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	270	8	--	-
....OOCYSTIS	--	-	--	-	76	2
...SCENEDESMACEAE						
....SCENEDESMUS	180#	24	380	12	540	14
....TETRASTRUM	--	-	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	--	-	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....CLOSTERIUM	--	-	--	-	--	-
....COSMARIUM	--	-	--	-	38	1
....STAURASTRUM	--	-	55	2	76	2
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	--	-	82	2	76	2
....MELOSIRA	--	-	--	-	76	2
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	27	1	--	-
...CYMBELLACEAE						
....CYMBELLA	--	-	55	2	--	-
...FRAGILARIACEAE						
....FRAGILARIA	29	4	--	-	--	-
....SYNEDRA	29	4	--	-	290	8
...GOMPHONEMATACEAE						
....GOMPHONEMA	--	-	--	-	--	-
...NAVICULACEAE						
....GYROSIGMA	--	-	27	1	110	3
....MASTOGLOIA	--	-	--	-	--	-
....NAVICULA	88	12	55	2	480	13
....PINNULARIA	--	-	82	2	57	2
...NITZSCHIACEAE						
....HANTZSCHIA	--	-	--	-	--	-
....NITZSCHIA	44	6	--	-	310	8
...SURIRELLACEAE						
....SURIRELLA	--	-	--	-	76	2

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	JUL 13,78 1000		AUG 14,78 1045		SEP 13,78 1030	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....AGMENELLUM	--	-	--	-	310	8
....ANACYSTIS	260#	36	1200#	38	940#	25
..HORMOGONALES						
...NOSTOCACEAE						
....ANABAENA	--	-	--	-	96	3
...OSCILLATORIACEAE						
....LYNGBYA	--	-	160	5	--	-
....OSCILLATORIA	--	-	--	-	--	-
...RIVULARIACEAE						
....RAPHIDIOPSIS	--	-	740#	22	--	-
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....EUGLENA	--	-	27	1	--	-
....TRACHELOMONAS	--	-	27	1	38	1

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

OBION RIVER BASIN

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) southeast of Tiptonville.

DRAINAGE AREA.--240 mi^2 (622 km^2).

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.--Lake frozen over several days in January, February, and March.

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, 12.54 ft (3.822 m) Dec. 6; minimum recorded, 11.24 ft (3.426 m) Aug. 28, but may have been less during periods of no gage-height record.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.21	11.97	12.21	12.20	---	---	11.49	12.18	12.06	11.86	11.69	11.76
2	12.19	11.98	12.20	12.15	---	---	11.50	12.17	12.10	11.87	11.65	11.78
3	12.13	12.05	12.27	12.17	---	---	11.50	12.18	12.07	11.87	11.68	11.80
4	12.10	12.10	12.45	12.17	---	---	11.57	12.12	12.02	11.85	11.68	11.81
5	12.07	12.09	12.47	12.18	---	---	11.53	12.16	12.01	11.82	11.64	11.80
6	12.06	12.11	12.53	12.19	---	---	11.55	12.18	12.01	11.78	11.62	11.77
7	12.04	12.10	12.47	12.20	---	---	11.57	12.25	12.03	11.91	11.58	11.75
8	12.13	12.08	12.53	12.45	11.25	---	11.57	12.28	12.07	11.89	11.55	11.75
9	12.08	12.01	12.49	12.32	11.24	---	11.55	12.29	12.04	11.96	11.54	11.74
10	12.07	12.02	12.37	12.24	11.25	---	11.75	12.24	12.01	11.96	11.57	11.71
11	12.09	12.08	12.30	12.15	11.26	---	11.76	12.15	11.99	11.99	11.58	11.68
12	12.06	12.10	12.27	12.13	11.28	---	11.80	12.07	12.00	11.96	11.56	11.67
13	12.04	12.06	12.42	12.12	11.38	---	11.88	12.11	11.98	12.01	11.55	11.70
14	12.02	12.03	12.47	12.08	11.49	---	11.90	12.11	11.95	12.01	11.54	11.70
15	12.03	11.99	12.50	12.05	11.60	---	11.92	12.12	11.91	12.05	11.50	11.69
16	12.02	12.09	12.45	12.11	11.70	12.25	11.94	12.14	11.87	12.03	11.49	11.68
17	11.96	12.11	12.48	12.17	11.73	12.22	11.88	12.13	11.85	12.01	11.46	11.66
18	11.99	12.12	12.45	12.18	11.71	12.07	11.96	12.12	11.97	11.99	11.45	11.64
19	11.99	12.08	12.39	12.22	---	12.05	12.06	12.11	11.93	11.97	11.46	11.64
20	11.98	12.32	12.35	12.23	---	11.93	12.14	12.19	11.98	11.95	11.43	11.63
21	11.97	12.37	12.26	12.24	---	11.95	12.15	12.19	11.99	11.91	11.40	11.66
22	11.96	12.35	12.17	12.25	---	11.88	12.14	12.17	11.97	11.89	11.38	11.61
23	11.95	12.35	12.20	12.26	---	11.84	12.14	12.13	11.98	11.87	11.35	11.57
24	11.96	12.33	12.22	12.35	---	11.70	12.15	12.13	11.98	11.84	11.33	11.55
25	12.02	12.35	12.21	12.40	---	11.64	12.17	12.12	11.94	11.84	11.31	11.54
26	12.01	12.27	12.17	---	---	11.59	12.16	12.09	11.92	11.93	11.32	11.51
27	12.01	12.30	12.14	---	---	11.50	12.13	12.08	11.91	11.79	11.29	11.49
28	12.03	12.34	12.13	---	---	11.44	12.14	12.05	11.91	11.78	11.33	11.49
29	12.02	12.30	12.15	---	---	11.47	12.09	12.14	11.91	11.74	11.51	11.46
30	12.00	12.24	12.17	---	---	11.48	12.15	12.11	11.89	11.75	11.68	11.49
31	11.97	---	12.17	---	---	11.45	---	12.10	---	11.72	11.70	---
MEAN	12.04	12.16	12.32	---	---	---	11.87	12.15	11.98	11.90	11.51	11.66
MAX	12.21	12.37	12.53	---	---	---	12.17	12.29	12.10	12.05	11.70	11.81
MIN	11.95	11.97	12.13	---	---	---	11.49	12.05	11.85	11.72	11.29	11.46

NOTE.--No gage-height record Jan. 26 to Feb. 7, Feb. 19 to Mar. 15.

07029500 HATCHIE RIVER AT BOLIVAR, TN

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 mi^2 (3,833 km^2).

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.--49 years, 2,361 ft^3/s (66.86 m^3/s), 21.66 in/yr (550 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,600 ft^3/s (1,740 m^3/s) Mar. 18, 1973, gage height, 21.66 ft (6.602 m), from rating curve extended above 34,000 ft^3/s (963 m^3/s); minimum, 78 ft^3/s (2.21 m^3/s) Sept. 2, 1943.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,500 ft^3/s (241 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 3	1300	29,500	835	19.00	5.791
Jan. 30	0100	10,500	297	15.91	4.849
May 10	1500	*33,200	940	19.44	5.925

Minimum discharge, 234 ft^3/s (6.63 m^3/s) Sept. 29, 30.

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	6360	1280	13700	1730	7510	1350	2100	1850	1540	804	358	338
2	6390	1120	20400	1730	6560	1570	2000	1930	1360	798	363	336
3	6140	1010	28900	1650	5950	2430	1800	2150	1100	807	384	325
4	5610	1010	25800	1530	5380	2930	1600	3010	942	758	399	315
5	5070	1370	19800	1410	4850	3050	1500	3500	874	688	403	308
6	4570	1910	15100	1380	4250	2920	1350	3710	810	605	377	295
7	4080	2240	11900	1470	3620	2790	1250	5420	821	564	371	280
8	3550	2380	9640	2610	2850	2640	1150	10300	1300	577	371	268
9	2760	2390	8290	4680	2250	2520	1100	21200	1980	576	368	256
10	2500	2320	7260	5330	1910	2880	1150	32000	2390	544	370	247
11	2680	2180	6480	5260	1750	3370	1280	31400	2620	741	380	247
12	2800	1970	5870	5100	1660	3690	1590	25100	2750	890	397	255
13	2830	1670	5450	4940	1650	3850	1910	18000	2770	839	383	261
14	2810	1330	5400	4790	1720	5740	2040	13600	2670	826	378	323
15	2660	1070	5050	4550	1770	6030	1970	10700	2490	931	387	417
16	2360	1090	4740	4400	1750	6270	1760	8810	2180	924	401	456
17	1930	1770	4450	5170	1650	6220	1520	7610	1770	734	373	445
18	1400	2420	4160	5120	1550	6750	1410	6820	1330	607	325	410
19	1020	2920	3890	5030	1470	7440	1700	6290	1010	550	293	375
20	852	3050	3580	4720	1420	7220	2100	5580	881	510	278	346
21	767	3990	3220	4530	1390	6660	2390	4940	1010	483	291	305
22	702	4900	2860	4470	1370	6120	2550	4340	1210	450	298	269
23	657	5260	2520	4360	1390	5620	2690	3720	1620	419	282	254
24	632	5310	2210	4830	1400	5080	2680	2940	2010	400	274	253
25	747	5350	2000	6990	1390	4570	2470	2180	2330	390	265	263
26	985	5840	1920	8920	1350	4020	2250	1720	2410	389	269	257
27	1360	6580	1880	8760	1300	3480	2160	1360	2090	387	358	247
28	1680	6950	1830	9350	1280	3040	2050	1130	1670	385	374	241
29	1720	7890	1750	10400	---	2730	1870	1080	1240	384	359	239
30	1580	11800	1680	10300	---	2490	1700	1290	943	373	341	238
31	1410	---	1690	8920	---	2270	---	1500	---	367	335	---
TOTAL	80612	100370	233420	154430	72390	127740	55090	245180	50121	18700	10805	9069
MEAN	2600	3346	7530	4982	2585	4121	1836	7909	1671	603	349	302
MAX	6390	11800	28900	10400	7510	7440	2690	32000	2770	931	403	456
MIN	632	1010	1680	1380	1280	1350	1100	1080	810	367	265	238
CFSM	1.76	2.26	5.09	3.37	1.75	2.78	1.24	5.34	1.13	.41	.24	.20
IN.	2.03	2.52	5.87	3.88	1.82	3.21	1.38	6.16	1.26	.47	.27	.23

CAL YR 1977 TOTAL 993085 MEAN 2721 MAX 28900 MIN 249 CFSM 1.84 IN 24.96
WTR YR 1978 TOTAL 1157927 MEAN 3172 MAX 32000 MIN 238 CFSM 2.14 IN 29.10

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 1977 TO SEPTEMBER 1978

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							
25...	1230	758	100	15.0	--	--	--
DEC							
06...	1600	14800	38	8.5	--	--	--
FEB							
06...	0915	4180	70	1.0	--	--	--
MAR							
14...	1040	6230	80	10.5	--	--	--
APR							
10...	1530	1120	98	21.0	27	82	90
MAY							
01...	1500	1790	70	19.0	126	609	87
01...	2000	1880	70	16.5	78	396	96
02...	0745	1960	70	15.5	50	265	93
02...	1130	1980	65	17.0	86	460	89
02...	1700	2000	70	18.0	97	524	95
02...	2030	2030	70	17.0	123	674	97
03...	0900	2130	70	15.0	70	403	90
03...	1315	2190	65	16.0	75	443	91
03...	1645	2220	65	16.5	68	408	93
JUN							
06...	1000	813	100	24.0	--	--	--
JUL							
18...	1000	615	65	25.5	--	--	--
AUG							
29...	1000	360	100	26.0	--	--	--

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 mi^2 (679 km^2).

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 temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--9 years, 346 ft^3/s (9.80 m^3/s), 17.93 in/yr (456 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft^3/s (671 m^3/s) Mar. 13, 1975, gage height, 24.96 ft (7.608 m); minimum, 66 ft^3/s (1.87 m^3/s) Apr. 6, 7, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 5,500 ft^3/s (156 m^3/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. 25	2100	*6,680	189	21.42	6.529	May 8	0530	6,270	178	21.15	6.447

Minimum discharge, 68 ft^3/s (1.93 m^3/s) July 31, Aug. 1.

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	358	85	2260	100	141	176	117	328	107	87	91	83
2	130	85	388	96	138	1450	115	136	106	90	86	83
3	93	89	232	92	135	3360	113	390	107	89	69	83
4	87	91	357	92	134	721	112	379	105	81	415	83
5	84	89	3190	93	140	198	110	164	102	80	145	82
6	82	89	2220	99	115	163	109	118	102	80	93	82
7	82	89	210	111	105	151	107	3980	138	78	87	81
8	90	90	159	3430	102	152	106	5600	105	79	86	81
9	88	88	333	2590	100	137	105	2740	102	77	85	81
10	81	87	179	387	100	210	105	345	99	76	94	81
11	79	86	135	178	99	168	211	180	99	303	88	81
12	77	86	131	174	107	159	128	155	98	147	86	81
13	77	86	390	181	452	481	108	147	97	86	86	82
14	78	86	1040	167	250	4220	101	132	96	83	85	171
15	78	86	300	146	142	1340	101	125	95	82	84	130
16	78	476	190	383	129	465	100	122	95	78	84	85
17	77	571	247	3500	126	247	98	119	95	76	84	82
18	77	169	290	862	118	182	102	207	95	75	84	81
19	77	112	168	281	112	163	98	160	113	73	82	81
20	81	100	138	207	115	149	94	126	259	73	82	81
21	79	2350	121	175	163	175	92	143	273	72	82	80
22	78	1150	110	165	124	206	93	124	441	72	82	79
23	81	277	107	162	148	159	94	120	775	72	83	79
24	81	172	108	2740	162	193	103	116	717	80	83	79
25	106	139	104	6030	138	194	135	112	142	72	83	79
26	96	123	101	4950	115	149	95	112	103	71	83	79
27	87	490	99	957	104	137	94	114	93	306	83	79
28	86	554	98	271	196	130	94	389	89	90	83	79
29	85	4170	100	197	---	127	93	236	87	72	84	79
30	85	4680	106	175	---	123	91	124	84	70	87	79
31	85	---	103	150	---	120	---	111	---	68	85	---
TOTAL	2903	16845	13714	29141	4011	16005	3224	17354	5019	2938	3014	2566
MEAN	93.6	562	442	940	143	516	107	560	167	94.8	97.2	85.5
MAX	358	4680	3190	6030	452	4220	211	5600	775	306	415	171
MIN	77	85	98	92	99	120	91	111	84	68	69	79
CFSM	.36	2.15	1.69	3.59	.55	1.97	.41	2.14	.64	.36	.37	.33
IN.	.41	2.39	1.95	4.14	.57	2.27	.46	2.46	.71	.42	.43	.36

CAL YR 1977 TOTAL 87460 MEAN 240 MAX 4680 MIN 73 CFSM .92 IN 12.42
WTR YR 1978 TOTAL 116734 MEAN 320 MAX 6030 MIN 68 CFSM 1.22 IN 16.57

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 mi^2 (3.26 km^2).

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 temperatures and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 654 ft^3/s (18.5 m^3/s) May 7, 1978, gage height 5.85 ft (1.783 m); no flow many days each year.

EXTREMES FOR WATER YEARS 1977-78.--Peaks above base of 175 ft^3/s (4.96 m^3/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. 3, 1977	1530	*290	8.21	4.00	1.219	Mar. 13, 1978	1945	339	9.60	4.30	1.311
Sept. 24, 1977	1220	248	7.02	3.72	1.134	May 7, 1978	0300	*654	18.5	5.85	1.783
						June 21, 1978	0945	175	4.96	3.17	0.966
Dec. 4, 1977	2015	490	13.9	5.10	1.554	Aug. 8, 1978	1600	348	9.86	4.35	1.326

No flow many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, NOVEMBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		---	.06	.16	.60	.22	.23	.10	.35	.00	.00	.00
2		---	.06	.06	.09	.20	4.6	.08	.18	.00	.00	.00
3		---	.06	.14	.16	45	5.9	.08	.13	.00	.00	.00
4		---	.06	.09	.24	8.1	14	.08	.17	.00	.00	.00
5		---	.06	.10	.20	1.5	1.5	.06	.06	.00	.00	.01
6		---	.08	1.0	.11	.58	.16	.02	.02	.00	.00	.01
7		---	.16	.83	.08	.40	.10	.02	.00	.00	.00	.01
8		---	.17	.20	.08	.37	.06	.02	.00	.00	.00	.00
9		---	.10	1.7	.10	.34	.05	.01	.00	.28	.00	.01
10		.04	.08	.47	.12	.40	.04	.01	.01	.02	.00	.01
11		.04	2.8	.25	.80	6.3	.03	.01	.00	.01	.00	.00
12		.04	1.2	.35	6.0	11	.03	.01	.00	.01	.00	.00
13		.04	.26	3.5	.75	1.5	.02	.01	.01	.00	.00	.56
14		.04	.07	16	.32	.70	.02	.02	.01	.00	.00	.21
15		.04	.06	2.5	.17	.34	.02	.02	.01	.01	.01	.01
16		.04	.08	1.6	.12	.33	.02	.01	.00	.01	.01	.01
17		.04	.08	.43	.16	.47	.02	.01	.07	.00	.01	.01
18		.04	.08	.19	.22	.76	.02	.01	.01	.00	.01	.00
19		.04	.08	.10	.17	.35	1.0	.01	.01	.00	.00	.03
20		.04	.08	.13	.11	.25	.29	.02	.00	.00	.00	.01
21		.05	.08	.13	.13	.28	.04	.01	.00	.00	.00	.00
22		.05	.08	.07	.16	.17	.03	.03	.00	.00	.01	.00
23		.05	.08	.14	5.9	.19	12	.04	.00	.00	.01	.00
24		.06	.08	.68	1.8	.21	3.8	.06	.00	.00	.01	36
25		.06	3.1	.30	.50	.22	2.1	.43	.00	.00	.00	1.3
26		5.9	.74	.31	1.5	.21	.44	.05	.56	.00	.00	.03
27		.63	.34	.29	.89	1.0	.22	.04	.10	.00	.00	4.7
28		.12	.32	.16	.24	2.2	.16	.16	.01	.00	.00	.03
29		.08	.17	.23	---	.43	.16	.93	.00	.00	.21	11
30		.06	.12	.17	---	.29	.14	.41	.01	.00	.01	4.8
31		---	.07	.56	---	.12	---	.48	---	.00	.00	---
TOTAL		---	10.86	32.84	21.72	84.43	47.20	3.25	1.72	.34	.29	58.75
MEAN		---	.35	1.06	.78	2.72	1.57	.10	.057	.011	.009	1.96
MAX		---	3.1	16	6.0	45	14	.93	.56	.28	.21	36
MIN		---	.06	.06	.08	.12	.02	.01	.00	.00	.00	.00
CFSM		---	.28	.84	.62	2.16	1.25	.08	.05	.009	.007	1.56
IN.		---	.32	.97	.64	2.49	1.39	.10	.05	.01	.01	1.73

07030295 LOOSAHATCHIE RIVER TRIBUTARY AT NEW ALLEN ROAD AT MEMPHIS, TN--Continued

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	.06	.01	2.0	.06	.24	1.4	.08	12	.34	.06	.00	.08
2	.02	.01	.24	.06	.24	23	.06	.11	1.6	.40	.00	.03
3	.01	.03	.08	.06	.24	5.4	.06	12	.48	.16	.00	.02
4	.01	.02	43	.03	.24	2.5	.06	.65	.48	.02	1.1	.02
5	.00	.58	13	.03	.17	1.4	.06	.06	.34	.02	.00	.02
6	.00	.23	1.8	.03	.11	1.4	.06	11	13	.02	.00	.02
7	.00	.03	.82	13	.11	2.4	.05	143	3.2	.01	.00	.02
8	.06	.01	1.8	34	.11	2.4	.06	34	.82	.01	28	.01
9	.01	.01	2.6	2.3	.11	2.0	.06	6.9	.24	.02	1.1	.01
10	.00	.00	1.1	.93	.11	1.8	1.4	.65	.08	.04	.03	.02
11	.00	.01	.65	.48	.08	.82	2.2	.82	.08	.36	.01	.01
12	.00	.02	.65	.48	.31	.48	.08	2.1	.06	.00	.04	.07
13	.00	.02	4.6	.48	4.3	31	.06	.65	.04	.00	7.9	.16
14	.00	.01	3.1	.48	.82	6.6	.04	.48	.04	4.4	.11	.59
15	.00	.01	.48	.48	.65	1.4	.03	.24	.03	.05	.01	.11
16	.00	6.2	.16	22	.48	1.8	.02	.16	.03	.01	.01	.06
17	.01	1.4	.24	11	.34	.65	.01	.11	.03	.00	.00	.04
18	.01	.03	.16	2.6	.24	.34	.01	.11	.06	.00	.01	.03
19	.02	.03	.08	2.1	.24	.34	.01	.99	.11	.00	.01	.02
20	.01	.03	.08	1.7	.24	.24	.01	.40	.34	.01	.01	.02
21	.02	8.7	.06	.48	1.7	2.1	.01	.92	11	.01	.01	.02
22	.02	.65	.08	.48	.82	.65	.01	.11	1.1	.00	.00	.03
23	.02	.24	.07	1.2	.65	.48	.11	.13	.15	.01	.01	.03
24	.03	.08	.06	40	.65	.48	.02	.10	.06	.04	.01	.02
25	1.5	.06	.04	35	.24	.65	.03	.16	.06	.02	.01	.02
26	.02	.02	.02	7.3	.24	.65	.03	.16	.06	.02	.00	.02
27	.01	4.8	.02	2.3	.16	.34	.03	.24	.06	.42	.00	.02
28	.02	1.4	.02	1.0	3.3	.11	.02	.34	.06	.00	.00	.02
29	.01	17	.02	.59	---	.11	.02	.65	.06	.00	6.2	.02
30	.01	4.5	.06	.24	---	.06	.03	.65	.06	.00	8.2	.02
31	.01	---	.06	.24	---	.08	---	.34	---	.00	.24	---
TOTAL	1.89	46.14	77.15	181.13	17.14	93.08	4.73	230.23	34.07	6.11	53.02	1.58
MEAN	.061	1.54	2.49	5.84	.61	3.00	.16	7.43	1.14	.20	1.71	.053
MAX	1.5	17	43	40	4.3	31	2.2	143	13	4.4	28	.59
MIN	.00	.00	.02	.03	.08	.06	.01	.06	.03	.00	.00	.01
CFSM	.05	1.22	1.98	4.64	.48	2.38	.13	5.90	.91	.16	1.36	.04
IN.	.06	1.36	2.28	5.34	.51	2.75	.14	6.79	1.01	.18	1.56	.05

CAL YR 1977 TOTAL 375.72 MEAN 1.03 MAX 45 MIN .00 CFSM .82 IN 11.08
WTR YR 1978 TOTAL 746.27 MEAN 2.04 MAX 143 MIN .00 CFSM 1.62 IN 22.02

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 mi^2 (1,810 km^2).

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 poor. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--9 years, 959 ft^3/s (27.16 m^3/s), 18.63 in/yr (473 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,400 ft^3/s (946 m^3/s) Mar. 14, 1975, gage height, 27.98 ft (8.528 m); minimum, 190 ft^3/s (5.38 m^3/s) Sept. 15, 16, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,000 ft^3/s (198 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Dec. 1	1630	8,340	236	15.86	4.834
Jan. 25	1930	7,290	206	14.89	4.538
May 10	0330	*13,200	374	19.55	5.959

Minimum daily, 200 ft^3/s (5.66 m^3/s) Aug. 25-27.

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	3410	394	7370	468	1590	450	515	551	486	313	250	300
2	2540	387	7280	466	1060	2000	498	479	468	289	245	285
3	1960	549	6260	456	856	1500	477	657	458	276	245	275
4	1450	492	4420	448	769	1000	467	709	431	268	600	265
5	998	459	3500	446	725	950	459	610	403	262	320	255
6	792	532	2480	455	630	840	451	585	382	253	285	256
7	680	553	1900	473	571	745	442	4180	380	267	270	255
8	648	511	1420	2520	556	745	432	5880	385	258	260	257
9	683	506	1180	1850	524	710	423	10900	631	269	250	250
10	698	498	1010	1870	493	938	437	11800	667	295	245	247
11	687	490	908	1750	483	1000	660	7390	526	297	245	244
12	625	483	842	1770	478	1090	610	4710	499	288	265	242
13	589	473	1090	1550	646	1340	597	3350	523	306	255	259
14	613	454	1570	1190	584	3410	550	2470	501	293	250	541
15	652	437	1260	895	541	2650	499	1900	442	288	245	549
16	623	964	1150	1180	517	2830	492	1500	392	295	260	412
17	557	1170	1160	2770	490	2360	492	1300	364	302	245	348
18	501	1100	1100	1900	476	2000	490	1230	360	300	230	312
19	457	958	1020	1870	461	1640	487	1080	435	290	220	295
20	425	816	924	1730	444	1220	465	862	445	280	210	280
21	402	2550	808	1530	455	1030	454	976	657	275	205	267
22	387	1740	712	1210	436	1030	465	770	479	270	220	259
23	374	1960	653	1040	439	949	532	647	532	265	210	251
24	360	1860	631	4110	434	849	559	593	476	260	205	242
25	429	1750	605	6380	426	773	536	554	566	260	200	237
26	415	1550	557	6290	414	677	488	525	480	260	200	237
27	410	1610	516	5910	397	630	461	508	401	360	200	234
28	404	1350	488	4790	515	599	447	485	367	290	235	233
29	397	2600	468	3700	---	573	436	470	356	275	220	235
30	397	3420	465	2880	---	554	447	489	340	260	450	230
31	390	---	468	2170	---	536	---	540	---	255	350	---
TOTAL	23953	32616	54215	66067	16410	37618	14768	68700	13832	8719	8090	8552
MEAN	773	1087	1749	2131	586	1213	492	2216	461	281	261	285
MAX	3410	3420	7370	6380	1590	3410	660	11800	667	360	600	549
MIN	360	387	465	446	397	450	423	470	340	253	200	230
CFSM	1.11	1.56	2.50	3.05	.84	1.74	.70	3.17	.66	.40	.37	.41
IN.	1.27	1.74	2.89	3.52	.87	2.00	.79	3.66	.74	.46	.43	.46

CAL YR 1977 TOTAL 315221 MEAN 864 MAX 7370 MIN 241 CFSM 1.24 IN 16.78
WTR YR 1978 TOTAL 353540 MEAN 969 MAX 11800 MIN 200 CFSM 1.39 IN 18.81

NOTE.--No gage-height record July 18 to Sept. 5.

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 mi^2 (3.76 km^2).

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 temperatures and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 740 ft^3/s (21.0 m^3/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 ft^3/s (7.08 m^3/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. 4	2150	264	7.48	8.41	2.563	May 7	0605	*541	15.3	10.44	3.182
Jan. 24	0745	303	8.58	8.75	2.667	Aug. 10	1720	491	13.9	10.13	3.088
Mar. 13	2120	459	13.0	9.92	3.024						

No flow many days.

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	.09	.00	1.7	.02	.24	.57	.02	3.2	.00	.00	.00	.00
2	.01	.00	.11	.01	.26	35	.01	.03	.06	.00	.00	.00
3	.00	.00	.03	.01	.23	7.0	.01	7.7	.00	.00	.00	.00
4	.00	.00	21	.01	.28	1.0	.01	1.7	.00	.00	12	.00
5	.00	.00	25	.03	.28	.47	.01	.05	.00	.00	.01	.00
6	.00	.00	2.8	.06	.14	.37	.00	2.8	1.3	.00	.00	.00
7	.00	.01	.44	.50	.11	.65	.00	81	.09	1.3	.00	.00
8	.03	.01	.62	37	.08	.92	.00	13	.51	.01	.00	.00
9	.00	.00	1.8	1.0	.05	1.0	.00	7.6	.02	.00	.00	.00
10	.00	.00	.14	.12	.04	1.3	.40	.62	.00	.00	43	.00
11	.00	.00	.10	.04	.03	.57	.85	.27	.00	.00	.61	.00
12	.00	.00	.12	.34	.70	.61	.01	.38	.00	.00	.05	.00
13	.00	.00	10	.40	4.0	45	.00	.20	.00	.00	.01	.12
14	.00	.00	5.2	.17	.25	11	.00	.10	.00	.05	.00	2.6
15	.00	.00	.80	.07	.10	1.0	.00	.06	.00	.00	.00	.11
16	.00	11	.28	37	.08	1.7	.00	.05	.00	.00	.00	.00
17	.00	4.6	.87	19	.07	.29	.00	.02	.00	.00	.00	.00
18	.00	.05	.27	1.6	.15	.12	.00	.02	.00	.00	.00	.00
19	.00	.02	.14	.73	.06	.08	.00	.10	.00	.00	.00	.00
20	.00	.02	.07	.50	.10	.11	.00	.17	9.6	.00	.00	.00
21	.00	23	.04	.32	.50	1.2	.00	2.8	13	.00	.00	.00
22	.00	.41	.03	.41	.35	.19	.00	.01	.09	.00	.00	.00
23	.00	.14	.03	1.9	.70	.08	.14	.00	.01	.00	.00	.00
24	.00	.08	.03	70	.40	.12	.96	.00	.00	.00	.00	.00
25	2.7	.04	.02	57	.19	.11	.02	.00	.00	.00	.00	.00
26	.01	.02	.02	8.3	.09	.05	.00	.00	.00	.00	.00	.00
27	.00	12	.02	1.3	.07	.04	.01	.00	.00	.01	.00	.00
28	.00	1.2	.01	.61	3.5	.03	.01	.00	.00	.00	.00	.00
29	.00	40	.02	.35	---	.03	.00	.00	.00	.00	.00	.00
30	.00	9.7	.09	.25	---	.03	.00	.00	.00	.00	.00	.00
31	.00	---	.03	.25	---	.03	---	.00	---	.00	.00	---
TOTAL	2.84	102.30	71.83	239.30	13.05	110.67	2.46	121.88	24.68	1.37	55.68	2.83
MEAN	.092	3.41	2.32	7.72	.47	3.57	.082	3.93	.82	.044	1.80	.094
MAX	2.7	40	25	70	4.0	45	.96	81	13	1.3	43	2.6
MIN	.00	.00	.01	.01	.03	.03	.00	.00	.00	.00	.00	.00
CFSM	.06	2.35	1.60	5.32	.32	2.46	.06	2.71	.57	.03	1.24	.07
IN.	.07	2.62	1.84	6.14	.33	2.84	.06	3.12	.63	.04	1.43	.07

CAL YR 1977 TOTAL 770.18 MEAN 2.11 MAX 106 MIN .00 CFSM 1.46 IN 19.75
WTR YR 1978 TOTAL 748.89 MEAN 2.05 MAX 81 MIN .00 CFSM 1.41 IN 19.20

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 mi^2 (7.67 km^2).

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 temperatures and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,620 ft^3/s (45.9 m^3/s) Aug. 10, 1978, gage height, 12.29 ft (3.746 m); minimum, 0.10 ft^3/s (0.003 m^3/s) Sept. 18, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft^3/s (15.6 m^3/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. 4	2005	1,280	36.2	10.99	3.350	June 6	1715	838	23.7	9.03	2.752
Mar. 13	1940	1,140	32.3	10.38	3.164	July 14	1215	989	28.0	9.73	2.966
May 7	0450	1,370	38.8	11.35	3.459	Aug. 8	1550	1,590	45.0	12.19	3.716
May 8	2250	586	16.6	7.73	2.356	Aug. 10	1525	*1,620	45.9	12.29	3.746
May 19	1655	976	27.6	9.67	2.947	Aug. 29	2310	786	22.3	8.78	2.676

Minimum discharge, 0.15 ft^3/s (0.004 m^3/s) Feb. 1, 9, 10, 11.

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	1.1	.81	2.1	1.3	.65	.86	1.5	15	2.0	2.8	2.3	1.2
2	1.1	2.3	1.0	1.3	.75	39	1.4	.67	16	3.5	2.3	1.1
3	1.3	2.0	1.1	1.4	1.1	1.8	1.5	26	1.5	5.4	2.3	1.5
4	1.0	.73	90	1.4	.92	1.3	1.5	1.7	1.3	2.2	27	1.6
5	.86	3.0	27	1.6	.88	1.3	1.5	.74	1.5	2.8	2.3	1.7
6	1.1	1.2	1.8	4.5	.78	1.3	1.4	17	61	2.8	2.2	1.8
7	2.6	.73	.86	21	.87	5.1	1.4	144	4.0	6.9	2.6	1.8
8	9.0	.86	6.6	32	.71	3.0	1.4	30	6.1	2.5	153	1.5
9	1.6	1.0	1.3	1.0	.40	3.4	1.3	5.6	2.0	3.5	4.3	.92
10	1.4	1.3	.86	.85	.46	1.3	25	1.1	2.0	11	134	1.7
11	1.2	1.1	.86	1.1	.51	2.2	18	.86	2.5	4.4	7.2	3.6
12	1.4	1.2	.86	4.7	6.6	1.3	3.2	5.4	2.6	3.4	7.8	4.8
13	1.8	1.1	21	2.2	3.0	71	1.5	.73	1.9	2.7	27	9.9
14	1.4	.93	2.2	1.1	.54	4.2	1.4	.73	1.8	125	4.8	16
15	1.9	1.1	.86	1.3	.89	4.8	1.3	.86	1.9	2.9	2.9	3.9
16	1.9	42	.86	50	1.0	1.6	1.2	.62	2.7	1.6	2.9	5.1
17	1.8	2.4	4.1	5.5	1.0	.73	7.0	.73	2.8	1.8	2.8	1.8
18	1.8	1.5	.86	1.3	3.0	.73	4.5	4.9	6.3	1.8	2.9	1.7
19	1.8	1.7	.86	1.3	1.0	.73	1.7	44	3.9	1.6	9.3	1.5
20	1.4	3.3	1.4	1.1	2.1	.86	1.4	4.8	2.3	1.8	2.1	2.5
21	1.5	22	1.3	2.2	2.4	11	1.3	5.3	3.8	1.8	2.1	2.1
22	1.5	1.4	1.6	1.8	1.3	1.6	1.3	2.0	3.7	1.6	1.8	1.8
23	1.7	1.2	1.6	3.0	1.0	1.4	1.3	1.7	3.2	14	2.0	1.6
24	1.8	1.3	2.2	89	1.0	2.6	1.2	1.7	3.0	3.2	2.0	2.4
25	15	1.5	2.2	53	1.0	1.7	1.2	1.4	2.4	5.2	1.3	2.2
26	.98	1.8	2.2	2.2	1.0	1.5	1.1	1.7	3.2	1.8	1.5	1.9
27	.51	24	2.1	1.4	2.5	1.5	1.0	1.8	2.9	4.0	1.6	1.9
28	.59	4.5	2.2	1.1	8.1	1.5	.81	2.0	2.8	2.2	3.9	2.0
29	.57	44	4.9	.99	---	1.4	.94	5.3	2.6	2.5	58	2.1
30	.52	8.0	4.2	.90	---	1.4	.97	1.9	2.5	2.0	9.2	2.7
31	.55	---	2.2	.73	---	1.4	---	1.7	---	2.7	1.6	---
TOTAL	62.68	179.96	193.18	292.27	45.46	173.51	90.22	331.94	156.2	231.4	487.0	86.32
MEAN	2.02	6.00	6.23	9.43	1.62	5.60	3.01	10.7	5.21	7.46	15.7	2.88
MAX	15	44	90	89	8.1	71	25	144	61	125	153	16
MIN	.51	.73	.86	.73	.40	.73	.81	.62	1.3	1.6	1.3	.92
CFSM	.68	2.03	2.11	3.19	.55	1.89	1.02	3.62	1.76	2.52	5.30	.97
IN.	.79	2.26	2.43	3.67	.57	2.18	1.13	4.17	1.96	2.91	6.12	1.08

CAL YR 1977 TOTAL 1691.65 MEAN 4.63 MAX 188 MIN .26 CFSM 1.56 IN 21.25
WTR YR 1978 TOTAL 2330.14 MEAN 6.38 MAX 153 MIN .40 CFSM 2.16 IN 29.27

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 mi^2 (2,416,000 km^2), approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: January 1933 to current year. Monthly discharge only for some periods, published in WSP 1311.
Gage heights: October 1934 to September 1951 and October 1952 to current year 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.

REVISED RECORDS.--WDR TN-77-1: 1977.

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 the 1978 water year were not available for publication at this time.

AVERAGE DISCHARGE.--44 years, 467,700 ft^3/s (13,200 m^3/s), 338,800,000 acre-ft/yr (418 km^3/yr).

EXTREMES FOR PERIOD 1934-77.--Maximum discharge, 1,980,000 ft^3/s (56,100 m^3/s) Feb. 8, 1937; maximum gage height, 48.69 ft (14.841 m) Feb. 10, 1937; minimum discharge, 79,200 ft^3/s (2,240 m^3/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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165000	307000	198000	203000	192000	363000	650000	409000	225000	370000	245000	280000
2	191000	320000	203000	201000	185000	421000	669000	412000	209000	392000	249000	262000
3	199000	334000	216000	201000	178000	476000	679000	409000	203000	402000	239000	247000
4	205000	345000	221000	198000	166000	538000	670000	404000	195000	398000	223000	246000
5	195000	351000	221000	196000	159000	575000	651000	402000	191000	372000	208000	249000
6	192000	348000	219000	196000	152000	607000	633000	406000	187000	374000	209000	249000
7	197000	348000	220000	196000	146000	655000	644000	409000	185000	372000	209000	250000
8	199000	345000	214000	195000	149000	690000	686000	405000	184000	358000	196000	266000
9	192000	337000	210000	197000	152000	720000	740000	400000	186000	338000	215000	292000
10	182000	323000	208000	206000	148000	742000	792000	409000	188000	322000	216000	316000
11	178000	305000	218000	211000	144000	757000	835000	440000	185000	310000	217000	333000
12	167000	277000	247000	216000	147000	775000	865000	471000	184000	298000	219000	336000
13	174000	255000	272000	215000	150000	776000	878000	487000	185000	290000	231000	331000
14	190000	235000	299000	214000	149000	775000	886000	490000	186000	289000	287000	322000
15	218000	223000	264000	215000	152000	780000	893000	477000	189000	294000	323000	308000
16	238000	220000	342000	218000	166000	791000	886000	450000	192000	290000	342000	296000
17	280000	209000	344000	220000	189000	794000	869000	416000	217000	284000	358000	290000
18	337000	202000	331000	229000	224000	792000	837000	380000	218000	282000	377000	309000
19	361000	194000	313000	236000	261000	783000	780000	354000	205000	288000	400000	364000
20	359000	191000	301000	238000	301000	768000	695000	332000	190000	284000	418000	425000
21	332000	183000	287000	240000	328000	745000	591000	313000	174000	277000	424000	452000
22	284000	180000	278000	242000	322000	721000	497000	298000	173000	253000	413000	457000
23	247000	178000	263000	242000	306000	607000	432000	288000	180000	237000	392000	454000
24	227000	183000	249000	236000	289000	644000	386000	277000	192000	226000	366000	455000
25	219000	184000	242000	234000	284000	609000	357000	265000	191000	229000	339000	450000
26	220000	172000	234000	234000	285000	584000	356000	250000	202000	244000	308000	442000
27	224000	179000	229000	231000	292000	566000	374000	243000	233000	251000	285000	436000
28	239000	184000	222000	229000	313000	549000	392000	250000	270000	254000	282000	427000
29	266000	190000	214000	223000	---	536000	400000	251000	302000	255000	293000	423000
30	283000	200000	209000	218000	---	565000	403000	249000	338000	257000	295000	419000
31	292000	---	209000	207000	---	617000	---	241000	---	256000	290000	---
TOTAL	7252000	7502000	7697000	6737000	5929000	20321000	19426000	11287000	6159000	9346000	9068000	10386000
MEAN	233900	250100	248300	217300	211800	655500	647500	364100	205300	301500	292500	346200
MAX	361000	351000	344000	242000	328000	794000	893000	490000	338000	402000	424000	457000
MIN	165000	172000	198000	195000	144000	363000	356000	241000	173000	226000	196000	246000
AC-FT	14380000	14880000	15270000	13360000	11760000	40310000	38530000	22390000	12220000	18540000	17990000	20600000

CAL YR 1976 TOTAL 139854000 MEAN 382100 MAX 860000 MIN 138000 AC-FT 277400000
WTR YR 1977 TOTAL 121110000 MEAN 331800 MAX 893000 MIN 144000 AC-FT 240200000

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.

REMARKS.--Daily values of specific conductance and temperatures for water year 1978 were not available when this publication went to press.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	HARDNESS (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
OCT											
04...	0900	353	7.6	20.0	7.8	88	2000	150	40	12	16
NOV											
02...	0830	371	7.2	15.0	8.3	85	870	160	42	14	17
30...	0850	300	7.6	7.0	10.9	93	2800	130	34	9.9	12
DEC											
29...	0900	382	7.8	2.0	12.6	94	730	150	42	12	14
FEB											
23...	0900	370	7.6	1.0	--	--	67	150	40	12	15
APR											
20...	0845	357	7.3	14.0	--	--	800	150	42	12	12
MAY											
24...	0900	335	7.6	18.0	7.3	80	1600	140	39	11	8.0
JUN											
28...	0945	395	7.9	26.5	6.9	87	K1700	180	46	15	20
AUG											
17...	0900	420	7.3	28.0	7.2	93	K1000	160	44	13	20
SEP											
07...	0915	430	8.0	26.5	7.3	92	K2500	170	47	13	26
20...	0910	440	8.2	27.0	6.8	86	K6600	180	47	14	22

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

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	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)	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)
OCT											
04...	.6	3.9	120	0	98	54	20	.2	6.9	222	212
NOV											
02...	.6	3.5	140	0	110	54	15	.2	7.8	228	223
30...	.5	3.1	110	0	90	41	14	.2	7.3	180	176
DEC											
29...	.5	3.1	--	0	--	51	22	.3	7.7	238	--
FEB											
23...	.5	2.4	130	0	110	48	17	.1	8.3	215	207
APR											
20...	.4	4.0	130	0	110	44	16	.2	6.8	208	201
MAY											
24...	.3	2.9	--	--	89	43	13	.2	--	198	209
JUN											
28...	.7	3.8	--	--	120	69	21	.2	4.5	251	252
AUG											
17...	.7	3.7	--	--	110	67	16	.2	6.8	243	237
SEP											
07...	.9	3.4	--	--	110	81	22	.3	2.4	258	265
20...	.7	3.2	--	--	120	71	22	.2	4.5	256	256

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	SEDIMENT, SUSPENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT										
04...	1.5	.06	--	--	.36	--	.25	.17	147	98
NOV										
02...	1.4	.01	--	--	1.2	--	.41	.10	348	96
30...	1.4	.01	--	--	.42	--	.24	.23	163	93
DEC										
29...	2.1	.18	--	--	.82	--	.24	.06	191	77
FEB										
23...	1.4	.31	.32	.63	.25	2.0	.14	.05	84	84
APR										
20...	2.5	.14	1.6	1.7	.82	4.2	.50	.07	444	95
MAY										
24...	--	--	--	--	--	--	.25	.05	273	84
JUN										
28...	1.3	.04	1.1	1.1	.82	2.4	.17	.07	112	86
AUG										
17...	1.3	.02	.88	.90	.63	2.2	.18	.07	135	81
SEP										
07...	.63	.02	.88	.90	.51	1.5	.18	.07	104	83
20...	.57	.04	.72	.76	.51	1.3	.14	.06	70	81

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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 04...	4	1	400	100	<10	0	10	0	50
FEB 23...	2	2	100	100	1	1	20	0	0
APR 20...	4	3	300	300	2	2	20	0	5

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 04...	1	40	6	3100	20	<100	0	200	0
FEB 23...	0	19	3	2000	20	6	0	80	10
APR 20...	0	100	10	15000	40	21	1	600	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 04...	.0	.0	0	0	<10	0	40	10
FEB 23...	.0	.0	0	0	1	0	30	10
APR 20...	.0	.0	1	0	0	0	80	20

07032000 MISSISSIPPI RIVER AT MEMPHIS, TN--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE	NOV 2,77		MAY 24,78		JUN 28,78		AUG 17,78		SEP 7,78		SEP 20,78	
TIME	0830		0900		0945		0900		0915		0910	
TOTAL CELLS/ML	6200		2400		1200		14000		22000		23000	
DIVERSITY: DIVISION	1.4		1.6		0.5		1.6		1.3		1.5	
.CLASS	1.4		1.6		0.5		1.6		1.3		1.5	
..ORDER	1.6		1.9		1.4		2.3		1.6		2.0	
...FAMILY	2.1		2.5		1.5		2.6		1.8		2.5	
....GENUS	2.4		2.8		1.5		3.5		2.7		3.4	
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												
....GLOEOACTINIUM	--	-	--	-	--	-	470	3	--	-	--	-
...CHARACIACEAE												
....SCHROEDERIA	--	-	--	-	--	-	--	-	*	0	--	-
...COELASTRACEAE												
....COELASTRUM	--	-	--	-	150	12	--	-	--	-	--	-
...HYDRODICTYACEAE												
....PEDIASTRUM	360	6	--	-	--	-	--	-	430	2	--	-
...OOCYSTACEAE												
....ANKISTRODESMUS	73	1	37	2	--	-	94	1	220	1	*	0
....CHODATELLA	--	-	--	-	--	-	*	0	--	-	--	-
....DICTYOSPHAERIUM	290	5	--	-	--	-	330	2	--	-	3700#	16
....KIRCHNERIELLA	--	-	--	-	--	-	--	-	--	-	220	1
....OOCYSTIS	--	-	--	-	--	-	--	-	290	1	480	2
...SCENEDESMACEAE												
....ACTINASTRUM	--	-	--	-	--	-	--	-	--	-	170	1
....CRUCIGENIA	--	-	--	-	--	-	370	3	--	-	960	4
....SCENEDESMUS	440	7	820#	34	--	-	940	7	1600	7	1000	5
....TETRASTRUM	--	-	--	-	--	-	510	4	--	-	--	-
..ULOTRICHALES												
...MICROSPORACEAE												
....MICROSPORA	290	5	--	-	--	-	--	-	--	-	--	-
..VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CARTERIA	--	-	--	-	--	-	94	1	--	-	--	-
....CHLAMYDOMONAS	--	-	37	2	--	-	94	1	--	-	--	-
...PHACOTACEAE												
....PTEROMONAS	--	-	--	-	--	-	*	0	--	-	--	-
CHRYSOPHYTA												
.BACILLARIOPHYCEAE												
..CENTRALES												
...COSCINODISCACEAE												
....COSCINODISCUS	--	-	--	-	--	-	--	-	290	1	--	-
....CYCLOTELLA	290	5	--	-	--	-	1200	9	5800#	26	1800	8
....MELOSIRA	3100#	51	190	8	540#	46	980	7	6500#	29	2600	11
....SKELETONEMA	--	-	--	-	--	-	1400	11	--	-	--	-
....STEPHANODISCUS	*	0	110	5	--	-	--	-	1000	5	--	-
..PENNALES												
...ACHNANTHACEAE												
....ACHNANTHES	--	-	37	2	--	-	--	-	--	-	--	-
...FRAGILARIACEAE												
....ASTERIONELLA	--	-	37	2	480#	41	--	-	--	-	--	-
....FRAGILARIA	--	-	190	8	--	-	--	-	--	-	--	-
....SYNEDRA	--	-	74	3	--	-	--	-	140	1	*	0
...NAVICULACEAE												
....NAVICULA	--	-	--	-	15	1	--	-	500	2	130	1
...NITZSCHIACEAE												
....NITZSCHIA	--	-	37	2	--	-	330	2	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
.CRYPTOPHYCEAE												
..CRYPTOMONADALES												
...CRYPTO,ONADACEAE												
....CRYPTOMONAS	--	-	--	-	--	-	*	0	--	-	--	-

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

PHYTOPLANKTON

DATE TIME	NOV 2,77 0830		MAY 24,78 0900		JUN 28,78 0900		AUG 17,78 0900		SEP 7,78 0915		SEP 20,78 0910	
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												
....AGMENELLUM	--	-	--	-	--	-	2600#	19	--	-	3100	14
....ANACYSTIS	--	-	--	-	--	-	650	5	1300	6	2900	13
..HORMOGONALES												
...NOSTOCACEAE												
....ANABAENA	580	9	480#	20	--	-	--	-	--	-	1000	5
....APHANIZOMENON	--	-	--	-	--	-	--	-	--	-	430	2
....CYLINDROSPERMUM	--	-	--	-	--	-	--	-	--	-	260	1
...OSCILLATORIACEAE												
....OSCILLATORIA	730	12	370#	15	--	-	2800#	21	4300#	19	3900#	17
...RIVULARIACEAE												
....RAPHIDIOPSIS	--	-	--	-	--	-	420	3	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)												
.EUGLENOPHYCEAE												
..EUGLENALES												
...EUGLENACEAE												
....TRACHELOMONAS	--	-	--	-	--	-	140	1	--	-	--	-

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

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, 1.6 mi (4.2 km) south of Germantown, and at mile 17.3 (27.8 km).

DRAINAGE AREA.--68.2 mi^2 (176.6 km^2).

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 poor. Periodic observations of water temperatures and specific conductance are published in this report as miscellaneous water quality data.

AVERAGE DISCHARGE.--9 years, 97.2 ft^3/s (2.75 m^3/s), 19.35 in/yr (491 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,680 ft^3/s (274 m^3/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 2,500 ft^3/s (71 m^3/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)
Nov. 29	2315	3,250	92.0	14.78	4.505	Mar. 14	0045	3,680	104	15.84	4.828
Jan. 8	1115	2,590	73.3	13.09	3.990	May 7	0930	5,020	142	18.81	5.733
Jan. 16	2400	2,660	75.3	13.27	4.045	Aug. 4	1215	*6,100	173	21.03	6.410
Jan. 25	0600	4,330	123	17.39	5.300						

Minimum discharge, 0.07 ft^3/s (0.002 m^3/s) Sept. 7.

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	26	.25	582	.75	10	31	3.4	12	2.5	.41	.15	.80
2	7.4	.25	175	.40	11	641	2.7	4.6	11	.29	.13	.55
3	3.3	1.2	110	.18	16	643	2.7	83	5.0	.15	.12	.30
4	1.7	1.2	86	.18	17	112	4.1	40	3.8	.12	1740	.20
5	1.2	.65	104	.25	17	39	4.9	12	3.2	.10	268	.10
6	.98	1.1	112	.75	11	26	4.1	68	4.7	.24	25	.08
7	.82	.75	77	2.7	5.9	24	3.9	3270	8.5	.75	8.9	.07
8	131	.45	56	1730	4.4	29	2.7	1230	7.0	1.2	5.5	.24
9	96	.30	126	337	4.1	51	1.4	308	6.4	12	2.5	.49
10	13	.25	77	44	3.4	316	3.6	33	4.7	65	1.5	.19
11	5.3	.30	49	16	3.4	83	175	13	3.8	13	1.0	.15
12	3.1	.21	40	14	5.7	97	23	82	3.0	1.3	.70	.65
13	2.2	.21	397	20	117	456	11	59	3.0	.29	.50	7.4
14	1.9	.21	667	13	37	1500	4.9	7.4	2.3	1.1	.38	297
15	1.7	.21	144	8.3	14	159	2.3	5.0	2.1	24	.28	19
16	1.5	530	60	614	10	126	1.7	3.6	1.9	2.6	.23	3.6
17	1.4	175	175	1230	7.9	47	3.1	3.0	1.6	.75	.20	1.3
18	3.0	32	110	198	7.9	22	2.7	2.8	1.5	.57	.17	.57
19	2.0	12	56	53	6.7	15	2.1	9.7	1.5	.49	140	.41
20	1.6	15	9.5	31	6.4	12	1.5	28	1.5	.41	110	.29
21	1.3	1040	4.9	20	9.5	207	1.4	6.1	305	.29	11	.24
22	1.1	240	1.4	14	6.7	84	1.2	4.0	248	.24	3.2	.29
23	1.5	45	.40	62	8.3	23	9.2	5.0	121	.19	.54	.29
24	10	20	.15	2390	7.3	17	3.4	4.2	150	.15	.42	.35
25	100	11	3.6	2830	5.9	14	2.5	3.6	12	.13	.30	.35
26	15	6.7	.85	667	4.4	8.9	1.9	3.2	5.0	.08	.20	.29
27	1.4	99	.45	122	3.1	6.4	.75	3.2	2.8	.65	.15	.29
28	.75	82	.40	55	49	5.7	.55	2.8	2.3	.85	.15	.41
29	.45	1710	.45	35	---	5.4	.55	3.0	.85	.24	15	.41
30	.35	1780	2.1	17	---	3.9	.85	3.4	.65	.24	60	.49
31	.25	---	1.4	11	---	3.1	---	2.5	---	.29	3.0	---
TOTAL	437.20	5805.24	3228.60	10536.51	410.0	4807.4	283.10	5515.1	926.60	128.12	2399.22	336.80
MEAN	14.1	194	104	340	14.6	155	9.44	171	30.9	4.13	77.4	11.2
MAX	131	1780	667	2830	117	1500	175	3270	305	65	1740	297
MIN	.25	.21	.15	.18	3.1	3.1	.55	2.5	.65	.08	.12	.07
CFSM	.21	2.85	1.53	4.99	.21	2.27	.14	2.51	.45	.06	1.14	.16
IN.	.24	3.17	1.76	5.75	.22	2.62	.15	2.90	.51	.07	1.31	.18

CAL YR 1977 TOTAL 27928.57 MEAN 76.5 MAX 2380 MIN .00 CFSM 1.12 IN 15.23
WTR YR 1978 TOTAL 34613.89 MEAN 94.8 MAX 3270 MIN .07 CFSM 1.39 IN 18.88

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 mi^2 (15.10 km^2).

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 temperatures and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,530 ft^3/s (43.3 m^3/s) Mar. 28, 1975, gage height, 10.42 ft (3.176 m); minimum, 0.03 ft^3/s (<0.001 m^3/s) Aug. 30, 31, Sept. 1, 4, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft^3/s (14.2 m^3/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. 8	0045	521	14.8	4.61	1.405	May 7	0605	*1,040	29.5	7.52	2.292
Jan. 24	0845	765	21.7	5.93	1.807	June 21	1050	786	22.3	6.05	1.844
Jan. 25	0650	505	14.3	4.53	1.381	June 22	1650	507	14.4	4.54	1.384
Mar. 13	2135	779	22.1	6.01	1.832						

Minimum discharge, 0.03 ft^3/s (<0.001 m^3/s) Aug. 30, 31, Sept. 1, 4.

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	.59	.71	13	.82	1.0	1.5	1.0	3.0	2.1	.19	.48	.04
2	.54	.71	3.9	.74	1.3	80	.93	.62	3.1	.19	.49	.04
3	1.2	.79	2.6	.77	1.7	15	.99	27	1.1	.19	.49	.04
4	1.9	.62	2.5	.79	1.2	3.3	.97	5.4	1.4	.25	45	.05
5	1.0	.52	9.6	.85	.90	1.8	.93	1.2	1.5	.29	.13	.05
6	.47	.41	5.6	1.0	.80	1.7	.92	34	3.9	.28	.08	.05
7	.52	.77	2.7	14	.75	1.7	.89	306	2.1	.38	.06	.05
8	13	.84	2.5	268	.73	1.5	.94	42	1.1	.42	.08	.06
9	1.5	1.2	5.0	45	.71	1.8	.89	5.3	1.7	.44	.10	.06
10	.70	1.3	2.6	8.0	.70	3.7	7.4	1.7	2.0	.16	.13	.06
11	.87	1.7	2.1	1.3	.70	1.6	15	1.0	2.1	.19	.13	.06
12	.50	1.7	2.1	1.6	1.3	1.0	.82	7.9	2.3	.21	.16	.06
13	.43	1.6	40	2.3	11	87	.58	5.1	2.6	1.2	.16	.16
14	.38	1.5	15	2.3	3.0	42	.48	.91	2.7	.26	.16	4.9
15	.33	1.5	3.1	1.5	1.2	6.4	.45	.71	2.9	.22	.20	.08
16	.29	76	2.1	116	1.1	7.2	.41	.61	2.9	.07	.20	.10
17	.27	4.0	4.1	62	1.0	3.5	.41	.59	3.0	.08	.20	.13
18	.26	1.2	2.2	12	1.2	2.6	.52	.64	3.2	.09	.16	.13
19	.25	.71	1.5	3.7	1.0	1.7	.45	47	3.0	.11	.20	.16
20	.24	.71	1.1	2.7	1.3	1.5	.42	6.3	4.0	.13	.13	.16
21	.24	53	1.0	2.0	1.4	18	.53	1.2	78	.12	.10	.13
22	.24	3.6	.97	1.9	1.2	6.5	.61	.70	48	.10	.10	.13
23	.24	1.9	.94	7.6	1.5	4.0	1.3	.78	2.2	.12	.10	.13
24	27	1.7	.90	234	1.2	3.5	1.5	.86	.39	.15	.10	.10
25	9.0	1.2	.88	226	1.1	2.0	.86	1.1	.22	.16	.13	.13
26	1.5	1.0	.86	20	1.0	1.5	.53	1.2	.19	.20	.16	.13
27	.53	6.2	.83	6.4	1.0	1.3	.51	1.3	.17	.24	.13	.13
28	.56	4.6	.80	3.2	6.0	1.2	.49	1.4	.18	.23	.13	.16
29	.62	183	1.0	2.1	---	1.1	.49	1.8	.20	.30	.16	.20
30	.66	35	1.2	1.5	---	.96	.47	1.9	.17	.45	.04	.16
31	.71	---	.97	1.2	---	1.0	---	2.0	---	.50	.04	---
TOTAL	66.54	389.69	133.65	1051.27	46.99	307.56	42.69	511.22	178.42	7.92	49.91	7.84
MEAN	2.15	13.0	4.31	33.9	1.68	9.92	1.42	16.5	5.95	.26	1.61	.26
MAX	27	183	40	268	11	87	15	306	78	1.2	45	4.9
MIN	.24	.41	.80	.74	.70	.96	.41	.59	.17	.07	.04	.04
CFSM	.37	2.23	.74	5.82	.29	1.70	.24	2.83	1.02	.05	.28	.05
IN.	.42	2.49	.85	6.71	.30	1.96	.27	3.26	1.14	.05	.32	.05

CAL YR 1977 TOTAL 2239.70 MEAN 6.14 MAX 271 MIN .10 CFSM 1.05 IN 14.29
WTR YR 1978 TOTAL 2793.70 MEAN 7.65 MAX 306 MIN .04 CFSM 1.31 IN 17.82

NONCONNAH CREEK BASIN

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 mi^2 (50.2 km^2).

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, 3,640 ft^3/s (103 m^3/s) Sept. 24, 1977, gage height, 14.56 ft (4.438 m); minimum, 0.04 ft^3/s (0.001 m^3/s) Sept. 12, 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft^3/s (34.0 m^3/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)
Nov. 29	0550	1,260	35.7	8.91	2.716	Mar. 13	2210	2,210	62.6	11.32	3.450
Jan. 8	0105	1,490	42.2	9.52	2.902	May 7	0630	*3,210	90.9	13.67	4.167
Jan. 24	0725	2,430	68.8	11.87	3.618	June 21	1115	1,940	54.9	10.63	3.240
Jan. 25	0455	1,760	49.8	10.19	3.106	Aug. 4	1130	1,240	35.1	8.85	2.698

Minimum discharge, 0.16 ft^3/s (0.005 m^3/s) Aug. 24, 25.

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	3.3	1.0	35	2.5	4.1	5.9	2.1	10	1.9	.87	.71	.39
2	2.0	1.5	7.4	2.2	4.9	265	1.9	.77	21	.81	.65	.35
3	3.4	2.1	4.8	2.3	5.3	63	1.8	74	3.0	.89	.59	.32
4	6.5	1.5	5.1	2.3	4.7	13	1.7	13	1.9	1.4	200	.32
5	3.2	1.0	22	2.4	3.7	6.6	1.7	3.1	1.9	.82	1.7	.30
6	1.8	.80	9.2	3.1	2.2	5.9	1.5	43	12	.82	.64	.28
7	1.9	.87	3.4	34	2.1	6.4	1.5	1090	17	.77	.42	.28
8	43	1.0	6.4	603	2.0	5.7	1.6	136	3.5	.77	.36	.28
9	5.6	.90	10	28	1.8	7.2	1.5	19	2.5	2.1	.35	.34
10	2.0	.87	2.9	16	1.8	11	17	7.6	2.7	1.4	.33	.41
11	2.7	.89	2.5	6.0	1.8	6.5	57	4.2	2.5	.77	.31	.56
12	1.5	.95	3.1	6.6	4.2	5.6	1.8	40	2.4	.77	.33	.54
13	1.4	.99	104	7.0	35	270	1.1	34	2.3	77	.47	4.6
14	1.2	1.0	56	4.5	5.8	176	1.0	4.6	2.3	19	.32	107
15	.90	1.2	10	3.4	3.8	21	.78	2.8	2.3	9.3	.27	2.0
16	.77	225	5.4	326	3.5	26	.67	2.2	2.4	1.0	.28	.80
17	.66	17	13	198	3.1	9.2	.76	1.9	2.7	.70	.32	.63
18	.62	5.4	5.4	22	3.3	6.3	1.1	1.9	2.8	.59	.30	.53
19	.62	2.3	4.0	10	2.6	4.3	.71	164	2.9	.49	.54	.52
20	.62	2.0	3.0	7.8	3.2	4.1	.69	32	3.5	.52	.41	.48
21	.59	166	2.5	6.8	3.8	58	.66	11	260	.52	.25	.39
22	.59	9.2	2.2	9.2	3.4	11	.66	4.5	80	.59	.21	.33
23	.59	4.4	2.1	39	4.3	6.8	3.8	3.6	8.4	.56	.32	.39
24	100	2.9	2.0	789	3.1	5.8	2.2	2.7	2.3	.52	.27	.37
25	40	2.1	1.9	792	2.8	4.6	1.9	1.9	1.2	.59	.17	.37
26	5.3	1.5	1.9	57	2.4	3.5	.82	2.3	.93	.62	.28	.38
27	1.5	39	1.8	35	2.4	3.0	.63	2.1	.87	1.2	.29	.38
28	1.0	13	1.8	17	20	2.7	.70	1.9	.84	.68	.24	.38
29	.90	524	2.7	11	---	2.9	.74	1.7	.87	.73	6.9	.37
30	1.5	155	3.7	5.6	---	2.9	.71	1.6	.90	.67	16	.37
31	.90	---	2.7	4.3	---	2.5	---	2.0	---	.76	.71	---
TOTAL	236.56	1185.37	337.9	3053.0	141.1	1022.4	110.73	1719.37	449.81	128.23	234.94	124.66
MEAN	7.63	39.5	10.9	98.5	5.04	33.0	3.69	55.5	15.0	4.14	7.58	4.16
MAX	100	524	104	792	35	270	57	1090	260	77	200	107
MIN	.59	.80	1.8	2.2	1.8	2.5	.63	.77	.84	.49	.17	.28
CFSM	.39	2.04	.56	5.08	.26	1.70	.19	2.86	.77	.21	.39	.21
IN.	.45	2.27	.65	5.85	.27	1.96	.21	3.30	.86	.25	.45	.24

CAL YR 1977 TOTAL 6764.60 MEAN 18.5 MAX 769 MIN .06 CFSM .95 IN 12.97
WTR YR 1978 TOTAL 8744.07 MEAN 24.0 MAX 1090 MIN .17 CFSM 1.24 IN 16.77

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 mi^2 (1.53 km^2).

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 good. 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, 486 ft^3/s (13.8 m^3/s) Sept. 29, 1977, gage height, 9.05 ft (2.758 m); minimum, 0.04 ft^3/s (0.001 m^3/s) May 18, 1976, Nov. 16, 17, Dec. 22, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft^3/s (7.08 m^3/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)
Nov. 21	0140	294	8.33	7.19	2.192	May 19	1655	400	11.3	8.19	2.496
Dec. 4	2005	424	12.0	8.42	2.566	Aug. 10	1505	337	9.54	7.60	2.316
Mar. 13	1935	372	10.5	7.93	2.417	Aug. 29	2300	257	7.28	6.83	2.082
May 7	0355	*454	12.9	8.71	2.655						

Minimum discharge, 0.09 ft^3/s (0.003 m^3/s) Dec. 11.

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	1.6	.71	.67	2.0	.82	.79	1.1	5.7	.89	.96	.93	.56
2	1.2	1.1	1.1	1.5	.83	12	.96	.87	3.0	1.5	1.1	.51
3	2.0	1.1	.56	1.4	1.2	1.2	.96	8.0	.80	1.9	1.1	.44
4	.64	.60	22	.82	.88	1.0	.95	.89	.83	.91	7.8	.61
5	.97	1.1	3.6	.63	.84	1.2	1.0	1.8	.70	.84	1.1	.58
6	1.4	.90	.44	1.5	1.1	1.1	.83	2.9	7.0	.92	1.1	.43
7	1.4	.92	.49	7.6	.84	1.5	1.1	35	.89	2.6	.89	.58
8	2.5	.92	2.3	10	.93	1.3	1.0	8.2	1.3	.79	2.8	.54
9	.84	.82	.89	.53	.94	1.4	.79	1.0	.74	1.4	1.2	.36
10	1.1	.74	1.0	.37	.77	.95	6.2	.82	.92	3.2	16	.56
11	1.0	.92	1.2	.49	.88	1.2	.97	.80	.66	.94	.65	.78
12	.97	.78	.63	1.0	2.5	1.0	.61	1.8	.74	.92	.71	1.6
13	1.1	.54	6.4	.72	1.0	19	.58	.76	.81	.86	2.0	2.4
14	.74	.75	1.6	.49	.77	1.8	.95	.71	.56	18	.58	5.7
15	.97	.98	1.5	.56	.90	2.1	.56	.55	.89	1.2	.64	.35
16	1.0	11	.89	14	.87	1.4	.50	.85	.73	.89	.49	.90
17	.92	.96	1.4	1.6	.88	1.5	1.0	.70	.64	.89	.62	.67
18	1.2	.79	.66	.46	1.4	1.3	.82	.41	14	1.1	.56	.53
19	1.6	.59	.69	.68	1.1	1.2	.82	11	1.1	.99	1.1	.68
20	.99	1.3	1.0	.46	1.0	1.3	.93	1.9	1.8	.87	.61	.64
21	.81	9.5	.77	.42	1.1	2.8	.72	.77	7.0	.99	.58	.49
22	1.9	.63	.64	.72	1.0	.97	.98	.70	1.2	.99	.48	.75
23	1.3	.82	1.1	1.1	.88	1.1	4.3	.64	1.1	.85	.60	.67
24	2.8	.43	1.7	25	.97	1.2	.70	.58	.63	1.1	.64	.64
25	9.8	.46	1.9	17	.99	1.3	.76	.65	1.1	1.2	.50	.79
26	3.2	.71	1.8	1.0	.93	1.1	.81	.92	.81	.82	.59	.75
27	.97	5.8	1.4	1.1	1.6	1.2	.63	.78	.98	2.4	.63	.71
28	1.1	.89	2.0	1.2	2.4	1.6	.80	.97	.93	1.0	1.3	.83
29	1.0	11	3.7	.91	---	1.5	.92	2.0	.85	.93	13	.78
30	1.1	1.7	2.4	.84	---	1.4	.69	.76	1.0	1.0	1.8	.64
31	.84	---	2.0	1.0	---	1.0	---	.81	---	1.0	.51	---
TOTAL	48.96	59.46	68.43	97.10	30.32	69.41	33.94	94.24	54.60	53.96	62.61	26.47
MEAN	1.58	1.98	2.21	3.13	1.08	2.24	1.13	3.04	1.82	1.74	2.02	.88
MAX	9.8	11	22	25	2.5	19	6.2	35	14	18	16	5.7
MIN	.64	.43	.44	.37	.77	.79	.50	.41	.56	.79	.48	.35
CFSM	2.68	3.36	3.75	5.31	1.83	3.80	1.92	5.15	3.09	2.95	3.42	1.49
IN.	3.08	3.74	4.31	6.11	1.91	4.37	2.14	5.93	3.44	3.40	3.94	1.67

CAL YR 1977 TOTAL 625.85 MEAN 1.71 MAX 34 MIN .32 CFSM 2.90 IN 39.39
WTR YR 1978 TOTAL 699.50 MEAN 1.92 MAX 35 MIN .35 CFSM 3.25 IN 44.03

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 mi^2 (12.90 km^2).

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 temperatures and specific conductance are published in this report as miscellaneous water quality data.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,020 ft^3/s (85.5 m^3/s) May 7, 1978, gage height, 12.98 ft (3.956 m); minimum, 0.90 ft^3/s (0.025 m^3/s) Jan. 1, 1977.

EXTREMES FOR WATER YEARS 1975-78.--Peak discharges above a base of 1,400 ft^3/s (39.6 m^3/s) and maximum (*):

Date	Time	Discharge (ft^3/s)	Discharge (m^3/s)	Gage height (ft)	Gage height (m)
Mar. 11, 1975	2150	1,420	40.2	9.56	2.914
Mar. 12, 1975	0510	2,220	62.9	11.41	3.478
Mar. 12, 1975	0925	*2,310	65.4	11.59	3.533
Mar. 28, 1975	0040	1,900	53.8	10.71	3.264
Mar. 29, 1976	1855	*1,450	41.1	9.62	2.932
Sept. 4, 1976	1345	1,430	40.5	9.59	2.923
Mar. 3, 1977	1455	1,510	42.8	9.78	2.981
Sept. 24, 1977	1210	*2,290	64.9	11.55	3.520
Sept. 27, 1977	0805	1,510	42.8	9.77	2.978
Dec. 4, 1977	2005	2,550	72.2	12.08	3.682
Mar. 13, 1978	1940	2,140	60.6	11.23	3.423
May 7, 1978	0415	*3,020	85.5	12.98	3.956
May 19, 1978	1655	2,850	80.7	12.67	3.862
June 6, 1978	1845	1,510	42.8	9.78	2.981
Aug. 8, 1978	1555	2,380	67.4	11.73	3.575
Aug. 19, 1978	1825	2,000	56.6	10.93	3.331
Aug. 29, 1978	2315	1,400	39.6	9.50	2.896

Minimum discharge:

Water Year	Date	Discharge (ft^3/s)	Discharge (m^3/s)	Water Year	Date	Discharge (ft^3/s)	Discharge (m^3/s)
1975	June 22	1.78	0.050	1977	Jan. 1	0.90	0.025
1976	Dec. 14	1.06	0.030	1978	Nov. 14	1.24	0.035

DISCHARGE, IN CUBIC FEET PER SECOND, DECEMBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			---	6.6	60	4.9	3.6	5.1	3.3	3.0	11	3.5
2			---	5.4	7.4	4.7	3.6	4.5	3.7	2.8	4.1	4.5
3			3.3	15	15	5.0	3.4	44	4.1	2.8	30	5.0
4			3.4	3.9	16	5.3	3.7	4.0	4.0	2.6	5.2	4.8
5			3.9	3.5	59	4.9	3.5	4.1	4.8	2.5	3.8	9.8
6			9.4	4.0	6.6	3.8	3.9	4.5	4.3	4.0	3.9	3.6
7			3.3	4.1	6.0	3.7	4.6	5.0	4.9	3.8	3.9	3.7
8			2.4	38	5.8	3.3	8.0	10	3.2	3.5	4.5	4.2
9			2.7	3.8	5.9	23	67	3.9	4.7	3.5	4.2	4.9
10			3.1	173	5.5	29	3.5	3.8	5.7	3.3	3.9	8.0
11			16	4.0	5.7	61	3.5	53	4.7	3.4	5.2	3.9
12			2.7	7.2	4.9	455	3.7	3.4	4.1	3.4	5.5	33
13			3.0	4.0	4.8	76	4.3	3.0	4.1	3.4	5.1	3.7
14			7.1	3.9	5.1	12	13	21	3.9	4.1	5.1	3.5
15			14	4.3	9.8	4.6	4.8	23	9.5	4.4	5.4	4.2
16			2.8	3.8	25	4.0	3.9	4.0	11	4.4	5.3	3.9
17			3.0	3.6	6.2	4.2	3.9	3.6	3.2	4.5	4.7	3.9
18			2.9	4.0	5.8	17	4.3	2.8	3.5	5.8	5.1	4.2
19			2.9	6.3	5.6	4.4	12	3.2	3.2	4.2	4.6	6.5
20			3.1	3.4	5.7	4.1	3.9	3.4	4.1	4.5	5.1	4.6
21			3.0	3.6	5.7	4.0	3.9	3.2	3.5	4.2	5.0	3.3
22			2.6	3.4	59	7.3	4.2	3.3	2.2	4.0	5.1	4.2
23			3.5	3.5	64	12	4.0	3.0	3.6	14	5.0	4.4
24			112	3.8	7.8	4.3	3.8	2.9	4.1	6.9	4.9	4.9
25			13	4.0	6.0	4.0	17	2.6	4.3	5.5	4.9	5.1
26			3.5	3.7	6.4	4.0	4.6	22	4.3	3.3	4.4	5.7
27			27	4.0	6.1	45	3.9	3.1	16	3.4	37	5.1
28			3.5	4.6	6.0	160	19	6.2	3.3	3.6	3.7	5.4
29			20	8.4	---	48	4.8	26	3.2	4.2	4.3	5.4
30			5.4	5.2	---	3.2	33	3.6	3.2	5.0	31	5.4
31			7.0	31	---	3.4	---	11	---	5.7	3.4	---
TOTAL	---	---	---	377.0	426.8	1025.1	260.3	296.2	141.7	133.7	234.3	172.3
MEAN	---	---	---	12.2	15.2	33.1	8.68	9.55	4.72	4.31	7.56	5.74
MAX	---	---	---	173	64	455	67	53	16	14	37	33
MIN	---	---	---	3.4	4.8	3.2	3.4	2.6	2.2	2.5	3.4	3.3
CFSM	---	---	---	2.45	3.05	6.65	1.74	1.92	.95	.87	1.52	1.15
IN.	---	---	---	2.82	3.19	7.66	1.94	2.21	1.06	1.00	1.75	1.29

07032248 CANE CREEK AT EAST PERSON AVENUE AT MEMPHIS, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	5.4	2.6	2.5	2.8	2.6	2.5	4.0	30	2.9	7.1	20
2	4.2	5.0	2.3	54	2.8	2.5	2.8	3.4	12	4.4	3.0	2.3
3	4.4	8.2	2.2	5.4	3.4	2.6	2.9	3.2	2.8	2.7	2.6	4.8
4	4.6	18	2.1	3.0	3.2	4.5	2.3	3.4	3.2	24	3.2	205
5	4.2	4.7	2.4	3.4	45	53	2.5	3.7	3.1	2.7	3.9	3.2
6	3.9	58	16	3.6	2.8	1.8	3.2	44	3.0	3.0	4.1	2.9
7	4.2	5.6	1.6	9.0	2.5	1.6	3.4	2.4	3.0	2.9	2.8	3.6
8	4.6	4.7	1.7	2.8	2.6	50	2.9	3.1	3.0	3.2	2.6	4.0
9	4.6	20	1.9	3.1	3.0	7.7	3.0	3.9	2.9	2.8	3.5	5.7
10	4.9	4.9	2.2	3.2	3.3	2.7	2.7	2.8	3.3	3.0	4.0	3.2
11	4.9	4.2	2.2	5.3	6.0	2.7	2.9	3.0	3.5	2.7	4.6	2.5
12	3.9	4.2	2.3	3.7	2.9	9.2	3.0	3.3	2.9	2.7	5.0	2.5
13	4.4	4.0	2.1	4.9	3.1	2.1	19	5.3	2.8	2.6	5.0	3.0
14	4.9	4.0	1.4	4.7	3.0	2.1	3.1	5.9	2.8	2.8	4.6	3.0
15	5.7	4.4	23	3.8	2.6	2.1	2.4	4.5	3.1	2.6	4.1	2.9
16	13	4.0	2.3	4.2	3.1	2.1	2.3	7.9	23	2.6	3.8	3.1
17	4.9	3.9	2.2	3.8	59	2.0	2.0	3.2	3.4	3.0	3.2	3.5
18	3.8	3.8	2.1	3.2	6.4	2.1	1.9	3.0	20	2.9	3.3	2.7
19	3.6	3.4	2.4	4.0	3.0	2.2	3.2	4.1	3.6	2.6	3.2	6.9
20	3.9	16	2.8	5.6	4.8	3.0	4.1	4.5	3.4	18	3.2	6.2
21	4.0	2.7	2.5	3.2	72	1.7	6.5	4.8	3.6	3.5	2.8	3.6
22	4.1	2.8	2.5	3.1	2.8	2.6	2.3	4.4	3.1	3.0	2.9	3.9
23	4.0	2.9	2.6	3.4	4.8	4.3	2.8	3.7	6.0	2.8	3.5	3.9
24	4.1	2.5	2.5	9.4	2.8	7.0	22	3.3	3.3	2.6	3.8	3.7
25	8.6	2.8	30	13	2.9	4.4	3.3	3.2	70	2.8	4.4	2.9
26	4.6	28	4.0	2.8	2.8	46	2.3	14	2.9	10	3.4	2.7
27	3.4	2.5	2.6	2.9	2.9	7.0	2.1	8.3	3.8	4.0	3.5	3.4
28	3.8	1.8	2.4	3.0	2.7	9.6	2.3	94	3.3	4.6	2.8	3.1
29	4.0	1.9	6.2	2.8	2.6	149	2.5	2.5	7.3	48	24	3.8
30	4.7	95	3.8	3.0	---	12	3.2	1.9	4.0	4.4	2.4	2.7
31	5.2	---	2.9	3.1	---	5.3	---	2.0	---	3.3	2.5	---
TOTAL	148.0	329.3	139.8	182.9	261.6	407.5	121.4	260.7	242.1	183.1	132.8	324.7
MEAN	4.77	11.0	4.51	5.90	9.02	13.1	4.05	8.41	8.07	5.91	4.28	10.8
MAX	13	95	30	54	72	149	22	94	70	48	24	205
MIN	3.4	1.8	1.4	2.5	2.5	1.6	1.9	1.9	2.8	2.6	2.4	2.3
CFSM	.96	2.21	.91	1.19	1.81	2.63	.81	1.69	1.62	1.19	.86	2.17
IN.	1.11	2.46	1.04	1.37	1.95	3.04	.91	1.95	1.81	1.37	.99	2.42

CAL YR 1975 TOTAL 3684.5 MEAN 10.1 MAX 455 MIN 1.4 CFSM 2.03 IN 27.52
WTR YR 1976 TOTAL 2733.9 MEAN 7.47 MAX 205 MIN 1.4 CFSM 1.50 IN 20.42

07032248 CANE CREEK AT EAST PERSON AVENUE AT MEMPHIS, TN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1977
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	2.5	2.2	1.7	1.7	2.1	3.7	2.9	2.9	3.8	3.3	3.5
2	3.0	2.9	2.5	1.9	1.8	2.4	46	2.4	3.0	2.9	3.2	3.5
3	3.2	3.5	2.4	2.5	2.1	141	29	3.1	3.2	2.9	3.3	3.0
4	3.7	2.7	2.0	1.9	2.3	6.9	20	2.2	3.1	3.2	3.3	3.7
5	24	2.6	2.6	1.9	1.6	2.8	2.4	2.3	3.0	3.8	3.3	3.6
6	2.5	1.9	8.5	23	1.5	2.7	2.9	2.3	6.2	4.2	2.6	3.7
7	2.5	2.1	2.8	2.6	1.7	2.7	2.7	2.3	2.8	4.4	3.4	3.8
8	2.3	2.6	2.4	1.6	1.8	2.8	3.3	24	2.9	4.6	3.5	4.2
9	2.0	3.1	2.3	9.8	1.9	2.5	2.7	2.7	2.9	5.0	3.6	3.8
10	1.8	3.0	1.9	1.7	1.8	2.9	2.2	2.5	2.7	4.0	3.5	2.8
11	2.1	4.5	12	1.6	4.4	46	2.2	2.3	2.7	3.8	35	2.7
12	2.5	2.5	2.5	1.6	15	11	2.1	2.5	3.2	4.0	5.3	3.3
13	2.6	2.1	2.3	32	1.6	2.8	2.1	2.4	6.6	4.3	2.3	25
14	3.1	3.3	2.4	42	1.6	3.1	2.5	2.2	3.5	4.4	64	12
15	3.0	2.2	2.2	1.8	1.6	3.6	2.7	2.3	3.0	4.3	4.2	4.0
16	1.9	2.8	1.7	1.3	1.8	3.6	2.7	2.7	2.7	3.6	3.4	3.2
17	1.6	2.9	1.9	1.3	1.9	3.7	2.7	2.5	6.0	4.1	3.5	2.7
18	2.5	3.0	1.9	1.6	2.0	4.8	4.5	2.6	37	3.9	3.9	3.3
19	5.9	3.2	1.8	1.7	1.9	3.6	26	2.8	2.5	39	3.7	11
20	9.1	4.4	1.8	1.8	2.1	3.2	3.4	2.9	2.6	5.9	3.1	4.1
21	2.4	2.7	1.9	1.5	2.5	3.2	2.6	2.8	2.6	4.0	2.8	4.1
22	2.5	3.0	2.1	1.4	3.0	3.3	3.8	2.8	3.0	3.6	3.0	4.3
23	15	2.8	1.9	2.1	30	3.4	39	2.9	3.7	4.1	3.7	4.0
24	36	2.7	2.0	3.9	2.2	3.6	7.3	3.2	3.3	3.7	3.7	226
25	68	1.9	16	1.7	2.1	4.4	2.5	6.5	2.8	6.1	3.7	5.2
26	2.1	35	1.7	1.7	6.2	3.7	2.2	2.5	11	4.2	3.9	5.0
27	1.9	1.8	2.0	1.7	1.9	6.0	2.7	2.8	9.8	3.8	4.2	70
28	2.0	3.5	2.3	1.6	2.0	12	3.3	2.5	3.6	3.7	4.2	7.5
29	13	2.0	1.6	1.7	---	2.9	3.3	2.3	3.9	14	10	50
30	9.3	2.0	3.5	1.7	---	3.1	3.0	2.5	4.0	3.0	3.6	5.7
31	1.9	---	1.4	1.8	---	3.0	---	2.5	---	6.2	3.6	---
TOTAL	236.2	115.2	96.5	156.1	102.0	302.8	235.5	105.2	150.2	172.5	207.8	488.7
MEAN	7.62	3.84	3.11	5.04	3.64	9.77	7.85	3.39	5.01	5.56	6.70	16.3
MAX	68	35	16	42	30	141	46	24	37	39	64	226
MIN	1.6	1.8	1.4	1.3	1.5	2.1	2.1	2.2	2.5	2.9	2.3	2.7
CFSM	1.53	.77	.62	1.01	.73	1.96	1.58	.68	1.01	1.12	1.35	3.27
IN.	1.76	.86	.72	1.17	.76	2.26	1.76	.79	1.12	1.29	1.55	3.65

CAL YR 1976 TOTAL 2564.7 MEAN 7.01 MAX 205 MIN 1.4 CFSM 1.41 IN 19.15
WTR YR 1977 TOTAL 2368.7 MEAN 6.49 MAX 226 MIN 1.3 CFSM 1.30 IN 17.69

NONCONNAH CREEK BASIN

07032248 CANE CREEK AT EAST PERSON AVENUE AT MEMPHIS, TN--Continued

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	4.4	2.0	3.4	3.2	5.7	4.4	4.6	16	6.4	7.0	6.1	4.0
2	4.6	3.9	2.9	3.2	5.9	63	4.8	3.5	34	9.0	6.1	3.5
3	3.9	3.2	2.8	4.1	6.1	5.7	4.7	48	4.6	12	9.1	3.9
4	3.6	1.5	155	4.1	6.1	4.2	5.0	4.9	4.4	6.4	144	4.2
5	3.8	2.9	37	4.8	5.7	4.1	5.5	3.6	4.7	6.2	5.0	4.3
6	4.1	1.7	5.1	12	5.8	4.3	5.9	24	104	6.6	5.0	4.1
7	3.4	1.7	4.1	46	5.7	7.9	6.0	275	9.5	14	5.3	4.3
8	11	1.6	14	61	5.5	6.7	5.6	59	11	6.6	185	4.4
9	2.1	1.7	5.3	6.0	5.6	7.6	4.9	9.7	7.0	12	11	3.9
10	2.6	1.9	3.4	5.5	6.1	5.3	26	6.5	5.6	22	130	3.8
11	3.0	2.0	3.2	5.5	6.1	4.8	5.7	6.8	6.7	9.2	7.2	5.8
12	3.0	1.9	3.6	12	14	4.7	4.2	13	7.0	8.5	17	9.3
13	2.4	1.5	34	8.6	9.0	135	4.5	5.3	5.6	8.0	44	13
14	2.8	1.6	5.9	5.6	5.1	8.6	4.6	5.1	5.0	190	6.6	31
15	2.6	1.9	3.3	6.6	5.1	9.3	4.3	5.7	5.4	15	6.6	3.8
16	2.5	57	3.8	90	5.2	5.4	4.0	6.0	6.2	6.0	6.9	3.0
17	2.6	2.8	7.3	14	5.2	4.4	6.0	6.3	6.5	5.8	7.9	3.3
18	2.8	2.1	3.8	5.8	7.1	4.4	4.8	6.9	11	6.3	7.7	3.6
19	2.6	2.2	4.1	5.4	5.1	4.2	4.5	145	6.0	5.9	129	3.6
20	2.2	3.5	3.8	5.9	6.1	4.4	4.4	7.1	5.5	6.0	6.2	3.3
21	2.3	35	3.6	7.1	8.1	10	4.3	6.7	7.3	6.0	5.4	3.3
22	2.0	1.9	3.8	6.7	6.3	4.9	3.9	4.6	7.0	7.0	5.6	3.2
23	2.0	1.9	4.2	9.0	6.5	5.1	25	5.3	6.3	30	4.9	2.6
24	2.8	1.8	4.2	163	6.2	12	3.8	5.8	5.7	10	5.4	2.8
25	20	1.7	3.7	110	6.2	4.2	3.9	6.1	5.5	12	4.8	2.8
26	2.1	1.9	4.0	9.6	5.4	4.2	3.6	6.4	6.6	5.1	4.9	3.4
27	1.6	36	4.2	7.8	6.9	4.3	3.6	6.3	6.1	8.9	4.8	3.9
28	1.6	3.4	4.1	6.3	13	4.6	3.8	6.4	5.7	5.6	7.9	3.7
29	1.7	74	6.9	5.0	---	4.4	3.8	18	5.3	5.5	107	3.7
30	1.8	13	4.6	4.9	---	4.6	3.7	5.9	5.9	5.4	15	4.4
31	1.9	---	3.0	5.2	---	4.6	---	6.2	---	11	4.7	---
TOTAL	109.8	269.2	352.1	643.9	184.8	361.3	179.4	735.1	317.5	469.0	916.1	153.9
MEAN	3.54	8.97	11.4	20.8	6.60	11.7	5.98	23.7	10.6	15.1	29.6	5.13
MAX	20	74	155	163	14	135	26	275	104	190	185	31
MIN	1.6	1.5	2.8	3.2	5.1	4.1	3.6	3.5	4.4	5.1	4.7	2.6
CFSM	.71	1.80	2.29	4.18	1.33	2.35	1.20	4.76	2.13	3.03	5.94	1.03
IN.	.82	2.01	2.63	4.81	1.38	2.70	1.34	5.49	2.37	3.50	6.84	1.15

CAL YR 1977 TOTAL 2651.9 MEAN 7.27 MAX 226 MIN 1.3 CFSM 1.46 IN 19.81
WTR YR 1978 TOTAL 4692.1 MEAN 12.9 MAX 275 MIN 1.5 CFSM 2.59 IN 35.04

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 mi^2 (8.24 km^2).

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. 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, 1,590 ft^3/s (45.0 m^3/s) May 11, 1975, gage height, 12.95 ft (3.947 m); no flow several days each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft^3/s (11.3 m^3/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)
Nov. 21	0205	513	14.5	7.41	2.259	June 6	1745	642	18.2	7.55	2.301
Dec. 4	2000	950	26.9	9.87	3.008	June 6	1900	1,060	30.0	9.70	2.957
Jan. 7	2245	584	16.5	7.85	2.393	July 14	0945	818	23.2	8.52	2.597
Jan. 24	0540	449	12.7	6.99	2.131	July 14	1425	418	11.8	6.16	1.878
Mar. 13	2000	885	25.1	9.54	2.908	Aug. 4	0825	608	17.2	7.35	2.240
May 7	0400	*1,330	37.7	11.60	3.536	Aug. 30	Unknown	Unknown		Unknown	

No flow many days.

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	.12	.01	1.3	.36	.82	.45	.29	3.8	.02	.00	.01	.00
2	2.4	.74	.23	.23	.37	50	.29	.02	4.9	.17	.00	.00
3	.02	2.4	.16	.16	.37	2.7	.29	22	.01	.01	.01	.00
4	.00	.05	69	.16	.37	.57	.29	.82	.01	.00	37	.00
5	.00	.11	10	.82	.37	.23	.29	.11	.00	.00	.88	.00
6	.00	.29	1.6	2.2	.37	.27	.29	3.2	103	.00	1.8	.00
7	.07	.02	.35	43	.38	1.1	.23	128	.71	.01	.26	.00
8	5.0	.00	.29	25	.41	1.3	.29	6.0	.07	.00	2.1	.00
9	.04	.00	1.4	2.4	.42	1.1	.37	.39	.02	.00	.70	.00
10	.01	.00	.23	.82	.40	.82	15	.26	.01	.01	.50	.00
11	.01	.00	.23	.57	.38	1.6	3.1	.13	.39	.01	.34	.02
12	.00	.00	.23	3.2	3.0	1.3	.55	32	.13	.00	2.4	.17
13	.00	.00	18	2.2	1.5	62	.46	1.1	.07	.00	11	.45
14	.00	.00	3.4	1.5	.40	5.4	.46	.34	.01	39	.72	10
15	.00	.00	.82	1.8	.35	5.6	.46	.13	.00	1.8	.25	.00
16	.00	28	.57	62	.35	2.7	.46	.17	.00	.22	.13	.00
17	.00	1.4	1.6	6.6	.35	.82	.94	.17	.00	.05	.07	.00
18	.00	.43	.46	2.2	.80	.57	2.4	.71	1.4	.03	.52	.00
19	.00	.36	.46	2.0	.35	.82	.48	.34	.03	.02	.13	.00
20	.00	1.6	.57	1.6	.62	.46	.45	.71	.00	.02	.23	.00
21	.00	45	.29	1.4	1.1	4.0	.07	2.1	1.3	.02	.05	.00
22	.00	4.6	.23	2.2	.60	.46	.07	.07	.01	.01	.03	.00
23	.00	4.5	.23	2.2	.70	.37	4.7	.05	.00	.01	.02	.00
24	.03	.05	.23	103	.45	1.8	1.8	.04	.00	.30	.01	.00
25	9.7	.05	.23	48	.38	.37	.36	.04	.00	.02	.01	.00
26	3.7	.05	.23	5.8	.35	.29	.03	.02	.00	.01	.01	.00
27	.05	20	.23	3.8	.60	.29	.02	.02	.00	3.4	.01	.00
28	.01	.71	.23	1.8	2.5	.29	.02	.03	.00	.17	4.3	.00
29	.01	29	1.3	1.6	---	.23	.02	5.8	.00	.10	34	.04
30	.01	6.6	1.4	1.4	---	.29	.02	.13	.00	.03	35	.02
31	.01	---	.36	1.3	---	.29	---	.02	---	.01	.00	---
TOTAL	21.19	145.97	115.86	331.32	19.06	148.49	34.50	208.72	112.09	45.43	132.49	10.70
MEAN	.68	4.87	3.74	10.7	.68	4.79	1.15	6.73	3.74	1.47	4.27	.36
MAX	9.7	45	69	103	3.0	62	15	128	103	39	37	10
MIN	.00	.00	.16	.16	.35	.23	.02	.02	.00	.00	.00	.00
CFSM	.21	1.53	1.18	3.37	.21	1.51	.36	2.12	1.18	.46	1.34	.11
IN.	.25	1.71	1.35	3.87	.22	1.74	.40	2.44	1.31	.53	1.55	.13

CAL YR 1977 TOTAL 1029.35 MEAN 2.82 MAX 101 MIN .00 CFSM .89 IN 12.04
WTR YR 1978 TOTAL 1325.82 MEAN 3.63 MAX 128 MIN .00 CFSM 1.14 IN 15.50

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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.

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 1978.

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements: Date	Measurements: 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	1975-78	8-30-78	.56
		Cumberland River basin				
03407879	Smoky Creek at Smoky Junction, Tn.	Lat 36°16'38", long 84°22'27", Scott County, 1.0 mile southwest of Smoky Junction and at mile 0.9.	32.8	1975-78	6-29-78	3.0
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	6-28-78	3.4
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	6-28-78	8.1
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	6-28-78 9-21-78	4.9 3.1
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	6-29-78 9-21-78	6.6 4.4
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	6-29-78 9-21-78	21.2 13.0

See footnotes at end of the table.

Discharge measurements made at low-flow partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		Cumberland River basin--Continued				
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	6-28-78	19.5
03420200	Collins River near Tarlton, Tn.	Lat 35°31'04", long 85°40'27", Grundy County, at bridge on State Highway 56, 1.5 miles north of Tarlton and at mile 48.3.	174	1929, 1952, 1962, 1965, 1975, 1978	7-12-78	14.5
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	6-27-78	.76
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 & Nashville Railroad bridge, 2.4 miles east of Hermitage, 3.5 miles southwest of Green Hill, and at mile 5.2.	15.0	1974-75, 1978	6-27-78 9-21-78	1.2 1.2
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	6-27-78 9-21-78	2.6 1.2
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 downstream 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	6-27-78 9-21-78	.11 a.1
*03432500	West Harpeth River near Leipers Fork, Tn.	Lat 35°53'56", long 86°58'01", Williamson County, at county road bridge (formerly State Highway 96), 1.8 miles east of town of Leipers Fork and at mile 9.8.	66.9	1955-61,‡ 1962-76, 1978	6-27-78 9-21-78	5.0 1.5
*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	6-27-78 9-21-78	1.7 1.4
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	6-27-78 9-21-78	14.7 10.3
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	6-27-78 9-21-78	21.9 11.5
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	6-28-78 9-22-78	10.5 6.3

See footnotes at end of the table.

Discharge measurements made at low-flow partial-record stations during water year 1978-Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		Cumberland River basin--Continued				
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 downstream 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	6-28-78 9-22-78	29.9 16.4
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	6-28-78 9-22-78	2.1 1.3
03434590	Jones Creek near Burns, Tn.	Lat 36°06'15", long 87°19'05", Dickson County, at bridge on Rock Church Road, 3.5 miles north of Burns and at mile 21.9.	13.3	1974-76, 1978	6-28-78 9-21-78	1.7 .54
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	6-30-78 9-21-78	1.5 .16
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	6-29-78 9-26-78	1.5 .58
03435044	Red River near Orlinda, Tn.	Lat 36°38'36", long 86°40'46", Robertson County, at ford on county road, 3.6 miles northeast of Orlinda.	78.4	1974-76, 1978	6-29-78 9-21-78	12.3 6.5
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 miles north of Cross Plains and at mile 24.4.	19.7	1974-76, 1978	6-29-78 9-21-78	2.6 1.6
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	9-21-78	6.9
03435637	Sulphur Fork Red River near Greenbrier, Tn.	Lat 36°29'05", long 86°47'33", Robertson County, at bridge on State Highway 76, 4.0 miles north of Greenbrier.	34.9	1974-78	11-15-77	14.6
03435700	Sulphur Fork Red River above Beaver Dam Creek near Springfield, Tn.	Lat 36°30'53", long 86°50'46" Robertson County, 400 ft downstream from private bridge, 0.9 mile upstream from Beaver Dam Creek, 2 miles east of Springfield, and at mile 32.9.	49.1	1975-78	11-15-77	21.8
03435750	Beaver Dam Creek near Springfield, Tn.	Lat 36°31'32", long 86°50'33", Robertson County, at private bridge, 2.7 miles northeast of Springfield and at mile 0.4.	14.2	1975-78	11-15-77	5.8
03435800	Sulphur Fork Red River at Springfield, Tn.	Lat 36°31'15", long 86°53'12", Robertson County, at old U.S. Highway 41 bridge at Springfield, and at mile 29.1.	79.9	1969, 1975-78	11-15-77	29.4
03435810	Sulphur Fork Red River near Springfield, Tn.	Lat 36°31'00", long 86°54'49", Robertson County, at birdge on county road, 2 miles west of Springfield and at mile 26.7.	84.6	1969, 1975-78	11-15-77	33.0

Discharge measurements made at low-flow partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		Cumberland River basin--Continued				
03436130	Passenger Creek near Sango, Tn.	Lat 36°32'07", long 87°11'50", Montgomery County, at county road bridge, 2.4 miles northeast of Sango.	20.5	1964, 1974-76, 1978	6-29-78 9-21-78	4.2 3.0
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	1964, 1974, 1978	6-29-78 9-21-78	42.1 20.7
03436655	Yellow Creek near Ruskin, Tn.	Lat 36°12'30", long 87°31'46" Dickson County, at county road bridge, 0.1 mile downstream from Cedar Creek, 3.4 miles north of Ruskin, and at mile 22.6.	52.2	1974-76, 1978	9-21-78	14.5
		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	1975-78	6-30-78	17
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, 1975-78	6-30-78	4.2
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	1975-78	6-30-78	7.0
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	1975-78	6-29-78	12
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, 1975-78	6-30-78	10
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 Chestnut Hill, and at mile 0.7.	1.78	1976-78	6-30-78	.19
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	1975-78	7-3-78	14
03476515	Beidleman 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	1975-78	6-30-78	20
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	1975-78	6-30-78	9.2
03499111	Stock Creek near Rockford, Tn.	Lat 35°52'11", long 83°55'09", Knox County, 0.2 mile upstream from culvert on Hall Road, 400 ft upstream from unnamed tributary, and 2.8 miles northeast of Rockford.	18.5	1975-78	6-30-78	7.7
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 miles southeast of Tellico Plains.	21.7	1927, 1975-78	6-30-78	23

Discharge measurements made at low-flow partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		Tennessee River basin--Continued				
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	1975-78	6-30-78	3.1
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, 1975-78	7-1-78	19
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	1975-78	6-29-78	12
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, 1977-78	6-30-78	22
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, 1977-78	6-30-78	.76
*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	1955-78	7-11-78	4.7
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	9-8-78	.40
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 Roseville, 4.1 miles west of Normandy, and at mile 1.5.	18.3	1953-54, 1956-57, 1970, 1975, 1978	9-8-78	6.3
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	9-21-78	7.3
03604750	Birdsong Creek at Holladay, Tn.	Lat 35°52'53", long 88°08'39", Benton County, at bridge on State Highway 69, 0.7 mile north of Holladay.	15.7	1975-78	8-2-78	.79
03606350	Big Sandy River at Westport, Tn.	Lat 35°53'34", long 88°18'32", Carroll County at county road bridge 0.3 mile southeast of Westport and at mile 43.4.	110	1975-78	8-2-78	45
		Obion River basin				
07024760	Spring Creek near Greenfield, Tn.	Lat 36°11'24", long 88°45'53", Weakley County, at bridge on State Highway 54, 3.2 miles northeast of Greenfield and at mile 2.3.	93.4	1955, 1975-78	8-3-78	25
07025190	Mud Creek near Sharon, Tn.	Lat 36°15'59", long 88°50'05", Weakley County, at bridge on U.S. Highway 45-E, 2.2 miles north of Sharon and at mile 11.0.	45.6	1958, 1975-78	8-3-78	1.2

See footnotes at end of the table.

Discharge measurements made at low-flow partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Measurements Date	Measurements Discharge (ft^3/s)
		Obion River basin--Continued				
07025300	North Fork Obion River at Jones Mill, Tn.	Lat 36°26'46", long 88°27'57", Henry County, at county road bridge at Jones Mill and at mile 42.8.	83.7	1958-61, 1964, 1975-78	8-3-78	35
07026100	Reeds Creek near Trimble, Tn.	Lat 36°10'48", long 89°15'15", Dyer County, at county road bridge, 0.4 mile north of Locust Grove, 4.0 miles southwest of Trimble, and at mile 1.6.	51.8	1975-78	8-4-78	1.6
07027280	Jacks Creek at Jacks Creek, Tn.	Lat 35°28'16", long 88°31'21", Chester County, at bridge on State Highway 100, at town of Jacks Creek, and at mile 8.5.	17.9	1975-78	8-2-78	3.2
07027750	Nixon Creek near Nut Bush, Tn.	Lat 35°41'59", long 89°16'36", Haywood County, 1.6 miles northeast of Christmasville, on county road bridge 7.2 miles east of Nut Bush, and at mile 6.60.	42.5	1976-78	8-4-78	.64
		Hatchie River basin				
07030140	Cane Creek near Cherry, Tn.	Lat 35°40'30", long 89°41'21", Lauderdale County, at bridge on State Highway 87-A, 1.2 miles east of Cherry and at mile 4.6.	83.9	1958-60, 1962, 1964, 1975-78	8-8-78 9-8-78	4.8 3.17
07030160	Indian Creek at Gilt Edge, Tn.	Lat 35°33'09", long 89°49'20", Tipton County, at bridge on State Highway 59, 0.2 mile east of Gilt Edge.	65.9	1976-78	8-8-78 9-8-78	5.1 1.8

* Also crest-stage partial-record station.
‡ Operated as a continuous-record gaging 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 nearby 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 1978

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Annual maximum Gage height (feet)	Annual maximum 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 74 and 60 at Cleveland. Datum of gage is 828.3 ft National Geodetic Vertical Datum of 1929.	4.35	1955-78	10-25-77	5.94	300
		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	1967-78	8-11-78	5.21	165
		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‡, 1955-78	1-26-78	9.37	-
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 intersection of State Highways 85 and 52.	15.5	1955-78	12- 5-77	4.32	-
03415700	Big Eagle Creek near Livingston Tn.	Lat 36°26'57", long 85°16'27" Overton County, at bridge on county road, 0.8 mile north of intersection with State Highway 42, 4.7 miles northeast of Livingston.	a7.98	1955-78	1-25-78	3.12	510
03417700	Mathews Branch tributary 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	1955-78	1978	<2.68	<80
03418900	Raccoon Creek near Old Winesap, Tn.	Lat 35°47'12", long 85°08'40", Cumberland County, at culvert under county road, 1.2 miles southeast of Old Winesap.	1.52	1973-78	6-12-78	7.04	138
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	1967-78	6- 8-78	4.84	464
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‡ 1958-78	5- 8-78	8.86	4,640

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (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	1955-78	12- 4-77	2.96	82
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	1955-78	1978	<7.10	<1,700
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‡ 1962-78	6-26-78	7.81	4,190
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	1955-78	9-13-77b 3-14-78	b7.04 c6.32	b1,140 780
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, 1959-78	3-14-78	4.08	210
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‡ 1962-78	1978	<4.90	<1,220
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, 1965-78	5- 8-78	d5.67	1,110
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	1977-78	3-14-78	6.82	-
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	1965-78	3-13-78	7.31	4,530
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‡ 1976-78	3-13-78	13.39	5,600
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	1965-78	3-13-78	5.99	-

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Annual maximum Gage height (feet)	Annual maximum Discharge (ft^3/s)
		Cumberland River basin--Continued					
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	1965-78	3-14-78	12.21	7,490
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	1977-78	5- 8-78	4.71	-
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	1965-78	5- 8-78	5.82	1,220
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	1965-78	5- 8-78	3.42	239
03431340	Browns Creek at Factory Street, at Nashville, Tn.	Lat 36°08'26", long 86°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	1965-78	5- 8-78	7.49	2,210
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	1977-78	3-13-78	4.25	-
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	1965-78	3-13-78	4.31	464
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	1965-78	3-13-78	5.04	506
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	1965-78	5- 8-78	8.04	2,280
03432500	West Harpeth River near Leipers Fork, Tn.	Lat 35°53'56", long 86°58'01", Williamson County, at bridge on former State Highway 96, 1.8 miles east of Leipers Fork. Datum of gage is 634.10 ft National Geodetic Vertical Datum of 1929.	66.9	1955-61‡ 1962-78	5- 9-78	12.72	3,660

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Annual maximum Gage height (feet)	Annual maximum Discharge (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.	22.0	1978	3-14-78	11.15	-
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‡ 1976-78	1-25-78	7.46	918
		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	1967-78	1-26-78	4.09	91
03461260	Caney Creek at Cosby, Tn.	Lat 35°48'09", long 83°14'18", Cocke County, at culvert under county road, 700 ft upstream from mouth, and 1.1 miles southeast of Cosby.	5.22	1967-78	1-26-78	11.13	161
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‡ 1959-78	11- 6-77	5.31	980
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 southeast of Morristown. Datum of gage is 1,015.73 ft National Geodetic Vertical Datum of 1929.	1,679	1921-57‡ 1959-78	11- 6-77	24.90	80,000
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	1967-78	1- 8-78	4.30	33
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	1954-78	1978	<11.77	<7,600
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	1954-78	1978	<7.95	<1,500
03469500	West Prong Little Pigeon River near Pigeon Forge Tn.e/	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‡ 1954-78	1-26-78	10.66	6,770

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft^3/s)
		Tennessee River basin--Continued					
03481600	Corn Creek at Mountain 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, 1963-78	10- 2-77	5.06	1,120
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‡ 1959-78	10- 2-77	10.80	11,000
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	1973-78	7-31-78	7.77	59
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	1955-78	1-26-78	4.06	93
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	1955-78	1978	<2.19	<23
03519610	Baker Creek tributary 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 1978f	4- 5-77	4.40	- -
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‡ 1976-78	1978	<6.10	<300
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	1954-78	6- 8-78	5.95	770
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‡ 1955-78	1-26-78	5.25	2,660
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 southeast of Norris. Datum of gage is 901.71 ft National Geodetic Vertical Datum of 1929.	h9.92	1948-50‡ 1955-78	8- 7-78	8.34	915
03535140	South Fork Beaver Creek at Harbison, Tn.	Lat 36°06'51", long 83°51'15", Knox County, at culvert under Tazewell Pike, 0.4 mile south of Harbison. Datum of gage is 1,076.35 ft National Geodetic Vertical Datum of 1929.	1.23	1967-78	6- 8-78	4.79	358

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft^3/s)
		Tennessee River basin--Continued					
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	1967-78	6- 8-78	6.86	451
03538130	Caney Creek near Kingston, Tn.	Lat 35°51'53", long 84°23'07", Roane County, 1.5 miles upstream from mouth, 2.4 miles northeast of intersection of U.S. Highway 70 and Buttermilk Road, 7.5 miles east of Kingston.	5.55	1962-78	6- 8-78	6.84	1,150
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	1954-78	10- 9-77	14.00	3,060
03538275	Bear Creek near Oak Ridge, Tn.	Lat 35°56'50", long 84°21'48", Roane County, at bridge on county road, 200 ft west of State Highway 95, and 3.9 miles southwest of intersection of State Highway 95 and Anderson County line in Oak Ridge. Datum of gage is 753.92 ft National Geodetic Vertical Datum of 1929.	7.15	1960-64‡ 1965-78	1-26-78	5.21	375 -
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‡ 1969-78	10- 9-77	17.35	7,850
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	1955-78	3-10-78	8.82	955
03538900	Self Creek near Big Lick, Rn.	Lat 35°47'54", long 85°02'33", Cumberland County, at culvert under county road, 1.3 miles southwest of Big Lick.	3.80	1968-78	1-26-78	3.97	195
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	1967-78	6- 8-78	7.50	2,450
03541500	Whites Creek near Glen Alice, Tn.	Lat 35°47'49", long 84°45'37", Roane County, 2,200 ft above Southern Railway bridge, 1.2 miles southwest of Glen Alice. Datum of gage is 758.62 ft National Geodetic Vertical Datum of 1929.	108	1935-55‡ 1956-78	11-23-77	12.06	6,000
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‡ 1955-78	1978	<11.73	-
03544500	Richland Creek near Dayton, Tn.	Lat 35°30'17", long 85°01'20", Rhea County, 0.4 miles 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‡ 1956-78	11-23-77	8.91	8,450

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft^3/s)
		Tennessee River Basin--Continued					
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	1955-78	10-25-77	4.98	525
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	1959-78	11-24-77	4.72	890
03571600	Brown Spring Branch near Sequatchie, Tn.	Lat 35°08'55", long 85°33'28", Marion County, at culvert under State Highway 27, 2.1 miles northeast of bridge over Little Sequatchie River, 3.1 miles northeast of Sequatchie.	0.67	1955-78	11-29-77	5.31	97
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	1955-78	11-29-77	7.16	2,770
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‡ 1960-78	6- 8-78	8.75	1,410
03579800	Miller Creek near Cowan, Tn.	Lat 35°10'17", long 85°59'00". Franklin County, at bridge on U.S. Highway 64, 1.8 miles east of Cowan.	4.30	1955-78	11- 4-77	6.66	-
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	1955-78	11- 4-77	j7.58	1,720
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‡ 1969-78	5- 8-78	13.00	7,410
03582200	Norris Creek tributary near Belleville, Tn.	Lat 35°13'55", long 86°33'50", Lincoln County, at culvert under U.S. Highway 231, 0.4 mile north of first crossing of Norris Creek from Fayetteville, 3.1 miles south of Belleville.	0.03	1955-78	6- 7-78	5.05	39
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	1954-78	5- 8-78	10.01	5,830
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	1955-78	5- 8-78	7.28	4,680

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Annual maximum Gage height (feet)	Annual maximum Discharge (ft^3/s)
		Tennessee River Basin--Continued					
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‡ 1969-78	5- 8-78	13.93	7,200
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	1955-78	3-13-78	3.28	138
03587500	Shoal Creek above Little Shoal Creek at Lawrenceburg, Tn.k/	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‡ 1955-78	11- 5-77	7.88	2,240
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	1955-78	11-28-77	4.69	1,250
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	1955-78	1978	<2.57	<82
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‡ 1970-78	5- 8-78	12.79	4,270
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	1966-78	6- 7-78	5.13	482
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 northeast of Bell Buckle.	0.73	1966-78	1978	(m)	-
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‡ 1978	5- 8-78	8.34	2,130
03598200	Weakly 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	1955-78	5- 8-78	5.10	1,270

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Annual maximum Gage height (feet)	Annual maximum Discharge (ft^3/s)
		Tennessee River Basin--Continued					
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	1954-78	5- 8-78	11.18	4,570
03600000	Rutherford Creek near Carters Creek, Tn.	Lat 35°40'23", long 86°58'42", Maury County, at bridge on county road, 2.5 miles south of Neapolis, 3.2 miles south of town of Carters Creek.	68.8	1954-58‡ 1959-78	11-29-77	15.81	-
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	1954-78	4-11-78	3.18	-
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	1967-78	5- 7-78	3.23	163
03604200	Cane Creek at Farmers Exchange, Tn.	Lat 35°38'53", long 87°39'39", Hickman County, at county road bridge, 0.5 mile north of Farmers Exchange.	45.1	1955-78	11-30-77	5.73	-
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	1955-78	12- 5-77	3.13	-
		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	1955-78	3- 2-78	10.26	-
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, 1959-78	1- 8-78	7.93	635
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	1954-78	1- 8-78	12.40	4,000
07028900	Middle Fork Forked Deer River near Spring Creek, Tn.	Lat 35°48'37", long 88°37'03", Carroll County, at bridge on U.S. Highway 70, 0.7 mile below Griffin Creek, 4.6 miles northeast of Spring Creek, and at mile 44.9.	88.2	1954-57, 1959-78	3-13-78	9.73	3,400
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	1967-78	12- 4-77	16.42	3,900
07029050	Nash Creek near Tigrett, Tn.	Lat 35°57'38", long 89°17'07", Dyer County, at bridge on former State Highway 20, 2.3 miles west of Tigrett.	7.23	1955-78	1-25-78	9.24	930
07029090	Lewis Creek near Dyersburg, Tn.	Lat 36°03'14", long 89°21'42", Dyer County, at bridge on U.S. Highway 51, 2.1 miles northeast of square in Dyersburg. Datum of gage is 276.52 ft National Geodetic Vertical Datum of 1929.	25.5	1955-78	3- 2-78	13.58	790

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Annual maximum Gage height (feet)	Annual maximum Discharge (ft^3/s)
		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, 1959-78	5- 7-78	15.60	4,070
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	1975-78	8- 8-78	10.84	-
		Wolf River basin					
07031653	Wolf River tributary 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	1975-78	5- 7-78	7.29	117
07031657	Wolf River tributary 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	1975-78	8- 4-78	14.38	-
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	1975-78	6-21-78	6.49	-
07031690	Fletcher Creek tributary 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	1975-78	5- 7-78	7.06	223
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 Stage Road, 1 mile east of Bartlett.	0.33	1975-78	5- 7-78	18.16	-
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	1975-78	5- 7-78	11.25	-
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	1975-78	5- 7-78	10.94	-
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	1975-78	5- 7-78	13.96	2,090
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	1975-78	8-10-78	5.70	148
07031730	Workhouse Bayou at Holmes Street, at Memphis, Tn.	Lat 35°09'43", long 89°57'04", Shelby County, 50 ft downstream from bridge on Holmes Street, 400 ft south of Macon Road, at Memphis.	1.30	1975-78n	5- 7-78	11.37	-

See footnotes at end of the table.

Annual maximum discharge at crest-stage partial-record stations during water year 1978--Continued

Station No.	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft^3/s)
		Wolf River basin--Continued					
07031761	Cypress Creek tributary 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-	8-10-78	10.51	-
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	1975-78	8-10-78	7.37	318
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	1975-78	8-10-78	11.60	1,020
07031795	Wolf River tributary 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	1975-78	8-29-78	9.45	-
		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	1975-78	8- 4-78	10.15	730
07032242	Cherry Bayou at Park Avenue, at Memphis, Tn	Lat 35°06'24", long 89°54'13", Shelby County, 20 ft downstream from culvert under Park Avenue,150 ft west of Colonial Road, at Memphis.	0.18	1975-78	5- 7-78	4.60	-
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	1975-78	5-19-78	8.16	-
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.	2.63	1975-78	3-13-78	5.47	545
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	1975-78	5-19-78	8.68	-
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 Boulevard, 200 ft downstream from Dison Avenue, at Memphis.	0.05	1975-78	8- 8-78	14.47	-

* Also a low-flow partial-record station.
‡ Operated as a continuous-record gaging station.
a Includes 3.21 mi^2 without surface drainage.
b Corrected.
c May have been higher June 26, 1978.
d Furnished by Corps of Engineers, Nashville district.
e Published as West Fork Little Pigeon River prior to 1966.
f No record; gage damaged.
g Published as at Coal Creek prior to 1935.
h Includes 2.10 mi^2 without surface drainage.
j May be affected by backwater from debris on pipeline.
k Published as Beeler Fork at Lawrenceburg prior to 1934.
m Unknown.
n Discontinued.

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 asterick (*); measurements of peak flow by a dagger (†).

Discharge measurements made at miscellaneous sites during water year 1978

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements 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	9-21-78	*1.2
		Cumberland River basin				
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	6-27-78 9-21-78	*1.4 *1.7
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	6-30-78 9-22-78	*.30 *.13
		Tennessee River Basin				
03461266 Greenbrier Creek	Cosby Creek	Lat 35°48'12", long 83°14'52", Cocke County, near mouth at bridge on State Highway 32, 0.9 mile northwest of intersection of State Highways 73 and 32, 0.9 mile south of Cosby.	4.96	-	7- 1-78	3.4
03464650 Nolichucky River	French Broad River	Lat 36°07'24", long 82°26'37", Unicoi County, at bridge on U. S. Highways 19-W and 23, about 2 miles southwest of Erwin, and at mile 95.9.	639	1966, 1972, 1974-75, 1977	6-30-78	*571
03464815 South Indian Creek	Nolichucky River	Lat 36°07'38", long 82°26'45", Unicoi County, 0.1 mile above mouth, near Erwin.	81.0	1972, 1974	6-29-78	*46
03465220 North Indian Creek	Nolichucky River	Lat 36°09'02", long 82°25'06", Unicoi County, at John Sevier Highway Bridge, at Erwin.	57.3	1900-01, 1945, 1953	6-29-78	*40
03466097 Jockey Creek	Big Limestone Creek	Lat 36°14'12", long 82°38'50", Greene County, 100 ft upstream from county road bridge, 1.2 miles northwest of Limestone, and at mile 1.4.	18.4	1975	6-30-78	*12
b/03466695 Little Chucky Creek	Nolichucky River	Lat 36°09'27", long 82°57'34", Greene County, 150 ft downstream from bridge on county road, 1.8 miles southwest of Rader, 2.3 miles south of Mosheim, at mile 14.7.	22.5	1977	6-29-78	*3.6
03467000 Lick Creek	Nolichucky River	Lat 36°12'05", long 83°02'52", Greene County, 100 ft upstream from county highway bridge, 0.2 mile east of Mohawk, 0.6 mile upstream from Riley Creek, and at mile 17.4.	220	1946-71‡, 1977	6-29-78	*52

See footnotes at end of the table.

Discharge measurements made at miscellaneous sites during water year 1978--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Tennessee River basin--Continued				
03560500 Davis Mill Creek	Ocoee River	Lat 34°59'43", long 84°22'56", Polk County, 100 ft upstream from bridge on State Highway 68, 0.8 mile northwest of Copperhill Post Office, and at mile 0.1.	5.16	1940-41‡ 1948-78‡	1-18-78 2-23-78 3-27-78 5- 4-78 6- 7-78 7-11-78 8-17-78 9-19-78	97 101 132 107 134 120 130 137
03566253 Greasy Creek	Candies Creek	Lat 35°14'17", long 84°53'11", Bradley County, at bridge on Eureka Road, 0.2 mile north of Hopewell, 3.9 miles north of Cleveland, and at mile 0.9.	3.12	-	6-30-78	*.15
03582108 Norris Creek	Elk River	Lat 35°15'55", long 86°33'33", Lincoln County, 100 ft upstream from Rutledge Hill road bridge, 0.5 mile south of Belleville, and at mile 11.5.	7.68	-	12-19-77	6.4
03582115 Norris Creek	Elk River	Lat 35°15'29", long 86°33"52", Lincoln County, 200 ft upstream from Union Branch, 1.2 miles south of Belleville, and at mile 10.9.	8.55	-	3-23-78	8.6
03582120 Union Branch	Norris Creek	Lat 35°16'47", long 86°34'57", Lincoln County, 80 ft upstream from county road bridge, 1.7 miles west of Belleville, and at mile 2.0.	1.12	1975	12-13-77 12-14-77 12-19-77	1.0 1.2 .90
03582121 Union Branch	Norris Creek	Lat 35°16'42", long 86°34'59", Lincoln County, 100 ft upstream from Cold Spring Branch, 1.7 miles west of Belleville, and at mile 1.9.	1.10	-	3-23-78	.98
03582151 Union Branch Tributary	Union Branch	Lat 35°15'35", long 86°34'07", Lincoln County, 150 ft upstream from Union Branch, 1.2 miles southwest of Belleville.	0.25	-	3-23-78	.05
03582160 Union Branch	Norris Creek	Lat 35°15'30", long 86°33'57", Lincoln County, 200 ft upstream from Norris Creek, 1.2 miles south of Belleville.	2.86	-	12-15-77	.31
03582181 Norris Creek	Elk River	Lat 35°15'10", long 86°34'07", Lincoln County, 0.2 mile below U. S. Highway 231 bridge, 1.6 miles south of Belleville, and at mile 10.4.	11.7	-	3-23-78	12.7
03582260 Little Norris Creek	Norris Creek	Lat 35°13'59", long 86°31'05", Lincoln County, at bridge on Lane Branch Road, 6.0 miles Northeast of Fayetteville.	6.94	1975	12-21-77	5.3
03582262 Little Norris Creek	Norris Creek	Lat 35°13'32", long 86°31'07", Lincoln County, at intersection of Johnson Cemetery Road and Mimosa Road, 5.5 miles northeast of Fayetteville.	7.23	-	12-21-77	4.5
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	11-15-77 3-29-78 9-11-78	*3.3 9.0 *1.2

See footnotes at end of the table.

Discharge measurements made at miscellaneous sites during water year 1978--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Obion River basin				
07027495 Bond Creek	South Fork Forked Deer River	Lat 35°34'29", long 88°48'46", Madison County, at Herron Grove Road bridge, 200 ft east of U.S. Highway 45, 0.5 mile east of Bemis.	4.85	1968, 1972, 1974, 1976-77	8- 2-78	*.33
		Hatchie River basin				
07029410 Mosses Creek	Hatchie River	Lat 35°04'46", long 88°46'56", McNairy County, at county road bridge 1.9 miles downstream from Kirk Branch, 2.2 miles northeast of Pocahontas.	47.6	1959-61, 1963-64, 1977	5- 1-78 5- 1-78 5- 2-78	362 451 167
07029425 Hatchie River	Mississippi River	Lat 35°07'35", long 88°48'48", Hardeman County, at county road bridge, 0.85 mile downstream from Lee Creek, 2.7 miles northeast of Lacy.	1,033	1977	5- 2-78	1,690
07030010 Big Muddy Creek	Hatchie River	Lat 35°27'02", long 89°22'35", Haywood County, at county road bridge, 1.6 miles southeast of Stanton.	84.4	1977	4-11-78 4-11-78 5- 1-78 5- 1-78 5- 1-78	47 126 204 192 134
07030050 Hatchie River	Mississippi River	Lat 35°38'14", long 89°36'14", Lauderdale County, at bridge on U.S. Highway 51, 0.9 mile north of Rialto and at mile 34.0.	2,308	1939-77[a]	5- 3-78 5- 4-78 5- 5-78	2,930 3,360 3,590

* Base flow.
† Peak flow.
‡ Operated as a continuous-record station.
a Operated as a continuous-record station by Corps of Engineers.
b Published incorrectly as station 03466690 in 1977 water year.

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. Daily mean discharges for Jack Daniel Spring at Lynchburg April 1970 to June 1978 (discontinued) have been published in the annual State reports.

Spring measurements made in the 1978 water year include 1 spring in northern Lincoln County as part of a continuing study of ground water resources in Lincoln County, and 1 spring in Rutherford County as part of a continuing study of ground water resources of the Murfreesboro area. 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 1978

Site number and name	Location	Tributary to--	Date	Discharge (gpm)	Temp. (°C) Water	Specific Conductance (umhos at 25°C)
		Dickson County				
03602195 Payne Spring	Lat 36°05'06", long 87°24'35", at Dickson Lake, 1.3 miles northwest of Dickson.	East Piney River	9-29-78	90	14.5	340
		Lincoln County				
03582109 Rutledge Hill Road Spring	Lat 35°15'55", long 86°33'33" 75 ft upstream from Rutledge Hill Road Bridge, 0.5 mile south of Belleville, and at mile 11.5.	Norris Creek	12-19-77	1070	-	-
			12-19-77	1100	-	-
			12-19-77	1070	-	-
			12-19-77	950	-	-
		Rutherford County				
03428047 Fox Camp Spring	Lat 35°48'15", long 86°20'52", 1.0 mile north of Mankinville, 3.7 miles southeast of Courthouse in Murfreesboro.	Todd Lake	10-14-77	740	12.0	360
			12-12-77	880	11.0	300
			2- 6-78	670	8.0	220
			3- 8-78	835	16.0	300
			5-16-78	1170	17.0	260
			6- 5-78	405	22.5	330
			6-19-78	420	21.0	350
			7-14-78	415	23.0	360
			8-16-78	360	21.5	385
			9-28-78	285	18.5	400
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	4-28-78	8930	14.5	360
			6-19-78	670	16.5	380
			8-16-78	14300	22.5	345
			9-28-78	700	19.0	440

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

Samples are collected at sites other than gaging stations and partial-record stations to give better areal coverage in a river basin. Such sites are referred to as miscellaneous sites.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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)
CUMBERLAND RIVER BASIN						
03435637 - SULPHUR FORK RED RIVER NEAR GREENBRIER, TENN (LAT 36 29 05 LONG 086 47 33)						
NOV , 1977						
15...	0905	14	320	7.7	9.0	10.0
03435700 - SULPHUR FK RED R AB BEAVER DAM C,NR SPRINGFLD,TN (LAT 36 30 53 LONG 086 50 46)						
NOV , 1977						
15...	0950	21	280	7.9	9.0	10.0
03435750 - BEAVER DAM CREEK NEAR SPRINGFIELD, TENN (LAT 36 31 32 LONG 086 50 33)						
NOV , 1977						
15...	1055	6.1	375	8.1	10.0	10.0
03435770 - SULPHUR FORK RED RIVER ABOVE SPRINGFIELD, TENN (LAT 36 30 47 LONG 086 51 44)						
OCT , 1977						
18...	1045	15	340	--	11.0	--
NOV						
15...	1025	26	350	7.9	10.5	8.1
JAN , 1978						
24...	1110	102	260	--	4.0	--
FEB						
23...	1130	89	265	--	4.0	--
MAY						
01...	1710	63	275	--	16.0	--
23...	1015	52	285	--	18.0	--
JUN						
22...	1115	16	320	--	22.5	--
AUG						
31...	1630	13	--	--	21.0	--
03435800 - SULPHUR FORK RED RIVER AT SPRINGFIELD, TENN (LAT 36 31 15 LONG 086 53 12)						
NOV , 1977						
15...	1155	29	290	7.9	11.0	8.5
03435810 - SULPHUR FORK RED RIVER NEAR SPRINGFIELD, TENN (LAT 36 31 00 LONG 086 54 49)						
NOV , 1977						
15...	1235	33	340	7.8	12.0	7.1

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

CUMBERLAND RIVER BASIN--CONTINUED

03407876 - SMOKEY CREEK AT HEMBREE, TN (LAT 36 14 23 LONG 084 24 48)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT , 1977				
05...	1430	7.4	280	12.0
26...	1500	136	150	13.0
NOV				
23...	1115	287	105	14.0
FEB , 1978				
13...	1410	46	200	2.5
APR				
11...	1215	21	200	15.5
MAY				
11...	1200	46	190	14.0
JUN , 1978				
09...	1320	83	160	17.5
JUL				
11...	1200	3.6	200	25.0
AUG				
09...	1310	29	190	19.5
SEP				
06...	1355	1.8	250	23.0

03407879 - SMOKY CREEK AT SMOKY JUNCTION, TENN (LAT 36 16 38 LONG 084 22 27)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN , 1978				
29...	1415	3.0	200	26.5

03407908 - NEW RIVER AT CORDELL, TENN (LAT 36 20 10 LONG 084 27 06)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT , 1977				
05...	1000	76	260	11.0
26...	1130	1840	190	14.0
DEC				
14...	1230	323	245	7.0
JAN , 1978				
19...	1600	860	180	3.0
MAR				
15...	1630	1590	175	5.0
APR				
10...	1135	140	275	17.5
JUN , 1978				
07...	1715	79	280	23.0
JUL				
10...	1100	42	420	25.0
AUG				
08...	1550	1600	200	26.0
SEP				
07...	1550	20	420	27.5

03408500 - NEW RIVER AT NEW RIVER, TENN (LAT 36 23 08 LONG 084 33 17.01)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT , 1977				
04...	1530	188	200	16.0
DEC				
16...	1000	525	120	7.0
FEB , 1978				
16...	1200	529	215	2.0
MAR				
15...	1225	--	100	11.0
APR , 1978				
10...	1315	240	230	20.0
MAY				
10...	1230	1280	174	15.0
JUL				
10...	1310	80	400	22.0
SEP				
05...	1315	39	280	25.0

03408600 - LONG BRANCH NEAR GRIMSLEY, TENN (LAT 36 15 32 LONG 084 57 40)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
MAR , 1978				
14...	0800	14	26	9.0

03408810 - CROOKED CREEK TRIBUTARY NEAR ALLARDT, TENN (LAT 36 23 30 LONG 084 54 43)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUL , 1978				
12...	1220	.06	102	24.0
SEP , 1978				
07...	1045	.02	115	19.5

03408815 - CROOKED CREEK NEAR ALLARDT,TENN (LAT 36 22 59 LONG 084 54 50)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
DEC , 1977				
13...	1550	7.2	95	7.0
FEB , 1978				
16...	1600	8.1	80	3.5
APR , 1978				
12...	1320	3.6	105	14.5
JUL				
12...	1400	.39	125	24.5

CUMBERLAND RIVER BASIN--CONTINUED

03409500 - CLEAR FORK NEAR ROBBINS, TENN. (LAT 36 23 18 LONG 084 37 49.01)

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)
OCT , 1977					JUN , 1978				
04...	1230	154	50	12.0	07...	1330	70	55	23.0
DEC					SEP				
16...	1200	336	60	7.0	05...	1130	31	64	24.5
APR , 1978									
10...	1430	165	45	17.5					

03414500 - EAST FORK OBEY RIVER NEAR JAMESTOWN, TENN. (LAT 36 24 58 LONG 085 01 35.01)

OCT , 1977					APR , 1978				
06...	1245	75	220	16.0	12...	1305	180	200	13.0
JAN , 1978					JUN				
11...	1045	817	--	18.0	06...	1220	69	225	18.0

03416000 - WOLF RIVER NEAR BYRDSTOWN, TENN. (LAT 36 33 37 LONG 085 04 23.01)

OCT , 1977					JUN , 1978				
06...	1000	43	210	15.0	06...	0910	40	260	19.5
DEC					JUL				
13...	1110	208	180	8.5	06...	1100	24	--	25.0
FEB , 1978					AUG				
09...	1115	107	230	2.5	10...	1015	108	230	18.0
APR					SEP				
12...	1010	110	--	13.0	13...	1120	78	170	19.5
MAY									
02...	1110	153	160	12.0					

03417500 - CUMBERLAND RIVER AT CELINA, TENN. (LAT 36 33 15 LONG 085 30 52)

AUG , 1978									
22...	1640	18100	180	15.5					

03418070 - ROARING RIVER ABOVE GAINESBORO, TENN (LAT 36 21 04 LONG 085 32 45)

OCT , 1977					APR , 1978				
05...	1510	41	250	17.0	27...	1135	413	210	14.5
JAN , 1978					JUN				
10...	1230	889	--	14.0	05...	1310	7.8	240	24.0
FEB									
10...	1015	143	210	2.0					

03421000 - COLLINS RIVER NEAR MCMINNVILLE, TENN. (LAT 35 42 32 LONG 085 43 46)

JUN , 1978					SEP , 1978				
07...	0945	352	200	20.0	13...	1740	142	--	23.0

03422500 - CANEY FORK NEAR ROCK ISLAND, TENN. (LAT 35 48 26 LONG 085 37 44)

SEP , 1978									
14...	0945	68	220	19.0					

03426500 - CUMBERLAND RIVER BELOW OLD HICKORY, TENN. (LAT 36 15 39 LONG 086 40 30)

AUG , 1978									
18...	1430	30700	215	24.0					

03426800 - EAST FORK STONES RIVER AT WOODBURY, TENN. (LAT 35 49 41 LONG 086 04 36)

OCT , 1977					JUN , 1978				
04...	1135	25	300	16.5	07...	1300	22	280	19.5
FEB , 1978					AUG				
01...	1105	61	--	7.0	11...	1150	22	330	20.5
APR					SEP				
13...	1295	29	260	15.0	14...	1230	8.7	300	22.0
MAY									
04...	1025	94	300	13.0					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

03428200 - WEST FORK STONES RIVER AT MURFREESBORO, TENN (LAT 35 54 10 LONG 086 25 48)

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)
NOV , 1977					JUN , 1978				
03...	1510	100	450	20.0	07...	1510	36	400	23.5
FEB , 1978					AUG				
08...	1005	144	440	3.5	14...	1250	42	400	26.0
APR					SEP				
13...	1505	60	410	18.0	14...	1340	47	440	25.0
MAY									
04...	1250	467	400	15.0					

03431517 - CUMMINGS BRANCH AT LICKTON, TENN (LAT 36 18 25 LONG 086 48 00)

MAR , 1978					JUL , 1978				
24...	0945	2.9	270	11.0	19...	0945	.17	400	21.0
APR					AUG				
18...	1125	2.2	310	16.5	03...	0945	.04	420	24.5
MAY					SEP				
18...	1000	4.4	290	13.5	01...	1130	.04	420	21.5
JUN									
15...	1250	.23	360	20.0					

03431700 - RICHLAND C AT CHARLOTTE AVE., AT NASHVILLE, TENN (LAT 36 09 04 LONG 086 51 16)

OCT , 1977					JUN , 1978				
03...	1335	5.3	500	18.0	16...	1335	1.6	460	26.0
NOV					JUL				
08...	1220	16	800	8.0	19...	1215	.58	470	27.0
FEB , 1978					AUG				
24...	1245	16	480	7.0	08...	1235	.35	470	28.5
MAR					31...	1140	6.5	400	23.0
24...	1255	24	500	15.0					
MAY									
16...	1340	280	530	15.0					

03431800 - SYCAMORE CREEK NEAR ASHLAND CITY, TENN. (LAT 36 19 12 LONG 087 03 04.01)

OCT , 1977					MAY , 1978				
06...	1120	28	295	15.5	26...	0900	580	260	22.0
NOV					AUG				
15...	0920	43	300	8.0	02...	1600	18	290	27.5
FEB , 1978					SEP				
27...	1535	161	230	8.5	01...	1200	23	--	21.5
MAR									
23...	1140	132	220	12.0					

03432350 - HARPETH RIVER AT FRANKLIN, TENN (LAT 35 55 14 LONG 086 51 56)

OCT , 1977					JUN , 1978				
03...	1530	27	415	18.0	08...	1345	42	360	22.0
JAN , 1978					JUL				
11...	1530	226	370	2.0	12...	1550	1.7	350	25.0
MAR					AUG				
29...	1210	182	370	11.5	02...	1045	4.1	330	24.0
APR									
28...	1245	43	380	14.5					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

CUMBERLAND RIVER BASIN--CONTINUED

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)
03433500 - HARPETH RIVER AT BELLEVUE, TENN.. (LAT 36 03 16 LONG 086 55 42.01)									
OCT , 1977					JUL , 1978				
05...	1600	68	420	17.0	21...	1145	20	380	28.0
NOV					AUG				
04...	1130	225	--	17.0	04...	0925	35	260	24.0
FEB , 1978					SEP				
10...	1150	325	380	3.0	12...	0910	15	410	24.5
MAR									
10...	1315	2210	335	8.5					
03434500 - HARPETH RIVER NEAR KINGSTON SPRINGS, TENN. (LAT 36 07 19 LONG 087 05 56)									
APR , 1978					JUN , 1978				
24...	1200	358	255	16.0	27...	1030	138	--	27.0
MAY					SEP				
25...	1500	471	300	24.5	25...	1050	64	--	19.0
03436000 - SULPHUR FORK RED RIVER NEAR ADAMS, TENN (LAT 36 30 55 LONG 087 03 32.01)									
OCT , 1977					MAY , 1978				
07...	1720	32	380	16.0	23...	1330	150	320	20.0
NOV					JUN				
15...	1335	71	390	10.0	22...	1455	58	355	25.0
FEB , 1978					AUG				
23...	1400	25	305	4.5	31...	1510	44	--	23.5
MAY									
01...	1410	154	310	16.5					
03436100 - RED RIVER AT PORT ROYAL, TENN (LAT 36 33 17 LONG 087 08 31)									
JAN , 1978					JUN , 1978				
24...	1620	1420	--	4.0	22...	1740	495	340	24.0
MAY					AUG				
23...	1700	866	320	22.0	31...	1330	265	--	22.5
03436700 - YELLOW CREEK NEAR SHILOH, TENN. (LAT 36 20 55 LONG 087 32 20.01)									
OCT , 1977					MAY , 1978				
03...	1520	157	220	18.0	24...	1200	117	250	19.5
NOV					JUN				
08...	1120	243	--	16.5	23...	0815	60	260	21.5
FEB , 1978					SEP				
24...	1215	196	230	6.0	01...	1450	37	--	22.0
MAY									
02...	1430	375	200	14.5					

TENNESSEE RIVER BASIN

03454790 - TRAIL FORK BIG CREEK AT DEL RIO, TN (LAT 35 54 27 LONG 083 01 26)									
JUN , 1978									
30...	1040	17	117	21.0					
03454850 - LONG CREEK NEAR DEL RIO, TN (LAT 35 56 53 LONG 083 03 13)									
JUN , 1978									
30...	0950	4.2	400	21.0					

TENNESSEE RIVER BASIN--CONTINUED

03461200 - COSBY CREEK ABOVE COSBY TN (LAT 35 46 58 LONG 083 13 03)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
NOV , 1977				
21...	1145	22	22	10.0
JAN , 1978				
16...	1130	26	16	2.0
FEB				
17...	1115	13	18	4.0
MAR				
07...	1035	13	16	3.5
APR				
12...	1130	16	18	10.5
MAY , 1978				
16...	1100	49	40	10.0
17...	1530	39	38	10.0
JUN				
21...	1415	21	17	10.0
JUL				
31...	1330	6.1	25	22.0
AUG				
29...	1445	9.4	14	18.0

03461266 - GREENBRIER CREEK AT HWY 32 AT COSBY TN (LAT 35 48 11 LONG 083 14 51)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUL , 1978				
01...	1430	3.4	34	22.0

03461500 - PIGEON RIVER AT NEWPORT, TENN. (LAT 35 57 38 LONG 083 10 28)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
FEB , 1978				
16...	1330	1900	290	4.0
JUN				
22...	1430	287	400	22.0
AUG , 1978				
02...	1100	320	650	22.5
31...	1350	224	580	24.0

03464650 - NOLICHUCKY RIVER NEAR ERWIN, TN (LAT 36 07 24 LONG 082 26 37)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN , 1978				
30...	1050	571	60	28.0

03464815 - SOUTH INDIAN CREEK NEAR ERWIN, TN (LAT 36 07 38 LONG 082 26 45)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN , 1978				
29...	1330	46	70	26.5

03465220 - NORTH INDIAN CREEK AT ERWIN, TN (LAT 36 09 02 LONG 082 25 06)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN , 1978				
29...	1630	40	105	26.0

03465500 - NOLICHUCKY RIVER AT EMBREEVILLE, TENN. (LAT 36 10 35 LONG 082 27 27)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT , 1977				
13...	1225	737	50	11.0
DEC				
06...	1420	3210	80	7.0
JAN , 1978				
24...	1130	1430	--	1.0
MAR				
01...	1215	1080	70	4.0
APR , 1978				
04...	1640	1780	50	16.0
JUN				
15...	1600	864	70	22.0
29...	1320	628	75	26.0
AUG				
30...	1200	558	--	23.5

03466228 - SINKING CREEK AT AFTON, TN (LAT 36 11 55 LONG 082 44 31)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT , 1977				
26...	1100	36	260	15.0
NOV				
07...	1245	100	150	16.5
DEC				
06...	1215	35	335	9.0
FEB , 1978				
27...	1430	11	400	10.0
JUL				
20...	1245	7.0	420	22.0
AUG				
31...	1250	4.0	--	22.0

03466695 - LITTLE CHUCKY CREEK BL MCNEW BRANCH NR RADER,TN (LAT 36 09 27 LONG 082 57 34)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN , 1978				
29...	1635	3.6	80	25.0

TENNESSEE RIVER BASIN--CONTINUED

03466870 - ROARING FORK NEAR GREENEVILLE, TN (LAT 36 13 18 LONG 082 52 05)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN , 1978				
30...	1645	7.0	400	26.5

03466880 - ROARING FORK NEAR MOSHEIM, TN (LAT 36 14 38 LONG 082 53 37)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN , 1978				
29...	1520	12	55	26.0

03467000 - LICK CREEK AT MOHAWK, TENN. (LAT 36 12 05 LONG 083 02 52.01)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN , 1978				
29...	1900	52	420	26.0

03467490 - BENT CREEK NEAR SPRINGVALE, TN (LAT 36 11 14 LONG 083 09 53)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN , 1978				
30...	1815	10	380	26.0

03468140 - MUDDY CREEK NEAR CHESTNUT HILL, TN (LAT 35 56 57 LONG 083 20 51)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN , 1978				
30...	1215	.19	50	23.0

03470000 - LITTLE PIGEON RIVER AT SEVIERVILLE, TENN. (LAT 35 52 42 LONG 083 34 40)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
FEB , 1978				
03...	1300	592	68	3.0
MAR				
07...	1415	366	100	9.0
APR				
13...	1510	303	95	19.0
MAY , 1978				
19...	1145	536	75	18.0
JUL				
31...	1030	151	160	25.0
AUG				
29...	1235	143	130	28.0

03470330 - TUCKAHOE CREEK AT PETERS MILL, TN (LAT 35 58 02 LONG 083 42 07)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUL , 1978				
03...	1050	14	40	20.0

03476515 - BEIDLEMAN CREEK NEAR CAYWOOD FORD, TN (LAT 36 31 28 LONG 082 07 53)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN , 1978				
30...	1330	20	380	26.5

03484000 - WATAUGA RIVER BELOW WILBUR DAM, TENN. (LAT 36 20 39 LONG 082 07 46)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
NOV , 1977				
12...	1130	1740	84	11.5
APR , 1978				
05...	1145	46	76	14.0
JUL , 1978				
20...	1205	2780	80	7.0

03485500 - DOE RIVER AT ELIZABETHTON, TENN. (LAT 36 20 40 LONG 082 12 37)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT , 1977				
12...	1345	122	110	14.0
DEC				
02...	1030	235	--	9.5
JAN , 1978				
25...	1100	898	--	4.5
FEB				
28...	1015	186	100	3.5
APR				
05...	1000	255	69	13.5
MAY , 1978				
10...	0945	441	62	12.0
JUN				
15...	0945	179	78	15.0
JUL				
20...	1110	78	110	20.5
AUG				
30...	0920	101	--	20.5

TENNESSEE RIVER BASIN--CONTINUED

03486000 - WATAUGA RIVER AT ELIZABETHTON, TENNESSEE (LAT 36 21 21 LONG 082 13 26)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
MAR , 1978				
01...	0800	348	90	4.0
APR				
05...	0830	380	80	12.0
JUL , 1978				
20...	0900	198	90	14.0

03487550 - REEDY CREEK AT OREBANK, TENN. (LAT 36 33 42 LONG 082 27 36)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT , 1977				
12...	--	44	400	13.0
DEC				
07...	1610	87	360	4.0
JAN , 1978				
25...	1630	311	--	7.5
31...	1700	92	--	6.0
MAR				
01...	1530	48	380	6.5
APR				
05...	1720	36	350	17.5
MAY , 1978				
10...	1455	73	350	15.5
JUN				
15...	1215	32	320	17.0
JUL				
20...	1535	18	420	24.0
AUG				
29...	1410	4.0	--	23.0

03497300 - LITTLE RIVER ABOVE TOWNSEND, TENN. (LAT 35 39 52 LONG 083 42 41)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT , 1977				
14...	1445	170	22	9.5
DEC				
20...	1415	380	--	9.0
FEB , 1978				
24...	1330	145	16	2.5
MAR				
12...	1500	206	18	13.5
APR , 1978				
12...	1500	206	18	13.5
AUG				
01...	1325	127	26	21.5
28...	1530	93	21	23.5

03498500 - LITTLE RIVER NEAR MARYVILLE, TENN (LAT 35 47 10 LONG 083 53 04)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
DEC , 1977				
20...	1115	584	80	9.0
FEB , 1978				
14...	1000	318	110	6.5
APR				
13...	0900	313	100	14.0
JUN , 1978				
20...	1130	266	130	20.5
AUG				
01...	1030	206	170	25.0
29...	1040	121	140	24.0

03499053 - CULTON CREEK AT ALCOA, TN (LAT 35 46 41 LONG 083 59 46)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN , 1978				
30...	1415	9.2	60	22.0

03499111 - STOCK CREEK NEAR ROCKFORD, TN (LAT 35 52 11 LONG 083 55 09)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN , 1978				
30...	1650	7.7	75	23.0

03518470 - BALD RIVER NEAR TELLICO PLAINS, TN (LAT 35 19 20 LONG 084 10 40)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
JUN , 1978				
30...	1410	23	14	23.0

03518500 - TELLICO RIVER AT TELLICO PLAINS, TENN. (LAT 35 21 42 LONG 084 16 44)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT , 1977				
11...	1245	203	24	8.5
NOV				
16...	1245	203	24	8.5
FEB , 1978				
15...	1200	182	20	4.5
MAR				
23...	1335	289	21	11.5
MAY				
01...	1130	375	24	11.0
JUN , 1978				
13...	1300	201	25	22.5
JUL				
11...	1130	72	32	24.0
AUG				
19...	1115	43	26	21.5
SEP				
19...	1115	43	26	21.5

TENNESSEE RIVER BASIN--CONTINUED

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)
03518700 - CANE CREEK AT BELLTOWN MILL, TN (LAT 35 25 31 LONG 084 15 16)									
JUN , 1978									
30...	1600	3.1	100	26.5					
03520170 - POND CREEK NEAR ADOLPHUS, TN (LAT 35 42 20 LONG 084 27 35)									
JUL , 1978									
01...	1750	19	290	24.5					
03531700 - MULBERRY CREEK AT ALANTHUS HILL, TN (LAT 36 33 18 LONG 083 22 51)									
JUN , 1978									
29...	1110	13	290	23.5					
03535000 - BULLRUN CREEK NEAR HALLS CROSSROADS, TENN (LAT 36 06 52 LONG 083 59 16)									
DEC , 1977					MAY , 1978				
12...	1420	83	295	3.5	15...	1125	161	315	13.0
JAN , 1978					JUN				
18...	1530	152	320	4.5	20...	1430	54	340	20.0
MAR					AUG				
08...	1230	147	360	8.5	03...	1000	15	340	22.0
APR					30...	0940	12	380	22.5
10...	1330	46	285	17.5					
03538225 - POPLAR CREEK NEAR OAK RIDGE, TENN. (LAT 35 59 55 LONG 084 20 23.01)									
FEB , 1978					JUL , 1978				
09...	1430	79	230	4.0	10...	1300	15	340	24.0
MAR					AUG				
30...	1140	134	190	11.5	15...	1330	97	240	20.5
MAY					SEP				
01...	1100	101	210	14.5	22...	1130	9.7	320	23.5
03539800 - OBED RIVER NEAR LANCING, TENN. (LAT 36 04 53 LONG 084 40 15)									
OCT , 1977					JUL , 1978				
10...	1315	4720	65	15.0	06...	1345	77	57	22.0
MAY , 1978					SEP				
18...	1510	1540	43	15.5	21...	1300	24	70	29.0
03543300 - LITTLE SEWEE CREEK NEAR CENTER POINT, TENN (LAT 35 35 54 LONG 084 42 13)									
JUN , 1978									
30...	1140	22	290	21.5					
03543500 - SEWEE CREEK NEAR DECATUR, TENN. (LAT 35 34 53 LONG 084 44 53)									
NOV , 1977					MAY , 1978				
16...	1200	126	265	11.0	04...	1030	1460	155	13.5
JAN , 1978					JUL				
19...	1445	386	--	5.0	13...	1130	48	300	21.0
MAR					SEP				
29...	1230	152	210	13.5	20...	1115	28	300	21.0
03556500 - HIWASSEE RIVER NEAR MCFARLAND, TENN (LAT 35 10 48 LONG 084 26 36)									
MAY , 1978									
05...	1200	1490	25	8.0					
03563000 - OCOEE RIVER AT EMF, TENN. (LAT 35 05 48 LONG 084 32 07)									
OCT , 1977					JUL , 1978				
05...	0820	1450	90	18.0	12...	1300	1440	155	22.0
JAN , 1978					SEP				
18...	1730	1570	160	5.0	19...	1530	1540	100	25.0
MAR									
27...	1445	1510	150	11.0					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

TENNESSEE RIVER BASIN--CONTINUED

03565300 - SOUTH CHESTUEE CREEK NEAR BENTON, TENN (LAT 35 10 02 LONG 084 42 59)

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)
OCT , 1977					MAY , 1978				
06...	0830	19	265	14.0	05...	1000	79	190	13.5
NOV					JUN				
15...	1130	32	280	9.0	06...	1400	9.9	320	19.0
JAN , 1978					JUL				
20...	1140	390	--	3.0	12...	1505	6.2	320	24.0
FEB					AUG				
24...	1245	22	255	8.5	16...	1430	7.3	--	23.0
MAR					SEP				
28...	1340	32	255	11.0	19...	1410	3.5	320	22.0
MAY									
04...	1500	194	195	14.0					

03565500 - OOSTANAULA CREEK NEAR SANFORD, TENN. (LAT 35 19 39 LONG 084 42 19)

OCT , 1977					MAY , 1978				
06...	1000	54	330	15.0	04...	1640	262	220	14.5
NOV					JUN				
15...	1340	82	320	12.0	06...	1135	59	290	18.0
FEB , 1978					JUL				
22...	1500	72	270	8.5	13...	0930	41	320	21.0
MAR					SEP				
28...	1230	129	260	12.0	19...	1200	31	350	20.5

03566117 - EAST FORK NORTH MOUSE CREEK NEAR NIOTA, TENN (LAT 35 32 54 LONG 084 33 45)

JUN , 1978				
30...	1030	.76	330	24.0

03566253 - GREASY CREEK AT HOPEWELL, TN (LAT 35 14 17 LONG 084 53 11)

JUN , 1978				
30...	0905	.15	220	20.5

03566420 - WOLFTEVER CREEK NEAR OOLTEWAH, TENN (LAT 35 03 43 LONG 085 03 59)

OCT , 1977					APR , 1978				
04...	1400	19	290	16.0	04...	1055	17	280	16.0
NOV					MAY				
08...	1125	93	310	16.0	02...	1110	46	230	13.0
DEC					JUN				
07...	1050	36	185	5.0	06...	1040	7.1	360	20.0
JAN , 1978					11...	0900	5.8	250	22.0
24...	1140	47	180	6.0	AUG				
MAR					01...	1050	4.0	380	22.0
07...	1040	25	230	8.0					

03571000 - SEQUATCHIE RIVER NEAR WHITWELL, TENN. (LAT 35 12 22 LONG 085 29 48)

OCT , 1977					MAY , 1978				
04...	1500	689	190	17.0	01...	1530	2680	150	14.0
NOV					JUN				
07...	1345	3050	170	16.0	05...	1310	283	180	19.0
JAN , 1978					JUL				
23...	1410	1070	180	6.0	10...	1410	131	220	25.0
MAR					31...	1320	142	195	24.0
06...	1425	864	160	6.0					
APR									
03...	1405	459	175	17.0					

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

TENNESSEE RIVER BASIN--CONTINUED

03578000 - ELK RIVER NEAR PELHAM, TENN. (LAT 35 17 48 LONG 085 52 12)

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)
OCT , 1977					MAY , 1978				
05...	1205	48	170	14.0	03...	1030	369	170	14.0
NOV					JUN				
09...	0950	226	180	16.0	07...	1000	28	220	17.0
DEC					JUL				
08...	1210	170	160	8.0	12...	1100	7.8	260	21.0
JAN , 1978					AUG				
25...	1130	585	210	5.0	02...	0940	4.8	270	22.0
MAR					SEP				
08...	1110	85	190	7.0	11...	1330	2.6	280	24.0
APR									
05...	1200	56	180	15.0					

03584500 - ELK RIVER NEAR PROSPECT, TENN. (LAT 35 01 39 LONG 086 56 52)

OCT , 1977					APR , 1978				
04...	1150	3260	260	17.5	04...	1145	972	290	16.5
JAN , 1978					AUG				
11...	1240	4290	240	5.0	01...	1200	388	220	25.5
MAR					SEP				
07...	1230	2080	260	9.0	07...	1200	433	220	24.5

03588000 - SHOAL CREEK AT LAWRENCEBURG, TENN. (LAT 35 14 40 LONG 087 21 02)

OCT , 1977					JUN , 1978				
06...	1525	41	165	17.0	07...	1445	74	185	19.0
FEB , 1978					JUL				
07...	1140	77	--	6.0	07...	1125	42	170	20.0
APR					AUG				
03...	1340	70	150	16.5	03...	1550	37	295	21.5
MAY					SEP				
02...	1800	54	160	16.0	12...	1300	28	--	21.5

03588400 - CHISHOLM CREEK AT WESTPOINT, TENN. (LAT 35 08 04 LONG 087 31 45)

OCT , 1977					JUN , 1978				
06...	1055	35	80	17.0	07...	1320	77	70	19.5
DEC					JUL				
02...	1445	46	70	16.5	07...	0950	34	145	21.5
APR , 1978					SEP				
03...	1540	60	63	16.0	12...	1455	35	--	22.5
MAY									
02...	1015	72	70	13.0					

03593098 - ROBINSON CREEK NEAR COUNCE TN (LAT 35 02 54 LONG 088 15 05)

NOV , 1977					SEP , 1978				
15...	1410	3.3	380	11.0	11...	1245	1.2	60	20.0
MAR , 1978									
29...	1445	9.0	360	14.5					

03596000 - DUCK RIVER BELOW MANCHESTER, TENN (LAT 35 28 15 LONG 086 07 18)

OCT , 1977					MAY , 1978				
05...	1425	54	150	16.0	03...	0830	328	110	14.0
09...	1345	140	120	16.0	JUN				
DEC					07...	0740	48	150	21.0
08...	1020	224	110	7.0	JUL				
JAN , 1978					12...	0745	49	150	22.0
25...	0850	1320	80	4.0	AUG				
MAR					02...	0755	30	170	22.0
08...	0825	132	100	7.0					
APR									
05...	1010	82	200	16.0					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

TENNESSEE RIVER BASIN--Continued

03598000 - DUCK RIVER NEAR SHELBYVILLE, TENN. (LAT 35 28 49 LONG 086 29 57)

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)
OCT , 1977					JUN , 1978				
05...	0920	204	285	16.0	08...	1030	5530	120	20.0
JAN , 1978					AUG				
05...	1420	242	280	4.5	02...	0910	183	175	25.5
MAR					SEP				
08...	0855	632	260	9.5	08...	0920	194	170	23.5
APR									
06...	1450	228	240	19.5					

03599500 - DUCK RIVER AT COLUMBIA, TENN. (LAT 35 37 05 LONG 087 01 56)

OCT , 1977					JUL , 1978				
07...	1405	438	350	19.0	12...	1015	654	240	27.0
MAR , 1978					AUG				
22...	1215	2240	300	11.0	02...	1340	235	265	28.0
JUN					SEP				
08...	1110	421	310	24.0	11...	1600	222	--	26.5

03600500 - BIG BIGBY CREEK AT SANDY HOOK, TENN (LAT 35 29 19 LONG 087 13 59)

OCT , 1977					JUN , 1978				
07...	1120	6.3	220	17.5	07...	1655	18	150	20.5
DEC					JUL				
15...	1315	22	160	15.5	07...	1345	7.8	100	28.0
FEB , 1978					AUG				
06...	1700	18	--	3.5	02...	1535	5.7	340	29.5
MAR					SEP				
22...	1520	37	160	13.5	12...	1040	6.4	--	23.5
23...	1625	32	160	14.0					
MAY									
01...	1615	30	155	16.5					

03602500 - PINEY RIVER AT VERNON, TENN. (LAT 35 52 16 LONG 087 30 05)

OCT , 1977					JUL , 1978				
05...	1320	145	230	16.0	03...	1200	239	200	22.5
28...	1550	303	210	15.0	AUG				
FEB , 1978					07...	1300	113	330	21.5
09...	1500	302	--	5.0	SEP				
MAR					20...	1105	180	180	21.0
28...	1330	468	170	10.5					
JUN									
05...	1210	195	225	18.5					

03604500 - BUFFALO RIVER NEAR LOBELVILLE, TENN. (LAT 35 48 46 LONG 087 47 51)

OCT , 1977					MAY , 1978				
05...	1130	860	120	18.0	25...	1115	876	115	21.5
MAY , 1978									
11...	1145	4450	80	15.0					

03604750 - BIRDSONG CREEK AT HOLLADAY, TENN (LAT 35 52 53 LONG 088 08 39)

AUG , 1978				
02...	1430	.79	60	29.0

03605555 - TRACE CREEK ABOVE DENVER, TENN (LAT 36 03 08 LONG 087 54 27)

OCT , 1977					MAY , 1978				
04...	1610	41	220	19.0	02...	1735	74	140	16.5
27...	1420	82	170	16.0	24...	1430	24	200	22.5
JAN , 1978					JUN				
25...	1230	1530	--	4.5	23...	1015	17	220	22.5
MAR					AUG				
24...	1010	43	170	13.0	30...	1800	15	--	24.5

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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									
03606350 - BIG SANDY RIVER AT WESTPORT, TENN (LAT 35 53 34 LONG 088 18 32)									
AUG , 1978									
02...	1510	45	32	24.0					
03606500 - BIG SANDY RIVER AT BRUCETON, TENN (LAT 36 02 19 LONG 088 13 42)									
OCT , 1977					JUN , 1978				
04...	1400	210	62	17.0	23...	1145	159	40	22.5
MAY , 1978					AUG				
24...	1640	127	44	22.0	30...	1415	294	--	23.0
OBION RIVER BASIN									
07024300 - BEAVER CREEK AT HUNTINGDON, TENN. (LAT 35 59 56 LONG 088 26 01.01)									
DEC , 1977					JUN , 1978				
07...	1100	286	50	3.0	07...	1145	55	90	19.5
FEB , 1978					JUL				
07...	1010	48	60	2.0	19...	1315	30	42	20.5
MAR					AUG				
15...	1445	516	80	12.5	30...	1215	88	55	21.0
MAY									
04...	1215	513	95	13.5					
07024500 - SOUTH FORK OBION RIVER NEAR GREENFIELD, TENN (LAT 36 07 05 LONG 088 48 39.01)									
OCT , 1977					JUN , 1978				
26...	1610	313	68	16.0	07...	1550	185	115	23.0
MAR , 1978					JUL				
16...	1215	1520	55	9.5	19...	1600	136	48	25.5
MAY					AUG				
04...	1645	1230	65	14.0	30...	1430	157	50	25.5
07024760 - SPRING CREEK NEAR GREENFIELD, TENN (LAT 36 11 24 LONG 088 45 53)									
AUG , 1978									
03...	1335	25	40	23.0					
07025300 - NORTH FORK OBION RIVER AT JONES MILL, TENN (LAT 36 26 46 LONG 088 27 57)									
AUG , 1978									
03...	1030	35	41	21.5					
07026100 - REEDS CREEK NEAR TRIMBLE, TENN (LAT 36 10 48 LONG 089 15 15)									
AUG , 1978									
04...	1330	1.6	185	25.5					
07027280 - JACKS CREEK AT JACKS CREEK, TENN (LAT 35 28 16 LONG 088 31 21)									
AUG , 1978									
02...	1230	3.2	38	24.0					
07027495 - BOND CREEK AT BEMIS, TN (LAT 35 34 29 LONG 088 48 46)									
AUG , 1978									
02...	1045	.33	120	22.5					
07027750 - NIXON CREEK NEAR NUT BUSH, TN (LAT 35 41 59 LONG 089 16 36)									
AUG , 1978									
04...	1630	.64	215	25.5					

MISCELLANEOUS TEMPERATURE MEASUREMENTS AND FIELD DETERMINATIONS

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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)
OBION RIVER BASIN--CONTINUED									
07030140 - CANE CREEK NEAR CHERRY, TENN (LAT 35 40 30 LONG 089 41 21)									
AUG , 1978									
08...	1200	4.8	370	27.0					
LOOSAHATCHIE RIVER BASIN									
07030240 - LOOSAHATCHIE RIVER NEAR ARLINGTON, TENN. (LAT 35 18 37 LONG 089 38 23)									
NOV , 1977					APR , 1978				
10...	1245	88	45	11.5	27...	1045	100	46	16.0
22...	0955	2710	60	10.5	JUN				
DEC					22...	1020	156	52	22.5
16...	1445	184	67	11.0	AUG				
JAN , 1978					01...	0930	68	44	21.0
06...	1545	101	63	13.0	23...	0915	84	44	19.5
07030295 - LOOSAHATCHIE R TR AT NEW ALLEN RD AT MEMPHIS TN (LAT 35 14 17 LONG 089 57 04.01)									
DEC , 1977					JUN , 1978				
05...	1005	7.4	80	11.0	21...	1030	134	65	23.0
JAN , 1978					JUL				
03...	1135	.07	230	2.0	11...	1015	5.1	90	24.5
MAR					27...	1015	.11	185	25.0
13...	0940	.22	260	8.5					
MAY									
18...	1305	.11	300	25.5					
WOLF RIVER BASIN									
07031650 - WOLF RIVER AT GERMANTOWN, TN (LAT 35 06 59 LONG 089 48 05)									
OCT , 1977					FEB , 1978				
26...	1415	413	50	17.0	02...	1100	1075	40	1.5
NOV					MAR				
29...	1445	3290	44	16.0	03...	1030	2172	54	4.5
DEC					APR				
16...	1310	1140	46	9.0	20...	1245	465	52	17.0
JAN , 1978					MAY				
10...	1120	2010	40	1.5	16...	1200	1543	42	18.5
07031680 - FLETCHER CREEK NEAR CORDOVA, TN (LAT 35 11 21 LONG 089 45 42)									
NOV , 1977					JAN , 1978				
29...	0845	54	40	5.5	30...	1540	.27	115	2.0
DEC					FEB				
15...	1330	.64	71	8.0	24...	1510	.30	110	8.0
JAN , 1978									
05...	1030	.03	90	2.5					
07031683 - FLETCHER CR AT WHITTEN RD AT MEMPHIS TN (LAT 35 11 16 LONG 089 50 09)									
NOV , 1977					APR , 1978				
22...	1530	6.5	54	10.0	27...	0855	.05	120	16.5
29...	0945	1030	42	5.5	MAY				
DEC					17...	1120	2.2	95	23.0
16...	1115	5.6	85	7.5	JUL				
JAN , 1978					31...	1110	.20	500	30.0
05...	1250	.78	240	4.0					
MAR									
03...	0900	75	65	2.0					
07031777 - LICK CREEK AT DICKINSON STREET, AT MEMPHIS, TENN (LAT 35 09 24 LONG 090 00 12)									
DEC , 1977					JUN , 1978				
04...	1545	.77	155	15.0	20...	1535	2.4	155	24.5
31...	1400	1.9	120	12.0	JUL				
MAR , 1978					27...	1400	2.4	150	27.0
13...	1300	1.8	150	12.0	AUG				
APR					24...	1400	1.3	155	28.5
25...	0915	1.2	130	17.5					
MAY									
18...	0945	1.3	152	20.0					

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									
07032200 - NONCONNAH CREEK NEAR GERMANTOWN, TENN. (LAT 35 02 59 LONG 089 49 08)									
OCT , 1977					MAR , 1978				
26...	1225	4.4	180	15.5	03...	0840	703	60	3.5
NOV					APR				
29...	1230	2250	30	5.5	21...	0810	1.8	100	13.0
DEC					MAY				
19...	1100	24	70	9.0	17...	0850	3.0	100	13.0
JAN , 1978					JUL				
11...	0930	20	44	.0	26...	1415	.60	120	33.0
FEB					SEP				
01...	1030	10	85	.5	07...	1240	.10	220	29.0
07032222 - JOHNS CREEK TRIB AT HOLMES RD, NR MEMPHIS, TN (LAT 35 00 20 LONG 089 52 16.01)									
OCT , 1977					APR , 1978				
26...	1030	1.4	190	17.0	21...	1040	.49	158	14.0
NOV					MAY				
30...	1200	19	65	8.5	17...	1115	.58	154	17.0
DEC					JUN				
15...	1145	3.3	75	9.0	22...	1040	1.6	110	24.0
JAN , 1978					AUG				
11...	1230	1.4	16	.5	24...	1000	.09	190	26.5
30...	0940	1.2	100	.5					
MAR									
02...	1155	25	150	4.0					
07032224 - JOHNS CREEK AT RAINES RD AT MEMPHIS, TN (LAT 35 02 05 LONG 089 53 10)									
OCT , 1977					APR , 1978				
26...	0910	9.0	200	16.0	21...	0920	.67	260	12.0
NOV					MAY				
30...	1330	60	85	8.5	17...	0955	1.8	150	16.5
DEC					JUN				
19...	0915	3.6	160	7.5	22...	0935	6.8	350	24.0
JAN , 1978					JUL				
11...	1055	5.4	26	.0	27...	1320	.94	300	23.0
FEB					AUG				
01...	0930	4.3	20	1.0	21...	1010	.26	500	24.0
MAR									
02...	1250	50	95	4.0					
07032241 - BLACK BAYOU AT SOUTHERN AVENUE, AT MEMPHIS, TENN (LAT 35 06 55 LONG 089 56 00)									
NOV , 1977					MAY , 1978				
09...	0820	.38	85	19.0	18...	1200	.34	120	19.0
DEC					JUN				
07...	1140	.29	120	15.0	20...	1130	.65	115	23.0
MAR , 1978					JUL				
01...	1450	.42	120	14.5	27...	0940	.51	115	20.5
24...	1000	12	120	17.5					
APR									
08...	1050	.47	115	20.0					
07032248 - CANE CREEK AT EAST PERSON AVENUE AT MEMPHIS TENN (LAT 35 06 02 LONG 090 00 43.01)									
NOV , 1977					APR , 1978				
11...	1040	2.3	200	16.0	20...	1355	4.4	240	20.0
DEC					JUN				
07...	1050	3.7	260	13.0	21...	1340	6.3	224	28.0
MAR , 1978									
01...	1700	4.1	320	13.5					
23...	1530	5.4	270	21.5					
07032260 - CYPRESS CREEK AT NEELY RD, AT MEMPHIS TN (LAT 35 01 36 LONG 090 03 23.01)									
DEC , 1977					JUN , 1978				
07...	0930	.38	170	2.0	21...	1030	102	60	25.0
MAR , 1978					JUL				
02...	1145	26	100	4.0	26...	1145	.02	200	29.0
23...	1050	.31	330	16.0	SEP				
APR					29...	1200	.01	220	22.0
20...	1140	.06	260	15.0					
MAY									
16...	1300	.14	295	21.5					

07029410 - MOSSES C NR POCAHONTAS, TENN.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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
APR							
10...	1610	30	75	20.0	10	.81	78
11...	0030	43	70	19.0	35	4.1	79
11...	0130	51	75	19.0	28	3.9	86
MAY							
01...	1600	335	30	18.0	506	458	82
01...	1630	340	28	17.5	473	434	93
01...	1700	360	32	17.0	463	450	88
01...	2055	410	32	16.0	351	389	87
01...	2200	425	32	16.0	309	355	83
01...	2305	440	31	16.0	271	322	89
02...	0840	288	32	15.0	70	54	80
02...	1020	235	32	15.0	41	26	95
02...	1355	181	35	16.5	71	35	90
02...	1910	140	34	15.5	73	28	77
03...	1140	103	34	14.0	80	22	85

07029425 - HATCHIE RIVER NEAR LACY, TN.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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
APR							
10...	1730	550	80	21.0	50	74	88
MAY							
01...	1740	1000	66	18.0	78	211	97
01...	1800	1030	65	18.0	71	197	94
01...	2130	1130	58	17.0	500	1530	39
02...	0900	1520	58	17.0	126	517	93
02...	0950	1550	58	17.0	176	737	78
02...	1445	1620	65	18.0	475	2080	97
02...	1600	1640	60	18.0	468	2070	99
02...	1930	1650	62	17.0	312	1390	98
02...	2230	1680	62	16.0	295	1340	98
03...	0810	1660	70	14.0	197	883	97
03...	1105	1650	70	15.0	193	860	95
03...	1600	1640	68	16.0	169	748	97

07030010 - BIG MUDDY CREEK AT STANTON, TN

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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
APR							
11...	0050	47	55	17.0	--	--	--
11...	0115	46	54	17.0	241	30	79
11...	1135	126	54	17.0	--	--	--
11...	1200	126	60	20.0	246	84	96
MAY							
01...	1030	202	80	17.0	2740	1490	100
01...	1100	204	85	17.0	--	--	--
01...	1200	192	75	17.0	1980	1030	100
01...	1425	139	65	17.0	1070	402	99

07030050 - HATCHIE RIVER AT RIALTO, TENN.

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

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
MAY							
03...	1115	2930	60	15.5	--	--	--
03...	1145	2930	60	15.5	501	3960	96
03...	1700	3000	60	15.5	428	3470	99
04...	1145	3360	55	15.0	--	--	--
04...	1230	3360	60	15.5	320	2900	98
05...	1045	3590	60	15.0	--	--	--
05...	1100	3590	65	15.0	407	3950	98

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, 22.18 ft (6.76 m) below land-surface datum, Nov. 6, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 3	18.89	DEC 7	11.65	MAR 7	12.65	MAY 2	12.21	JUL 11	17.79	AUG 30	20.34
NOV 7	14.67	JAN 24	9.60	APR 4	12.46	JUN 6	12.30	AUG 1	19.05		

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 (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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB. 1	14.67	APR 13	15.62	JUN 7	15.74	JUL 10	15.91

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 Feb. 4-28.

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 1977 TO SEPTEMBER 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.09	15.01	14.60	14.89	--	14.11	14.62	14.83	14.97	14.96	15.44	15.32
10	16.31	8.74	10.62	14.70	--	13.61	14.81	14.65	9.00	15.18	12.93	15.87
15	16.06	14.86	14.70	14.82	--	8.29	14.90	14.76	14.56	15.19	14.95	16.37
20	15.23	14.63	14.77	14.53	--	11.69	14.94	14.76	10.22	15.23	14.99	16.89
25	16.16	14.92	14.76	14.73	--	13.96	14.96	14.84	14,55	15.03	15.09	17.40
EOM	14.98	14.96	14.86	12.35	14.88	14.13	14.74	14.91	14.92	15.51	15.01	17.89

WTR YEAR 1978 MAX 4.27 MAR 11, 1978 MIN 17.89 SEP 30, 1978

CROCKETT COUNTY

354253089051300. Local number, Ck:B-5

LOCATION.--Lat 35°42'53", long 89°05'13", Hydrologic Unit 08010205, at U.S. Highway 79, Bells.
Owner: Winter Garden Freezer Company.

AQUIFER.--Sand of Claiborne Group of middle Eocene age.

WELL CHARACTERISTICS.--Drilled unused artesian well, diameter 10 to 6 in (250 to 150 mm), depth 537 ft (164 m), cased to 523 ft (159 m), screened 523 to 537 ft (159 to 164 m).

INSTRUMENTATION.--Water-level recorder since May 1961.

DATUM.--Altitude of land-surface datum is 350 ft (107 m). Measuring point: Top of casing, 1.10 ft (0.34 m) above land-surface datum.

PERIOD OF RECORD.--May 1961 to January 1978 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 37.96 ft (11.57 m) below land-surface datum, Mar. 14, 1975; lowest, 43.92 ft (13.39 m) below land-surface datum, Nov. 4, 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, OCTOBER 1977 TO JANUARY 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN
5	--	42.0	40.3	40.8
10	--	42.0	40.9	40.5
15	--	42.0	40.8	--
20	--	41.7	40.7	--
25	--	41.0	40.8	--
EOM	42.0	40.8	40.9	--

WTR YEAR 1978 MAX 40.0 DEC 4, 1977 MIN 42.2 NOV 3, 1977

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 69 ft (21 m).

DATUM.--Altitude of land-surface datum is 1,970 ft (600 m). Measuring point: Top of casing, 1.00 ft (0.30 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, 23.25 ft (7.09 m) below land-surface datum, Aug. 18, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	16.93	JAN 30	15.46	MAR 13	13.93	MAY 9	15.31	AUG 10	16.20
NOV 22	15.20	FEB 17	17.67	APR 13	18.90	JUL 13	21.11	SEP 7	20.28

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, 30.62 ft (9.33 m) below land-surface datum, Oct. 6, 1976.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 12	22.37	MAR 16	20.50	MAY 3	23.74	JUL 7	26.55

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 June 5 to July 26.

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 1977 TO SEPTEMBER 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	32.47	29.15	20.98	29.54	25.26	23.00	28.57	23.90			33.65	33.48
10	25.84	27.21	23.02	22.42	26.82	24.57	29.69	21.80			33.70	33.62
15	30.05	30.43	23.91	25.09	24.41	20.91	30.27	24.07			33.46	33.62
20	32.95	29.57	23.02	23.67	25.59	24.49	31.09	26.90			33.55	33.74
25	33.55	24.88	25.39	20.16	25.09	24.29	32.48	29.99			33.66	33.63
EOM	30.01	17.02	27.80	23.54	25.05	25.95	32.18	30.11		33.56	33.05	33.68

WTR YEAR 1978 MAX 11.23 NOV 30, DEC 1, 1977 MIN 33.75 SEP 18, 19, 1978

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, 4.22 ft (1.29 m) below land-surface datum, Mar. 20, 1975; lowest measured, 16.64 ft (5.07 m) below land-surface datum, Sept. 15, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	15.91	FEB 9	9.17	MAY 5	9.50	JUL 21	11.88
DEC 8	13.34	MAR 3	5.33	JUN 8	9.76	SEP 1	14.42

DYER COUNTY--Continued

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.
Owner: City of 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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	8.57	FEB 9	3.93	MAY 5	5.82	JUL 21	6.50
DEC 8	3.51	MAR 17	3.47	JUN 9	5.36	AUG 31	7.53

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, 77.16 ft (23.46 m) below land-surface datum, Sept. 28, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	75.58	DEC 30	75.63	MAR 2	75.69	APR 28	76.18	JUN 30	76.52	AUG 31	77.02
DEC 3	75.47	FEB 3	75.79	MAR 31	75.97	JUN 1	76.32	JUL 26	76.73	SEP 28	77.16

FAYETTE COUNTY--Continued

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	40.94	DEC 30	40.64	MAR 2	40.28	APR 28	40.36	JUN 30	40.36	AUG 31	40.71
DEC 3	40.70	FEB 3	40.50	MAR 31	40.26	JUN 1	40.24	JUL 26	40.50	SEP 28	40.80

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 Aug. 31 to Sept. 30.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.85 ft (1.17 m) above land-surface datum, Apr. 4, 1977; 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 1977 TO SEPTEMBER 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.10	4.46	0.36	4.16	2.63	5.48	5.47	1.29	6.07	6.51	5.13	
10	4.34	- .16	2.34	1.98	4.34	2.23	5.92	.46	6.15	6.50	5.09	
15	5.20	2.70	4.17	3.14	5.57	- .55	6.31	2.60	6.17	6.71	4.93	
20	6.31	3.83	4.83	.78	5.97	1.10	3.55	4.56	6.41	6.69	6.24	
25	6.50	- .42	3.86	- .22	6.27	3.69	4.82	4.99	6.47	6.76	6.58	
EOM	4.02	-1.29	3.09	.31	6.19	4.72	5.36	5.87	6.41	6.70	--	

WTR YR 1978 MAX -2.05 NOV. 29, 1977 MIN 6.88 JUL 30, AUG. 1, 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.--Missing record May 7-23.

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 1977 TO SEPTEMBER 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	87.07	86.69	85.92	86.45	86.32	86.12	86.20	86.13	86.38	86.73	87.07	87.18
10	86.89	86.76	86.22	86.40	86.33	86.10	86.20	--	86.43	86.78	87.08	87.24
15	86.97	86.72	86.09	86.37	86.32	85.99	86.35	--	86.53	86.65	87.12	87.27
20	87.09	86.59	86.20	86.28	86.28	86.06	86.36	--	86.51	86.84	87.23	87.29
25	87.09	86.43	86.34	85.80	86.33	86.06	86.38	86.18	86.57	86.90	87.23	87.35
EOM	86.87	86.22	86.37	86.13	86.20	86.09	86.36	86.29	86.69	86.97	87.17	87.39

WTR YR 1978 MAX 85.72 JAN 25, 1978 MIN 87.39 SEP 30, 1978

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.

CORRECTIONS.--The date for the highest water level for period of record is Apr. 7, 1975. The date previously published in WDR TN-75-1 and WDR TN-76-1 is incorrect.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	197.2	197.1	195.7	196.4	195.4	196.2	191.8	194.5	194.7	195.1	195.2	195.9
10	197.0	197.0	195.4	196.5	195.6	195.9	193.8	194.3	194.8	195.0	195.3	195.9
15	197.0	196.9	195.6	196.2	196.0	195.5	195.0	193.2	195.0	194.8	195.4	196.0
20	197.1	196.8	196.0	196.0	196.1	194.1	194.8	193.4	195.0	194.9	195.6	196.2
25	197.3	196.8	196.1	196.9	196.2	192.8	194.8	193.8	195.0	195.0	195.8	196.2
EOM	197.3	196.7	196.2	196.7	196.1	191.7	194.6	194.4	195.1	195.2	195.8	196.1

WTR YR 1978 MAX 191.5 APR 1, 2, 1978 MIN 197.4 OCT 28, 1977

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, 128.06 ft (39.03 m) below land-surface datum, October and November 1971.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	LEVEL	DATE	LEVEL	DATE	LEVEL	DATE	LEVEL
OCT 25	126.23	FEB 7	125.87	MAY 3	125.66	JUL 19	126.10
DEC 7	126.09	MAR 14	125.64	JUN 7	125.70	AUG 30	126.40

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 1968.

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 Nov. 7 to Dec. 14.

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 1977 TO SEPTEMBER 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.61	52.35	--	51.15	50.65	50.62	50.13	50.50	50.45	51.00	51.51	51.75
10	52.48	--	--	51.21	50.52	50.50	50.07	50.51	50.54	51.09	51.52	51.82
15	52.41	--	51.44	51.15	50.60	50.45	50.19	50.33	50.64	51.12	51.61	51.89
20	52.37	--	51.34	51.05	50.47	50.31	50.22	50.38	50.71	51.27	51.64	51.96
25	52.30	--	51.27	50.70	50.58	50.17	50.23	50.38	50.79	51.35	51.65	52.03
EOM	52.35	--	51.18	50.79	50.50	50.10	50.31	50.40	50.89	51.44	51.70	52.11

WTR YEAR 1978 MAX 49.96 APR 11, 1978 MIN 52.70 OCT 2, 1977

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.

REMARKS.--Missing record Oct. 14 to Dec. 20.

PERIOD OF RECORD.--March 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.02 ft (5.49 m) below land-surface datum, Mar. 16, 1973; lowest, 27.75 ft (8.46 m) below land surface datum Oct. 28, 29, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.00		--	24.53	23.54	25.17	24.56	23.40	24.41	25,47	26.09	26.14
10	26.09		--	24.02	24.24	25.09	24.74	23.78	24.67	25.64	25.94	26.28
15	--		--	24.03	24.60	24.42	24.95	23.88	24.87	25.75	25.81	26.37
20	--		24.94	23.20	24.82	24.14	24.98	23.77	25.02	25.85	25.75	26.45
25	--		24.88	23.29	24.98	23.96	24.94	23.87	25.20	25.96	25.88	26.56
EOM	--		23.98	22.77	25.05	24.25	23.27	23.96	25.35	26.05	26.04	26.69

WTR YR 1978 MAX 20.89 JAN 26, 1978 MIN 26.69 SEP 30, 1978

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 1977 TO SEPTEMBER 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.7	46.9	47.4	--	47.6	47.5	47.0	47.2	46.8	46.8	46.9	46.9
10	46.7	47.1	47.6	--	47.4	47.3	47.0	47.1	46.9	46.8	46.9	47.0
15	46.8	46.9	47.3	--	47.5	47.4	47.1	46.9	46.8	46.7	47.0	47.2
20	47.0	46.9	47.5	--	47.2	47.2	47.2	46.9	46.7	46.8	47.2	47.1
25	47.0	47.1	--	--	47.4	47.3	47.1	46.9	46.7	46.8	47.2	47.2
EOM	47.0	46.9	--	47.4	47.4	47.0	47.0	46.9	46.8	46.9	47.1	47.2

WTR YR 1978 MAX 46.5 OCT 7, 1977 MIN 47.7 DEC 9, 1977

SHELBY COUNTY--CONTINUED

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 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 1977 TO SEPTEMBER 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	57.3	55.4	54.0	53.3	53.5	54.2	49.8	51.2	52.4	54.6	55.3	55.2
10	57.1	54.8	54.1	53.4	53.6	54.1	50.4	51.3	52.5	54.9	--	55.3
15	56.8	54.7	53.3	53.5	54.4	53.6	51.2	50.9	51.7	55.2	--	55.7
20	56.9	54.3	53.0	53.4	54.5	52.8	51.7	50.5	51.9	55.5	--	56.1
25	55.1	54.6	53.3	53.3	54.4	51.5	51.8	50.9	52.9	--	--	56.4
EOM	55.8	54.3	53.1	53.7	54.5	50.2	51.7	51.8	53.8	55.7	55.2	55.8

WTR YR 1978 MAX 49.7 APR 6, 1978 MIN 57.3 OCT 3, 4, 5, 1977

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 1977 TO SEPTEMBER 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	71.2	70.3	69.5	67.3	68.1	69.2	65.2	65.4	66.9	69.8	69.8	70.0
10	70.9	70.4	69.5	67.5	67.7	68.7	66.2	65.0	67.6	69.7	69.5	69.9
15	70.7	70.2	69.1	67.1	68.2	67.6	66.9	64.6	68.2	69.4	69.5	69.9
20	70.6	70.0	68.7	68.1	68.2	66.4	66.8	64.2	69.1	69.4	69.7	70.0
25	70.6	69.6	69.0	68.1	68.4	65.4	66.3	64.1	69.4	69.4	70.2	69.9
EOM	70.4	69.4	67.5	68.7	68.5	63.9	65.8	65.7	69.4	69.4	70.4	69.9

WTR YR 1978 MAX 63.7 MAR 30, 31, 1978 MIN 71.4 OCT 2, 1977

SHELBY COUNTY--Continued

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 1977 TO SEPTEMBER 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	--	113.8	112.4	112.4	112.6	112.5	111.7	112.5	113.3	114.8	115.7	115.1
10	--	113.6	113.1	112.5	112.7	112.5	111.6	112.2	113.2	115.2	115.4	115.4
15	--	113.5	112.9	112.5	112.9	112.2	111.8	112.4	113.1	115.2	115.3	115.2
20	--	113.1	112.6	--	113.0	112.4	112.0	112.5	112.9	115.6	115.3	115.4
25	--	113.0	112.6	--	113.0	111.9	112.2	112.5	113.2	115.8	--	115.3
EOM	114.0	112.9	112.5	112.5	112.9	111.8	112.5	113.1	113.9	115.6	115.1	115.4

WTR YR 1978 MAX 111.5 APR 10, 1978 MIN 115.8 AUG 3, 1978

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 CHARACTERSISTICS.--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 1977 TO SEPTEMBER 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	141.2	137.9	135.3	134.1	136.5	135.6	134.0	134.6	135.4	139.4	139.7	139.1
10	140.0	137.4	136.5	135.4	136.8	135.3	134.4	133.9	136.2	140.2	139.1	139.5
15	--	136.8	135.8	--	137.0	134.6	134.6	133.9	137.3	140.2	139.2	139.7
20	--	137.1	135.6	--	136.8	134.2	134.7	134.1	137.5	138.5	140.3	139.5
25	--	136.5	135.1	--	136.9	133.8	134.3	134.4	--	138.7	140.4	139.4
EOM	138.0	135.4	133.9	136.1	136.2	133.6	134.6	135.2	139.5	138.9	140.9	139.6

WTR YR 1978 MAX 132.9 MAR 27, 28, 1978 MIN 141.8 OCT 1, 1977

SHELBY COUNTY--Continued

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 102.58 ft (31.27 m) below land-surface datum, Sept. 23, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	101.8	101.6	101.3	101.6	101.6	101.6	101.2	101.5	101.6	101.8	102.2	102.3
10	101.6	101.8	101.9	101.8	101.5	101.3	101.1	101.5	101.7	101.9	102.2	102.4
15	101.8	101.8	101.3	101.6	101.5	101.2	101.3	101.3	101.7	101.9	102.1	102.5
20	101.8	101.7	101.5	101.6	101.4	101.4	101.4	101.4	101.6	102.1	102.3	102.5
25	101.8	101.5	101.6	101.2	101.5	101.2	101.4	101.5	101.6	102.1	102.3	102.5
EOM	101.6	101.5	101.4	101.6	101.4	101.2	101.3	101.5	101.7	102.2	102.4	102.4

WTR YR 1978 MAX 101.0 APR 10, 1978 MIN 102.6 SEPT 23, 1978

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, 60.42 ft (18.42 m) below land-surface datum, Dec. 20, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	58.17	DEC 29	58.28	MAR 1	59.59	APR 27	59.73	JUN 29	60.36	AUG 30	59.79
DEC 2	57.95	FEB 2	58.67	MAR 30	58.97	JUN 1	59.83	JUL 27	59.90	SEP 28	60.28

SHELBY COUNTY--Continued

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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	57.80	DEC 29	56.61	MAR 1	56.66	APR 27	55.15	JUN 29	55.62	AUG 30	56.76
DEC 2	56.94	FEB 2	56.47	MAR 30	55.32	JUN 1	54.93	JUL 27	56.62	SEP 28	57.30

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 Vertical Geodetic 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 1977 TO SEPTEMBER 1978

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
FEB 6	88.60	MAR 29	88.72	JUL 12	88.44	AUG 2	88.40	SEP 11	88.32

WILLIAMSON COUNTY--Continued

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 Nov. 4 to Feb. 6.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.00 ft (5.18 m) below land-surface datum, Mar. 5, 1977; 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 1977 TO SEPTEMBER 1978
LOWEST WATER LEVEL FOR THE DAY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	34.30					32.21	33.58	31.96	34.04	34.45	34.57	34.67
10	33.75				33.28	32.82	33.80	27.01	34.16	34.52	34.62	34.70
15	34.06				33.21	26.13	33.97	31.51	34.27	34.54	34.60	34.71
20	34.20				33.55	31.25	34.02	32.98	34.32	34.59	34.62	34.72
25	34.30				33.75	32.54	34.11	33.44	34.37	34.61	34.66	34.73
EOM	33.60				33.79	33.30	34.16	33.85	34.44	34.62	34.63	34.75

WTR YEAR 1978 MAX 22.15 MAY 9, 1978 MIN 34.75 SEP 29, 30, 1978

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

LINCOLN COUNTY

351007086264400 - LI:0-3, LLOYD'S CHAPEL NR KELSO, TN (NL-33)

DATE	DEPTH OF WELL, TOTAL (FEET)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
JAN 10...	85	200	7.2	16	5	93	11	33	2.5	1.4	3	.1

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	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, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
JAN 10...	.7	100	0	82	10	6.8	1.7	.1	8.4	98	104	.13

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)
JAN 10...	.63	.01	.64	.12	0	0	1	0	5	450	0

DATE	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)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
JAN 10...	9	30	10	<.5	0	0	20	4.9	.00	5	.00

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

LINCOLN COUNTY--Continued

351346086423801 - LI:S-18, BELLEVILLE, TN (NL-42)

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (GPM)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
DEC 19...	60	360	200	1350	7.2	8	30	830	570	250	50	15
APR 27...	60	60	10	1300	7.1	--	--	730	480	200	55	22

DATE	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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	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)
DEC 19...	4	.2	2.6	320	0	260	32	510	16	.3	11	1030
APR 27...	6	.4	2.0	300	0	250	38	480	20	.3	9.2	973

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
DEC 19...	1010	1.40	.51	.01	.52	.13	2	0	0	0	5	1400
APR 27...	937	1.32	--	--	--	--	--	--	--	--	--	--

DATE	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)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
DEC 19...	350	14	230	210	<.5	0	0	30	8.5	.00	17	.10
APR 27...	--	--	--	120	--	--	--	--	--	--	0	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

LINCOLN COUNTY--Continued

351347086424000 - LI:M-7, BOONSHILL, TN (NL-39)

DATE	DEPTH OF WELL, TOTAL (FEET)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
JAN 17...	225	500	7.3	38	30	240	20	72	15	12	10	.3

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	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, SUM OF CONSTITUENTS, DISSOLVED (MG/L)
JAN 17...	2.5	270	0	220	22	25	6.1	.3	6.8	278	273

DATE	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
JAN 17...	.38	2.9	.06	3.0	.46	0	100	0	0	18	1900

DATE	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)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
JAN 17...	0	8	130	40	<.5	1	0	30	5.6	1	.00

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

LINCOLN COUNTY--Continued

351459086310901 - LI:N-6 MIMOSA, TENN (NL-28)

DATE	DEPTH OF WELL, TOTAL (FEET)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
JAN 05...	66	360	7.4	13	20	190	25	66	5.8	1.6	2	.1

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	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, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)
JAN 05...	1.0	200	0	160	13	15	2.2	.1	7.2	201	198	.27

DATE	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)
JAN 05...	.70	.00	.70	.19	2	0	2	0	6	1100	40

DATE	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)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
JAN 05...	17	50	0	<.5	0	0	10	9.8	.01	3	.00

351525086340100 - LI:S-21, MRS. WRIGHT, BELLEVILLE, TENN.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	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)
APR 27...	480	7.4	230	46	79	9.1	3.2	3	.1	4.8	230	0

DATE	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	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, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	MANGANESE, DISSOLVED (UG/L AS MN)	PHENOLS (UG/L)
APR 27...	190	15	29	9.8	.1	6.9	274	255	.37	0	0

LINCOLN COUNTY--Continued

351531086340500 - LI:S-9 BELLEVILLE, TENN (NL-18)

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (GPM)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	COLIFORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLIFORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)
DEC 15...	298	1245	160	360	7.2	5	2	780	120	950	180
APR 27...	298	60	10	365	7.5	--	--	--	--	--	180

DATE	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	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)
DEC 15...	24	57	9.0	2.8	3	.1	1.4	190	0	160
APR 27...	16	61	6.7	1.7	2	.1	1.2	200	0	160

DATE	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	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, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)
DEC 15...	19	18	2.9	.2	10	204	195	.28	.80	.01
APR 27...	10	18	2.1	.1	7.7	205	197	.28	--	--

DATE	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	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)
DEC 15...	.81	.07	1	0	0	0	4	160	70	25
APR 27...	--	--	--	--	--	--	--	--	--	--

DATE	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)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
DEC 15...	240	230	<.5	0	0	10	9.2	.00	17	.00
APR 27...	--	0	--	--	--	--	--	--	0	--

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

LINCOLN COUNTY--Continued

351534086335600 - LI:S-20, GRADY WRIGHT,BELLEVILLE, TENN

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	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)
APR 27...	640	7.1	300	16	100	13	7.5	5	.2	.9	350	0

DATE	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	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, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	MANGANESE, DISSOLVED (UG/L AS MN)	PHENOLS (UG/L)
APR 27...	290	44	28	9.7	.1	7.0	364	339	.50	10	0

SEVIER COUNTY

354225083313200 - SV:E-1,GATLINBURG,TN.(GAT-5)

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (GPM)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAY 05...	230	367	75	90	7.4	5	1	30	0	8.2	2.2	6.7

DATE	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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	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)
MAY 05...	33	.5	.5	56	0	46	3.6	2.6	1.6	.1	19	72

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
MAY 05...	69	.10	.38	.01	.39	.03	1	0	0	0	2	70

DATE	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)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
MAY 05...	10	14	10	10	<.5	0	0	20	4.2	.00	0	.00

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

SEVIER COUNTY--Continued

354230083305600 - SV:E-5.GATLINBURG,TN.(GAT-9)

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (GPM)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAY 04...	230	315	57	110	6.4	5	1	32	0	8.5	2.6	6.6

DATE	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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	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)
MAY 04...	30	.5	.7	42	0	34	27	1.1	5.6	.1	21	58

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
MAY 04...	67	.08	1.6	.00	1.6	.06	1	0	0	0	0	130

DATE	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)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
MAY 04...	20	0	10	10	<.5	0	4	140	6.0	.00	0	.00

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

SEVIER COUNTY--Continued

354230083310900 - SV:E-2,GATLINBURG,TN.(GAT-6)

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (GPM)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
MAY 06...	255	3H0	60	150	6.6	5	1	49	1	15	2.9	7.0

DATE	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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	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)
MAY 06...	23	.4	.8	59	0	48	24	1.0	3.9	.0	22	101

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
MAY 06...	82	.14	3.3	.01	3.3	.05	0	0	0	0	2	400

DATE	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)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
MAY 06...	10	7	10	10	<.5	0	1	180	5.3	.00	0	.00

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTMBER 1978

SEVIER COUNTY--Continued

354359083265000 - GAT-18

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (GPM)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
JUN 21...	230	435	67	70	5.9	10	1	15	0	3.3	1.6	3.8

DATE	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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	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)
JUN 21...	35	.4	.6	20	0	16	40	1.0	1.9	.1	20	48

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
JUN 21...	42	.07	.49	.00	.49	.11	1	0	0	0	2	20

DATE	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)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
JUN 21...	0	9	10	10	<.5	0	0	60	7.4	.00	0	.00

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

SEVIER COUNTY--Continued

354415083270000 - SV:F-14 GATLINBURG, TENN. (GAT-23)

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE, INSTANTANEOUS (GPM)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
JUN 23...	212	420	67	119	7.5	5	1	32	0	8.0	2.9	6.6

DATE	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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	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)
JUN 23...	31	.5	.4	61	0	50	3.1	2.0	1.5	.2	22	61

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)
JUN 23...	74	.08	.11	.00	.11	.08	3	0	1	0	2	60

DATE	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)	CYANIDE TOTAL (MG/L AS CN)	PHENOLS (UG/L)	METHYLENE BLUE ACTIVE SUBSTANCE (MG/L)
JUN 23...	0	6	20	30	<.5	0	0	30	8.0	.00	0	.00

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

SHELBY COUNTY

350711089560202 - SH:K-94

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE (GPM)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
SEP 06...	550	1500	850	148	5.2	10	2	30	0	6.8	3.2	13

DATE	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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
SEP 06...	48	1.0	.8	43	0	35	434	11	7.2	.1	19

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)
SEP 06...	83	84	.11	.00	.00	.00	.00	1	0	1	0

DATE	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)
SEP 06...	18	2000	1500	9	10	30	<.5	0	0	40	1.9

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

SHELBY COUNTY--Continued

350144090073301 - SH:H-7 SEWANEE ROAD MEMPHIS TN

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE (GPM)	SPE-CIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
SEP 07...	466	61500	1375	131	6.0	5	2	43	0	10	4.4	9.3

DATE	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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
SEP 07...	31	.6	.8	68	0	56	109	2.4	2.9	.1	12

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)
SEP 07...	79	76	.11	.00	.00	.00	.00	0	100	3	0

DATE	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)
SEP 07...	3	1000	960	7	10	20	<.5	0	0	10	2.5

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

SHELBY COUNTY--Continued

350218089511701 - SH:L-36

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE (GPM)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
SEP 07...	567	9300	1300	100	5.8	5	1	33	0	8.2	3.0	3.8

DATE	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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
SEP 07...	20	.3	.5	43	0	35	109	2.6	.8	.1	10

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)
SEP 07...	54	50	.07	.00	.00	.00	.00	0	0	1	0

DATE	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)
SEP 07...	10	260	180	5	10	10	<.5	0	0	20	1.5

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

SHELBY COUNTY--Continued

350438090013601 - SH:J-127 ALCY ROAD MEMPHIS TN

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE (GPM)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
SEP 07...	510	4535	1275	150	5.7	5	2	98	0	21	11	8.8

DATE	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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
SEP 07...	16	.4	1.2	130	0	110	415	3.1	2.1	.1	16

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)
SEP 07...	121	128	.16	.00	.00	.00	.00	0	100	5	0

DATE	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)
SEP 07...	7	1200	1000	8	20	20	<.5	0	0	50	.8

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

SHELBY COUNTY--Continued

350540090061701 - SH:J-84

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
SEP 08...	415	240	200	6.5	8	2	73	0	17	7.5	8.5

DATE	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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
SEP 08...	20	.4	.8	110	0	90	56	3.6	2.5	.0	9.6

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)
SEP 08...	101	104	.14	.00	.00	.00	.00	0	0	2	0

DATE	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)
SEP 08...	6	690	610	10	10	10	<.5	0	0	20	.1

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

SHELBY COUNTY--Continued

350935090013701 - SH:O-182

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE (GPM)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
SEP 07...	587	60	850	205	6.0	10	8	69	0	15	7.6

DATE	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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
SEP 07...	8.8	22	.5	.9	100	0	82	160	1.3	1.9	.0

DATE	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)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)
SEP 07...	13	96	100	.13	.00	.00	.00	.01	1	0	0

DATE	CHROMIUM, HEXAVALENT, DIS, (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	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)
SEP 07...	0	670	12	20	30	<.5	0	0	40	.8

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

SHELBY COUNTY--Continued

351109089512901 - SH:Q-40

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	FLOW RATE (GPM)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
SEP 07...	516	150	1300	130	5.7	5	1	36	0	8.0	3.8	7.2

DATE	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)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)
SEP 07...	30	.5	.9	48	0	39	153	6.1	3.3	.1	12

DATE	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)
SEP 07...	66	66	.09	.00	.00	.00	.00	0	0	3	0

DATE	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)
SEP 07...	5	1100	990	10	20	20	<.5	0	0	50	.1

WATER QUALITY DATA, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978

SHELBY COUNTY--Continued

352047089523001 - SH:V-2

DATE	DEPTH OF WELL, TOTAL (FEET)	PUMP OR FLOW PERIOD PRIOR TO SAMPLING (MIN)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	COLOR (PLATINUM-COBALT UNITS)	TURBIDITY (JTU)	HARDNESS (MG/L AS CACO3)	HARDNESS, NONCARBONATE (MG/L CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	SODIUM PERCENT
OCT 26...	512	180	200	6.5	--	--	--	--	--	--	--	--
SEP 06...	512	180	200	6.1	5	2	83	0	18	9.3	6.8	15

DATE	SODIUM ADSORPTION RATIO	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CACO3)	CARBON DIOXIDE DISSOLVED (MG/L AS CO2)	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)
OCT 26...	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	.3	.9	110	0	90	140	3.4	1.5	.0	18	111

DATE	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	SOLIDS, DISSOLVED (TONS PER AC-FT)	NITROGEN, NITRATE TOTAL (MG/L AS N)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 26...	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	113	.15	.00	.00	.00	.00	0	0	3	0	6

DATE	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)	PHENOLS (UG/L)
OCT 26...	--	--	--	--	--	--	--	--	--	--	0
SEP 06...	570	500	13	10	10	<.5	0	0	30	.6	--

APPENDIX

NUMERIC LISTING

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
00623	NITROGEN, AMMONIA PLUS ORGANIC, DISSOLVED (MG/L AS N)
00623	NITROGEN, KJELDAHL, DISSOLVED (MG/L AS N)
00624	NITROGEN, AMMONIA PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS N)
00624	NITROGEN, KJELDAHL, SUSPENDED (MG/L AS N)
00625	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL (MG/L AS N)
00625	NITROGEN, KJELDAHL, TOTAL (MG/L AS N)
00626	NITROGEN, AMMONIA PLUS ORGANIC, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
00626	NITROGEN, KJELDAHL, TOTAL IN BOTTOM MATERIAL, DRY WT (MG/KG AS N)
00683	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00683	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED TOTAL (MG/L AS C)
00688	CARBON, INORGANIC, SUSPENDED (MG/L AS C)
00689	CARBON, ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00689	CARBON, ORGANIC, SUSPENDED (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED TOTAL (MG/L AS C)
00694	CARBON, INORGANIC PLUS ORGANIC, SUSPENDED (MG/L AS C)
00916	CALCIUM, TOTAL RECOVERABLE (MG/L AS CA)
00916	CALCIUM, TOTAL (MG/L AS CA)
00926	MAGNESIUM, SUSPENDED RECOVERABLE (MG/L AS MG)
00926	MAGNESIUM, SUSPENDED (MG/L AS MG)
00927	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)
00927	MAGNESIUM, TOTAL (MG/L AS MG)
01001	ARSENIC, SUSPENDED TOTAL (UG/L AS AS)
01001	ARSENIC, SUSPENDED (UG/L AS AS)
01006	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)
01006	BARIUM, SUSPENDED (UG/L AS BA)
01007	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)
01007	BARIUM, TOTAL (UG/L AS BA)
01008	BARIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BA)
01008	BARIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BA)
01011	BERYLLIUM, SUSPENDED RECOVERABLE (UG/L AS BE)
01011	BERYLLIUM, SUSPENDED (UG/L AS BE)
01012	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)
01012	BERYLLIUM, TOTAL (UG/L AS BE)
01013	BERYLLIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS BE)
01013	BERYLLIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS BE)
01016	BISMUTH, SUSPENDED TOTAL (UG/L AS BI)
01016	BISMUTH, SUSPENDED (UG/L AS BI)
01021	BORON, SUSPENDED RECOVERABLE (UG/L AS B)
01021	BORON, SUSPENDED (UG/L AS B)
01022	BORON, TOTAL RECOVERABLE (UG/L AS B)
01022	BORON, TOTAL (UG/L AS B)
01023	BORON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS B)
01023	BORON, TOTAL IN BOTTOM MATERIAL (UG/G AS B)
01026	CADMIUM, SUSPENDED RECOVERABLE (UG/L AS CD)
01026	CADMIUM, SUSPENDED (UG/L AS CD)
01027	CADMIUM, TOTAL RECOVERABLE (UG/L AS CD)
01027	CADMIUM, TOTAL (UG/L AS CD)
01028	CADMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CD)
01028	CADMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CD)
01029	CHROMIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CR)
01029	CHROMIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS CR)
01031	CHROMIUM, SUSPENDED RECOVERABLE (UG/L AS CR)
01031	CHROMIUM, SUSPENDED (UG/L AS CR)
01034	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
01034	CHROMIUM, TOTAL (UG/L AS CR)

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
01036	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)
01036	COBALT, SUSPENDED (UG/L AS CO)
01037	COBALT, TOTAL RECOVERABLE (UG/L AS CO)
01037	COBALT, TOTAL (UG/L AS CO)
01038	COBALT, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CO)
01038	COBALT, TOTAL IN BOTTOM MATERIAL (UG/G AS CO)
01041	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)
01041	COPPER, SUSPENDED (UG/L AS CU)
01042	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
01042	COPPER, TOTAL (UG/L AS CU)
01043	COPPER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS CU)
01043	COPPER, TOTAL IN BOTTOM MATERIAL (UG/G AS CU)
01044	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
01044	IRON, SUSPENDED (UG/L AS FE)
01045	IRON, TOTAL RECOVERABLE (UG/L AS FE)
01045	IRON, TOTAL (UG/L AS FE)
01050	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)
01050	LEAD, SUSPENDED (UG/L AS PB)
01051	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
01051	LEAD, TOTAL (UG/L AS PB)
01052	LEAD, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS PB)
01052	LEAD, TOTAL IN BOTTOM MATERIAL (UG/G AS PB)
01053	MANGANESE, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MN)
01053	MANGANESE, TOTAL IN BOTTOM MATERIAL (UG/G AS MN)
01054	MANGANESE, SUSPENDED RECOVERABLE (UG/L AS MN)
01054	MANGANESE, SUSPENDED (UG/L AS MN)
01055	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
01055	MANGANESE, TOTAL (UG/L AS MN)
01061	MOLYBDENUM, SUSPENDED RECOVERABLE (UG/L AS MO)
01061	MOLYBDENUM, SUSPENDED (UG/L AS MO)
01062	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO)
01062	MOLYBDENUM, TOTAL (UG/L AS MO)
01063	MOLYBDENUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS MO)
01063	MOLYBDENUM, TOTAL IN BOTTOM MATERIAL (UG/G AS MO)
01066	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
01066	NICKEL, SUSPENDED (UG/L AS NI)
01067	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
01067	NICKEL, TOTAL (UG/L AS NI)
01068	NICKEL, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS NI)
01068	NICKEL, TOTAL IN BOTTOM MATERIAL (UG/G AS NI)
01076	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)
01076	SILVER, SUSPENDED (UG/L AS AG)
01077	SILVER, TOTAL RECOVERABLE (UG/L AS AG)
01077	SILVER, TOTAL (UG/L AS AG)
01078	SILVER, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AG)
01078	SILVER, TOTAL IN BOTTOM MATERIAL (UG/G AS AG)
01081	STRONTIUM, SUSPENDED RECOVERABLE (UG/L AS SR)
01081	STRONTIUM, SUSPENDED (UG/L AS SR)
01082	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR)
01082	STRONTIUM, TOTAL (UG/L AS SR)
01083	STRONTIUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS SR)
01083	STRONTIUM, TOTAL IN BOTTOM MATERIAL (UG/G AS SR)
01086	VANADIUM, SUSPENDED TOTAL (UG/L AS V)
01086	VANADIUM, SUSPENDED (UG/L AS V)
01091	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)
01091	ZINC, SUSPENDED (UG/L AS ZN)
01092	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
01092	ZINC, TOTAL (UG/L AS ZN)

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
01093	ZINC, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS ZN)
01093	ZINC, TOTAL IN BOTTOM MATERIAL (UG/G AS ZN)
01096	ANTIMONY, SUSPENDED TOTAL (UG/L AS SB)
01096	ANTIMONY, SUSPENDED (UG/L AS SB)
01101	TIN, SUSPENDED RECOVERABLE (UG/L AS SN)
01101	TIN, SUSPENDED (UG/L AS SN)
01102	TIN, TOTAL RECOVERABLE (UG/L AS SN)
01102	TIN, TOTAL (UG/L AS SN)
01105	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)
01105	ALUMINUM, TOTAL (UG/L AS AL)
01107	ALUMINUM, SUSPENDED RECOVERABLE (UG/L AS AL)
01107	ALUMINUM, SUSPENDED (UG/L AS AL)
01108	ALUMINUM, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS AL)
01108	ALUMINUM, TOTAL IN BOTTOM MATERIAL (UG/G AS AL)
01116	CESIUM, SUSPENDED TOTAL (UG/L AS CS)
01116	CESIUM, SUSPENDED (UG/L AS CS)
01121	GALLIUM, SUSPENDED TOTAL (UG/L AS GA)
01121	GALLIUM, SUSPENDED (UG/L AS GA)
01126	GERMANIUM, SUSPENDED TOTAL (UG/L AS GE)
01126	GERMANIUM, SUSPENDED (UG/L AS GE)
01131	LITHIUM, SUSPENDED RECOVERABLE (UG/L AS LI)
01131	LITHIUM, SUSPENDED (UG/L AS LI)
01132	LITHIUM, TOTAL RECOVERABLE (UG/L AS LI)
01132	LITHIUM, TOTAL (UG/L AS LI)
01136	RUBIDIUM, SUSPENDED TOTAL (UG/L AS RB)
01136	RUBIDIUM, SUSPENDED (UG/L AS RB)
01146	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)
01146	SELENIUM, SUSPENDED (UG/L AS SE)
01151	TITANIUM, SUSPENDED TOTAL (UG/L AS TI)
01151	TITANIUM, SUSPENDED (UG/L AS TI)
01161	ZIRCONIUM, SUSPENDED TOTAL (UG/L AS ZR)
01161	ZIRCONIUM, SUSPENDED (UG/L AS ZR)
01170	IRON, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS FE)
01170	IRON, TOTAL IN BOTTOM MATERIAL (UG/G AS FE)
01505	ALPHA, SUSPENDED TOTAL (PCI/L)
01505	ALPHA, SUSPENDED (PCI/L)
01506	ALPHA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
01506	ALPHA, SUSPENDED, COUNTING ERROR (PCI/L)
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS U NATURAL)
01516	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/L AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS U NATURAL)
01517	GROSS ALPHA RADIOACTIVITY, SUSPENDED (PCI/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/G AS U NATURAL)
01518	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/G AS U NATURAL)
03505	BETA, SUSPENDED TOTAL (PCI/L)
03505	BETA, SUSPENDED (PCI/L)
03506	BETA, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
03506	BETA, SUSPENDED, COUNTING ERROR (PCI/L)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS CS-137)
03516	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS CS-137)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS SR/YT-90)
03517	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS SR/YT-90)

APPENDIX

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
03518	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/G AS CS-137)
03518	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/G AS CS-137)
07010	TRITIUM, SUSPENDED TOTAL (PCI/L)
07010	TRITIUM, SUSPENDED (PCI/L)
07011	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07011	TRITIUM, SUSPENDED, COUNTING ERROR (PCI/L)
07014	TRITIUM, SUSPENDED TOTAL, COUNTING ERROR (TRITIUM UNITS)
07014	TRITIUM, SUSPENDED, COUNTING ERROR (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED TOTAL (TRITIUM UNITS)
07016	TRITIUM, SUSPENDED (TRITIUM UNITS)
07052	CALCIUM 45, SUSPENDED TOTAL (PCI/L)
07052	CALCIUM 45, SUSPENDED (PCI/L)
07053	CALCIUM 45, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07053	CALCIUM 45, SUSPENDED, COUNTING ERROR (PCI/L)
07062	IRON 59, SUSPENDED TOTAL (PCI/L)
07062	IRON 59, SUSPENDED (PCI/L)
07063	IRON 59, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07063	IRON 59, SUSPENDED, COUNTING ERROR (PCI/L)
07082	RHODAMINE WT, SUSPENDED TOTAL (UG/L)
07082	RHODAMINE WT, SUSPENDED (UG/L)
07102	SELENIUM 75, SUSPENDED TOTAL (PCI/L)
07102	SELENIUM 75, SUSPENDED (PCI/L)
07103	SELENIUM 75, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07103	SELENIUM 75, SUSPENDED, COUNTING ERROR (PCI/L)
07122	SILVER 110, SUSPENDED TOTAL (PCI/L)
07122	SILVER 110, SUSPENDED (PCI/L)
07123	SILVER 110, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07123	SILVER 110, SUSPENDED, COUNTING ERROR (PCI/L)
07142	SULFUR 35, SUSPENDED TOTAL (PCI/L)
07142	SULFUR 35, SUSPENDED (PCI/L)
07143	SULFUR 35, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
07143	SULFUR 35, SUSPENDED, COUNTING ERROR (PCI/L)
09505	RADIUM 226, SUSPENDED TOTAL (PCI/L)
09505	RADIUM 226, SUSPENDED (PCI/L)
13505	STRONTIUM 90, SUSPENDED TOTAL (PCI/L)
13505	STRONTIUM 90, SUSPENDED (PCI/L)
13506	STRONTIUM 90, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
13506	STRONTIUM 90, SUSPENDED, COUNTING ERROR (PCI/L)
22705	URANIUM, NATURAL, SUSPENDED TOTAL (UG/L AS U NATURAL)
22705	URANIUM, NATURAL, SUSPENDED (UG/L AS U NATURAL)
28404	CESIUM 137, SUSPENDED TOTAL (PCI/L)
28404	CESIUM 137, SUSPENDED (PCI/L)
28405	CESIUM 137,SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28405	CESIUM 137,SUSPENDED, COUNTING ERROR (PCI/L)
28412	CESIUM 134, SUSPENDED TOTAL (PCI/L)
28412	CESIUM 134, SUSPENDED (PCI/L)
28413	CESIUM 134, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
28413	CESIUM 134, SUSPENDED, COUNTING ERROR (PCI/L)
29633	SCANDIUM 46, SUSPENDED TOTAL (PCI/L)
29633	SCANDIUM 46, SUSPENDED (PCI/L)
29634	SCANDIUM 46, SUSPENDED TOTAL, COUNTING ERROR (PCI/L)
29634	SCANDIUM 46, SUSPENDED, COUNTING ERROR (PCI/L)
39332	ALDRIN, SUSPENDED TOTAL (UG/L)
39332	ALDRIN, SUSPENDED (UG/L)
39342	LINDANE, SUSPENDED TOTAL (UG/L)
39342	LINDANE, SUSPENDED (UG/L)
39353	CHLORDANE, SUSPENDED TOTAL (UG/L)
39353	CHLORDANE, SUSPENDED (UG/L)

PARM. CODE	NEW TERMINOLOGY -- FIRST LINE OLD TERMINOLOGY -- SECOND LINE
39362	DDD, SUSPENDED TOTAL (UG/L)
39362	DDD, SUSPENDED (UG/L)
39367	DDE, SUSPENDED TOTAL (UG/L)
39367	DDE, SUSPENDED (UG/L)
39372	DDT, SUSPENDED TOTAL (UG/L)
39372	DDT, SUSPENDED (UG/L)
39382	DIELDRIN, SUSPENDED TOTAL (UG/L)
39382	DIELDRIN, SUSPENDED (UG/L)
39392	ENDRIN, SUSPENDED TOTAL (UG/L)
39392	ENDRIN, SUSPENDED (UG/L)
39402	TOXAPHENE, SUSPENDED TOTAL (UG/L)
39402	TOXAPHENE, SUSPENDED (UG/L)
39412	HEPTACHLOR, SUSPENDED TOTAL (UG/L)
39412	HEPTACHLOR, SUSPENDED (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED TOTAL (UG/L)
39422	HEPTACHLOR EPOXIDE, SUSPENDED (UG/L)
39432	ISODRIN, SUSPENDED TOTAL (UG/L)
39432	ISODRIN, SUSPENDED (UG/L)
39502	AROCLOR, SUSPENDED TOTAL, 1248 PCB SERIES (UG/L)
39502	AROCLOR, SUSPENDED, 1248 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED TOTAL, 1254 PCB SERIES (UG/L)
39506	AROCLOR, SUSPENDED, 1254 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED TOTAL, 1260 PCB SERIES (UG/L)
39510	AROCLOR, SUSPENDED, 1260 PCB SERIES (UG/L)
39518	PCB, SUSPENDED TOTAL (UG/L)
39518	PCB, SUSPENDED (UG/L)
39533	MALATHION, SUSPENDED TOTAL (UG/L)
39533	MALATHION, SUSPENDED (UG/L)
39543	PARATHION, SUSPENDED TOTAL (UG/L)
39543	PARATHION, SUSPENDED (UG/L)
39573	DIAZINON, SUSPENDED TOTAL (UG/L)
39573	DIAZINON, SUSPENDED (UG/L)
39603	METHYL PARATHION, SUSPENDED TOTAL (UG/L)
39603	METHYL PARATHION, SUSPENDED (UG/L)
39733	2,4-D, SUSPENDED TOTAL (UG/L)
39733	2,4-D, SUSPENDED (UG/L)
39743	2,4,5-T, SUSPENDED TOTAL (UG/L)
39743	2,4,5-T, SUSPENDED (UG/L)
39757	MIREX, SUSPENDED TOTAL (UG/L)
39757	MIREX, SUSPENDED (UG/L)
39763	SILVEX, SUSPENDED TOTAL (UG/L)
39763	SILVEX, SUSPENDED (UG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED TOTAL (MG/L)
70299	SOLIDS, RESIDUE AT 110 DEG. C, SUSPENDED (MG/L)
71895	MERCURY, SUSPENDED RECOVERABLE (UG/L AS HG)
71895	MERCURY, SUSPENDED (UG/L AS HG)
71900	MERCURY, TOTAL RECOVERABLE (UG/L AS HG)
71900	MERCURY, TOTAL (UG/L AS HG)
71921	MERCURY, RECOVERABLE FROM BOTTOM MATERIAL (UG/G AS HG)
71921	MERCURY, TOTAL IN BOTTOM MATERIAL (UG/G AS HG)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED TOTAL (UG/L AS U NATURAL)
80040	GROSS ALPHA RADIOACTIVITY, SUSPENDED (UG/L AS U NATURAL)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED TOTAL (PCI/L AS SR/YT-90)
80060	GROSS BETA RADIOACTIVITY, SUSPENDED (PCI/L AS SR/YT-90)

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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
	Length	
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)
	Area	
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)
	Volume	
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)
	Flow	
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)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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