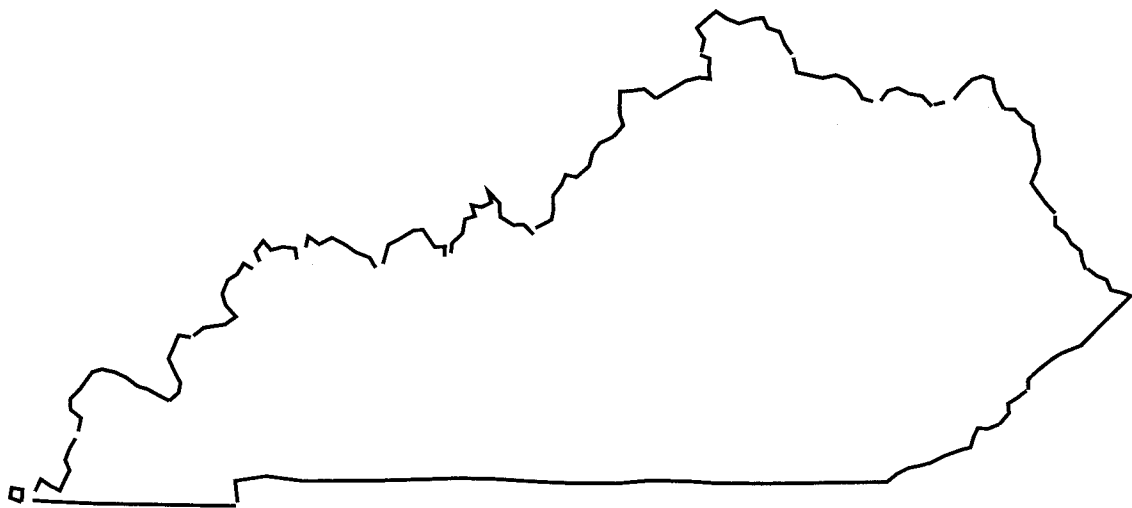


Water Resources Data Kentucky Water Year 1996



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT KY-96-1
Prepared in cooperation with the Commonwealth of
Kentucky and with other agencies

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- Ground-Water Site Inventory Data Base - Contains inventory data for more than 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requester will be expected to pay all computer costs he/she incurs. Direct access may be obtained by contacting:

U.S. Geological Survey
National Water Data Exchange
421 National Center
12201 Sunrise Valley Drive
Reston, VA 22092

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 inch floppy disk; and, as noted in the introduction, on Compact Disc - Read Only Memory (CD-ROM) discs. Beginning with the 1990 water year, all water-data reports will also be available on CD-ROM. All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc. Information about the availability of specific types of data or products and user charges can be obtained locally from each of the Water Resources Division's District Offices. (See address on the back of the title page.) A limited number of CD-ROM discs will be available for sale by the U.S. Geological Survey, Earth Science Information Center, Open-File Reports Section, Box 25286, MS 517, Denver Federal Center, Denver, CO 80225.

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 (SI) Units 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.

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP, therefore, provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

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

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary base and is expressed as milligrams dry weight of algae produced per liter of sample.

Annual 7-day minimum is the lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1–March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

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, while 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 all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 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 intestine 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 that produce blue colonies within 24 hours when incubated at 44.5 °C plus or minus 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 the intestine 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 plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the sediment mixture 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 micro-organisms, 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 grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square mile (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 105 °C for zooplankton and 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).

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 green 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 artificial structure, or a uniform cross section over a long reach of the channel.

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

Cubic foot per second (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 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic feet per second per square mile [$(\text{ft}^3/\text{s})/\text{mi}^2$] 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.

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 refers to 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.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

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 stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

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 more 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 computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO_3).

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

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 eight-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

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 substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

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

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

Milligrams per liter (MG/L , mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents 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 dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) 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.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

National Water-Quality Assessment (NAWQA) Network is a network of fixed-location and synoptic sampling stations. It is currently limited in Kentucky to the Kentucky River Basin. The U.S. Geological Survey began the National Water-Quality Assessment Program in April 1986 to (1) provide a nationally consistent description of current water-quality status, (2) define recent trends in water quality, and (3) relate past and present water-quality conditions to relevant natural features, the history of land and water use, and land- and waste-management practices. The pilot study of the Kentucky River Basin is one of four surface-water pilot studies and will be used to test, and modify as necessary, assessment concepts and approaches in preparation for future full-scale implementation of the National program.

National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

Organism is any living entity.

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 meter (m²), acre, or hectare. 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 milliliter (mL) or liter (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.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

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 a particle 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 the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

<u>Classification</u>	<u>Size (mm)</u>		<u>Method of analysis</u>
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 matter 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, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

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 per milliliter (cells/mL) of sample.

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

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [$\text{mg C}/(\text{m}^2 \cdot \text{time})$] for periphyton and macrophytes and [$\text{mg C}/(\text{m}^3 \cdot \text{time})$] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [$\text{mg O}/(\text{m}^2 \cdot \text{time})$] for periphyton and macrophytes and [$\text{mg O}/(\text{m}^3 \cdot \text{time})$] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

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.

Recoverable from bottom material is 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 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.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN., in.) indicates the depth to which the drainage area would be covered if all of 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.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons/day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

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).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft³/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

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 mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

7-day 10-year low flow (7 Q₁₀) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within 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 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 microsiemens 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 microsiemens). 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 (stage) 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 lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

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 multiplate samplers (made of hardboard) for benthic organism collection, and Plexiglas strips for periphyton collection.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

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

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

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

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
<u>Genus</u>	<u>Hexagenia</u>
<u>Species</u>	<u>Hexagenia limbata</u>

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

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 of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is 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 sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total, recoverable is 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 are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1991, is called the "1991 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

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.

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting 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) pertains to 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.

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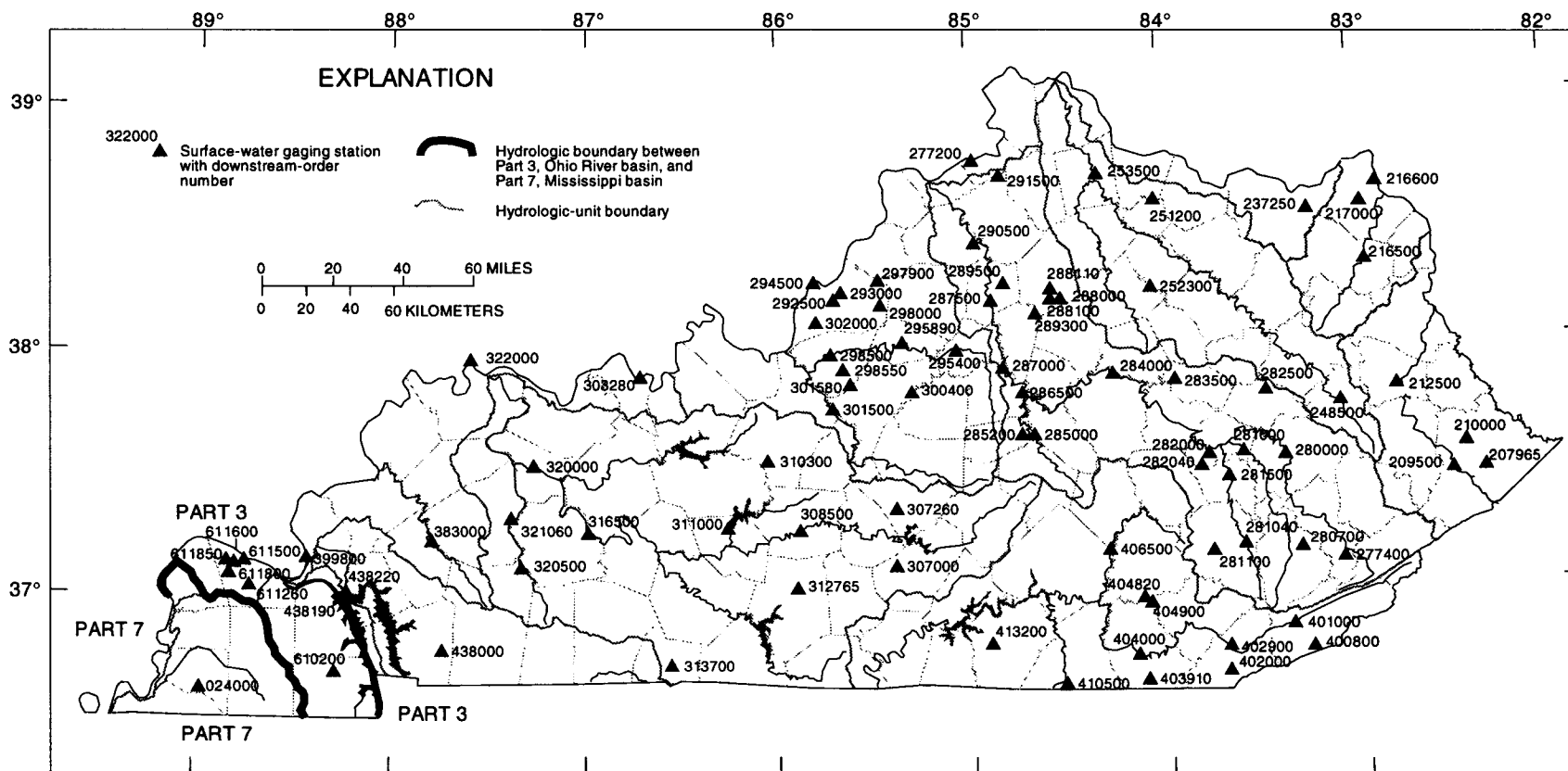


Figure 4. Location of gaging stations in Kentucky.

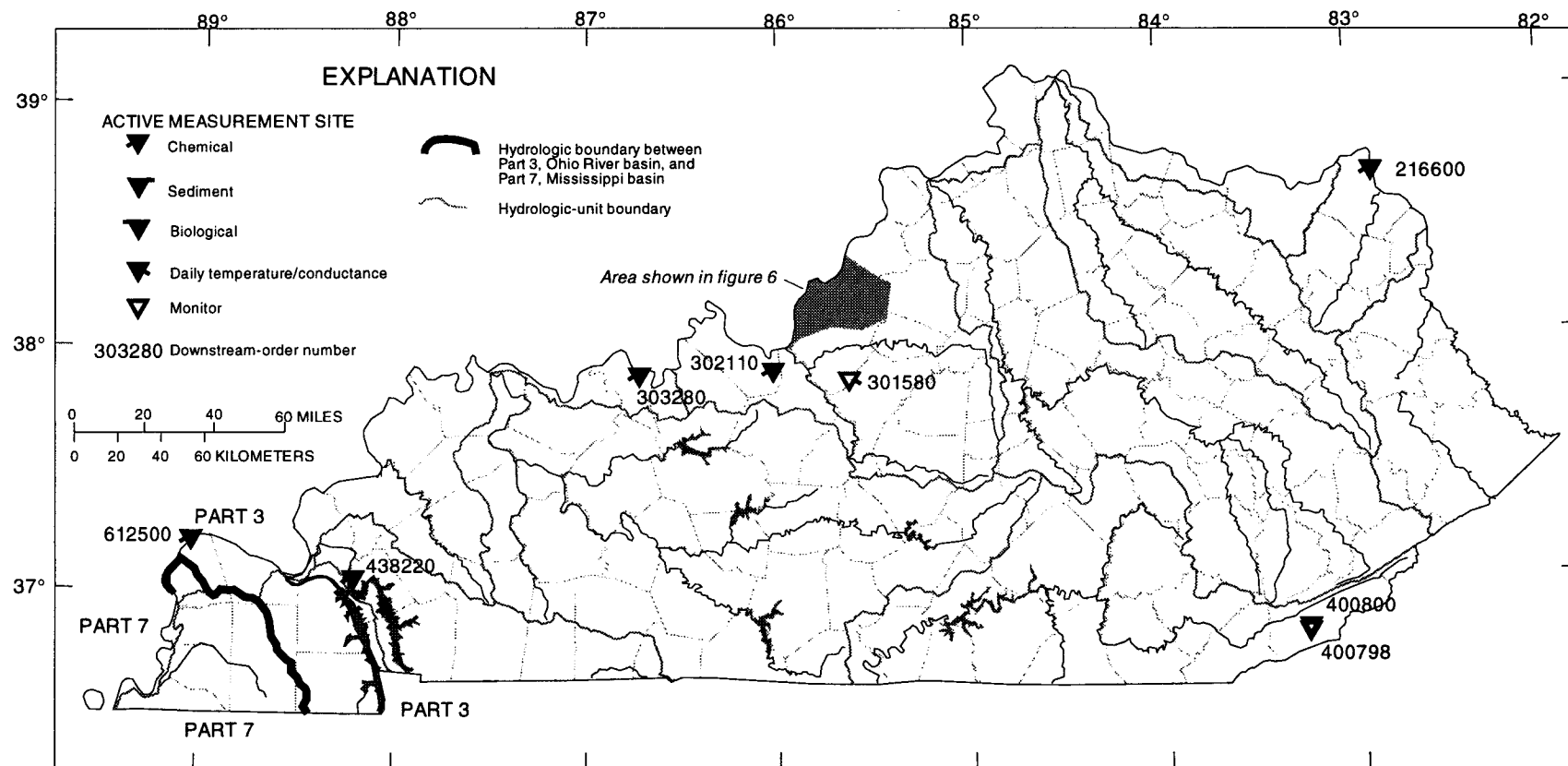


Figure 5. Location of surface-water quality stations in Kentucky.

WATER RESOURCES DATA - KENTUCKY, 1996

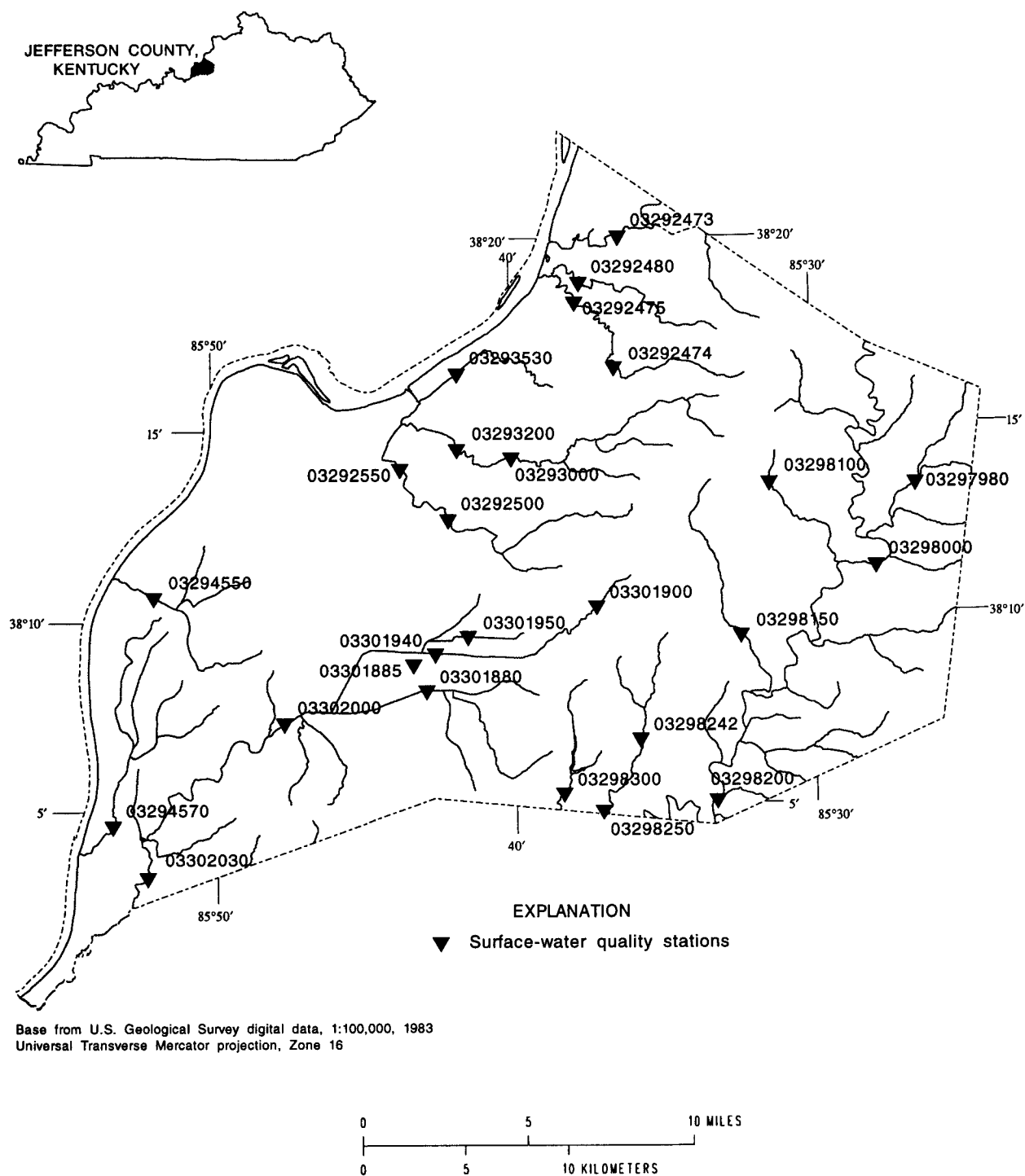


Figure 6. Location of surface-water quality stations in Jefferson County for the Metropolitan Sewer District Sampling Network.

BIG SANDY RIVER BASIN

03207965 GRAPEVINE CREEK NEAR PHYLLIS, KY

LOCATION.--Lat 37°25'57", long 82°21'14", Pike County, Hydrologic Unit 05070202, on right bank at the Grapevine Recreation area, 1.3 mi downstream from Dicks Fork, 1.3 mi southwest of Phyllis, and at mile 1.1.

DRAINAGE AREA.--6.20 mi².

PERIOD OF RECORD.--October 1973 to September 1982, April 1989 to September 1992, October 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 780 ft above sea level from topographic map.

REMARKS.--Estimated daily discharges: Feb. 4-7, and May 16 to June 3. Records fair except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	DAILY MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.1	2.6	2.2	6.8	10	18	9.5	11	1.2	4.9	1.7
2	1.5	6.1	2.6	12	6.4	8.3	18	8.8	8.3	1.7	2.2	2.0
3	1.4	9.1	2.4	22	3.5	6.1	18	8.0	7.2	2.6	1.6	4.3
4	1.9	4.6	2.3	13	3.2	5.0	16	7.5	6.8	1.7	1.5	2.9
5	6.4	3.0	2.1	9.0	3.5	5.5	14	11	6.1	1.4	1.5	2.6
6	3.7	2.6	2.1	6.4	3.5	13	13	19	5.2	1.4	1.2	2.6
7	3.0	40	2.1	6.0	4.0	37	11	20	4.8	1.7	.94	2.3
8	2.8	12	2.1	4.4	37	28	9.4	47	5.1	2.9	4.1	2.1
9	2.6	4.8	2.6	4.0	101	17	7.7	39	6.1	2.3	3.0	2.0
10	2.3	3.0	5.3	3.9	29	14	5.8	20	4.7	1.9	1.5	2.1
11	2.1	11	6.4	3.9	18	11	5.9	16	3.4	1.4	1.5	2.3
12	2.1	12	2.7	3.9	13	9.6	5.5	14	3.5	1.4	15	2.5
13	2.1	6.2	2.6	3.9	11	9.1	5.0	11	3.6	1.8	5.5	3.3
14	7.6	5.2	2.5	5.6	9.8	9.1	4.7	10	3.0	1.9	2.6	2.1
15	5.3	5.5	2.1	18	9.1	11	5.4	11	2.3	2.7	1.9	1.8
16	3.0	4.9	2.6	35	9.1	14	8.6	82	2.3	2.0	6.6	4.8
17	2.3	3.6	2.6	56	9.1	23	7.7	25	2.1	2.3	3.8	2.8
18	2.1	3.0	2.9	31	8.2	21	7.2	16	3.0	2.3	2.3	2.6
19	2.1	2.8	23	75	7.1	24	6.7	12	4.1	16	1.8	2.3
20	2.8	2.6	20	24	6.8	26	8.0	10	2.6	5.3	1.4	2.2
21	2.9	2.2	12	15	6.4	21	8.5	8.8	2.0	2.4	1.4	2.1
22	2.4	2.0	7.1	11	6.1	19	6.7	9.8	2.0	2.3	1.3	2.0
23	2.1	1.8	5.4	9.2	5.4	18	6.1	7.6	2.5	1.8	1.2	1.9
24	1.9	2.1	4.0	27	3.4	18	5.5	10	2.3	1.5	2.4	1.9
25	1.9	1.9	3.6	25	4.1	18	5.5	39	2.5	1.5	2.1	1.7
26	1.9	1.9	3.5	18	3.9	17	9.0	27	1.9	1.4	1.9	1.5
27	3.3	1.7	3.1	16	4.0	14	7.5	31	1.9	1.2	1.8	1.5
28	3.9	1.6	2.8	12	13	34	7.7	75	1.4	1.0	1.9	11
29	4.0	2.8	2.1	10	12	36	8.3	40	1.5	1.1	1.9	5.8
30	2.7	2.6	2.3	8.3	---	25	10	24	1.5	1.3	1.7	2.5
31	2.2	---	2.0	7.7	---	20	---	15	---	15	1.7	---
TOTAL	88.0	164.7	141.5	498.4	357.4	541.7	270.4	684.0	114.7	86.4	84.14	83.2
MEAN	2.84	5.49	4.56	16.1	12.3	17.5	9.01	22.1	3.82	2.79	2.71	2.77
MAX	7.6	40	23	75	101	37	18	82	11	16	15	11
MIN	1.4	1.6	2.0	2.2	3.2	5.0	4.7	7.5	1.4	1.0	.94	1.5
CFSM	.46	.89	.74	2.59	1.99	2.82	1.45	3.56	.62	.45	.44	.45
IN.	.53	.99	.85	2.99	2.14	3.25	1.62	4.10	.69	.52	.50	.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1996, BY WATER YEAR (WY)

MEAN	4.12	7.11	8.77	15.8	13.9	18.3	12.7	11.4	7.52	2.46	2.61	2.14
MAX	28.0	31.0	18.8	42.6	34.0	53.6	22.3	47.7	23.2	10.4	10.6	5.75
(WY)	1990	1974	1979	1974	1990	1975	1977	1989	1974	1979	1989	1989
MIN	.32	.27	.98	1.44	4.08	7.12	4.62	.71	.64	.32	.31	.38
(WY)	1992	1982	1982	1981	1992	1977	1982	1976	1980	1991	1981	1981

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1974 - 1996

ANNUAL TOTAL	2558.36	3114.54	
ANNUAL MEAN	7.01	8.51	8.53
HIGHEST ANNUAL MEAN			17.2
LOWEST ANNUAL MEAN			5.30
HIGHEST DAILY MEAN	145	May 14	832
LOWEST DAILY MEAN	.63	Aug 19	.01
ANNUAL SEVEN-DAY MINIMUM	1.0	Aug 17	.04
INSTANTANEOUS PEAK FLOW			243
INSTANTANEOUS PEAK STAGE			1.72
ANNUAL RUNOFF (CFSM)	1.13		1.37
ANNUAL RUNOFF (INCHES)	15.35		18.69
10 PERCENT EXCEEDS	14		20
50 PERCENT EXCEEDS	3.2		4.1
90 PERCENT EXCEEDS	1.3		1.7

BIG SANDY RIVER BASIN

03208500 RUSSELL FORK AT HAYSI, VA

LOCATION.--Lat 37°12'25", long 82°17'45", Dickenson County. Hydrologic Unit 05070202, on right bank 180 ft downstream from bridge on State Highway 63, at Haysi, and 700 ft downstream from McClure River.

DRAINAGE AREA.--286 mi².

PERIOD OF RECORD.--July 1926 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1003: 1926-43. WSP 1385: 1928(M), 1929, 1933(M), 1935(M), 1937-38(M).

GAGE.--Water-stage recorder. Datum of gage is 1,237.61 ft above sea level. Prior to Dec. 21, 1939, nonrecording gage at highway bridge 180 ft upstream at same datum.

REMARKS.--Records good except those for periods with ice effect, Dec. 9-13, 30, Jan. 7-13, and Feb. 4-6, which are poor. U.S. Army Corps of Engineers satellite precipitation and gage-height telemeter at station. Maximum discharge, 59,000 ft³/s, from rating curve extended above 32,000 ft³/s on basis of slope-area measurement of peak flow. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	26	126	111	446	760	947	1040	423	60	355	40
2	17	67	109	289	395	609	1300	895	330	286	192	38
3	17	166	91	1260	365	484	1050	773	290	983	121	53
4	20	92	87	690	e330	379	812	634	272	358	94	73
5	70	62	77	442	e300	353	664	537	235	175	79	58
6	107	48	70	348	e280	2310	548	847	183	115	77	58
7	54	603	75	e280	354	3800	491	848	174	94	67	54
8	35	567	70	e230	881	2520	442	1240	250	93	60	48
9	27	241	e64	e190	4940	1210	445	1270	191	120	66	48
10	23	138	e62	e170	2380	823	387	887	229	93	59	90
11	20	146	e60	e170	1610	668	359	689	166	71	51	63
12	18	382	e68	e180	1110	582	345	564	207	64	632	60
13	18	230	e84	e190	756	512	334	448	414	62	662	251
14	26	188	102	201	651	456	335	380	288	79	331	108
15	72	205	175	445	641	486	314	586	191	146	185	68
16	54	172	228	951	625	585	671	2700	148	167	125	70
17	36	134	229	1720	568	1540	708	1110	125	104	175	93
18	28	114	260	1790	513	1240	587	676	130	80	146	79
19	25	96	813	4930	444	1140	530	493	121	89	118	64
20	24	84	1420	1770	450	1250	521	390	124	260	89	55
21	23	77	660	912	488	992	587	325	126	138	75	49
22	23	68	396	613	491	777	558	300	100	100	67	46
23	23	62	274	490	483	661	526	227	88	81	60	41
24	21	67	204	1050	445	594	463	185	89	70	57	39
25	19	61	164	1260	382	566	412	1230	184	71	65	41
26	18	54	140	886	359	505	498	698	112	137	58	40
27	23	53	126	4430	346	434	513	527	87	102	53	37
28	42	54	112	1680	818	969	480	792	76	80	51	180
29	49	92	94	977	997	1490	461	1360	69	81	49	624
30	35	133	e84	699	---	1050	776	880	64	71	44	198
31	29	---	96	565	---	830	---	568	---	94	41	---
TOTAL	1014	4482	6620	29919	22848	30575	17064	24099	5486	4524	4304	2766
MEAN	32.7	149	214	965	788	986	569	777	183	146	139	92.2
MAX	107	603	1420	4930	4940	3800	1300	2700	423	983	662	624
MIN	17	26	60	111	280	353	314	185	64	60	41	37
CFSM	.11	.52	.75	3.37	2.75	3.45	1.99	2.72	.64	.51	.49	.32
IN.	.13	.58	.86	3.89	2.97	3.98	2.22	3.13	.71	.59	.56	.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1996, BY WATER YEAR (WY)

	MEAN	86.2	164	331	519	651	769	576	421	179	146	121	64.6
MAX	838	961	1326	2083	1797	2331	1994	1429	715	566	561	608	
(WY)	1990	1978	1927	1937	1939	1955	1977	1958	1989	1938	1966	1989	
MIN	.98	2.46	11.1	19.6	57.7	168	64.0	63.4	21.6	3.03	8.81	2.07	
(WY)	1954	1954	1954	1940	1941	1988	1942	1941	1966	1930	1953	1943	

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1926 - 1996		
ANNUAL TOTAL	115335			153701					
ANNUAL MEAN	316			420			334		
HIGHEST ANNUAL MEAN							568		
LOWEST ANNUAL MEAN							100		
HIGHEST DAILY MEAN	5000	May 19		4940	Feb 9		30600	Apr 4	1977
LOWEST DAILY MEAN	11	Sep 10		17	Oct 2		.20	Jun 27	1936
ANNUAL SEVEN-DAY MINIMUM	12	Sep 6		21	Oct 21		.56	Jun 24	1936
INSTANTANEOUS PEAK FLOW				8320	Jan 19		59000	Apr 4	1977
INSTANTANEOUS PEAK STAGE				9.14	Jan 19		28.24	Apr 4	1977
INSTANTANEOUS LOW FLOW				16	Oct 2		.20	Jun 27	1936
ANNUAL RUNOFF (CFSM)	1.10			1.47			1.17		
ANNUAL RUNOFF (INCHES)	15.00			19.99			15.89		
10 PERCENT EXCEEDS	687			979			736		
50 PERCENT EXCEEDS	139			191			130		
90 PERCENT EXCEEDS	20			47			15		

e ESTIMATED

BIG SANDY RIVER BASIN

03209500 LEVISA FORK AT PIKEVILLE, KY

LOCATION.--Lat 37°27'51", long 82°31'35", Pike County, Hydrologic Unit 05070203, on right bank 20 ft downstream from bridge on State Highway 1426, 0.75 mi downstream from Lanks Branch, 1.0 mi south of Pikeville, 1.5 mi upstream from Harolds Branch, and at mile 117.3.

DRAINAGE AREA.--1,232 mi².

PERIOD OF RECORD.--October 1937 to current year. Gage-height records collected in this vicinity since 1907 are contained in reports of National Weather Service.

REVISED RECORDS.--WRD KY 78-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 631.98 ft above sea level. Prior to Sept. 23, 1944, nonrecording gage at site 2.3 mi downstream at datum 2.65 ft higher. Sept. 23, 1944 to Sept. 30, 1952, water-stage recorder 2.3 mi downstream at datum 1.65 ft higher. Oct. 1, 1952 to Sept. 30, 1979, at site 2.1 mi downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since October 1968 by Fishtrap Lake (station 03207995), since August 1966 by North Fork Pound River Lake (station 03208680) and since March 1965 by John W. Flannagan Lake (station 03208990).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	297	335	636	475	1960	2670	1870	2450	2000	269	1210	202
2	293	409	433	894	1540	2190	2420	2280	1510	330	971	197
3	289	708	405	3680	1250	1960	2240	2330	1180	1380	408	318
4	292	719	477	4150	748	1590	1820	2320	1180	1600	346	450
5	350	627	429	2280	1070	1220	1560	1790	1170	647	342	347
6	428	572	367	1390	1310	3940	1440	3660	1110	404	456	674
7	484	1740	383	1190	1320	9990	1770	4720	752	328	400	468
8	628	3740	366	1140	2580	9190	1690	4670	690	347	340	249
9	601	2820	362	1030	12100	6110	1620	6430	989	577	681	229
10	374	1230	426	1290	10000	4720	1440	4800	956	528	353	225
11	323	1160	450	1180	8040	3620	1350	3180	983	442	310	256
12	315	1550	538	1050	6340	2730	1230	2900	738	332	1240	241
13	270	1620	537	941	4430	2110	1220	2050	928	360	2680	316
14	300	1580	506	950	3010	1930	1290	1640	1350	330	1180	400
15	559	1440	494	1610	2910	2020	1140	2290	712	384	763	292
16	578	1420	651	3970	2640	2360	1310	9480	634	818	582	302
17	490	964	712	6950	2330	4690	2250	8300	574	877	650	315
18	472	900	902	7690	2230	5200	2060	6510	474	535	560	325
19	448	866	2260	11600	2090	5250	1620	4200	444	348	353	372
20	270	830	5840	4590	1980	5460	1820	2930	450	1220	328	325
21	277	817	4240	2260	1860	4700	1990	1830	536	1590	294	244
22	477	877	2120	1510	1770	3600	1840	1550	534	819	269	241
23	507	778	1210	2880	1630	3020	1730	1510	441	378	250	229
24	382	787	1070	9650	1360	2730	1720	1200	424	342	240	309
25	324	773	860	8240	1270	2740	1620	4920	487	325	253	446
26	336	756	783	5950	1380	2510	1330	4080	526	333	302	381
27	342	797	620	6310	1520	2180	1490	2700	490	386	324	363
28	369	809	509	5730	1720	2690	1410	3350	395	354	236	888
29	544	668	423	5710	2950	4880	1580	5530	307	312	214	1400
30	550	723	431	5020	---	2540	1840	5210	279	254	215	1320
31	339	---	426	2490	---	1980	---	2720	---	628	207	---
TOTAL	12508	33015	29866	113800	85338	112520	49710	113530	23243	17777	16957	12324
MEAN	403	1100	963	3671	2943	3630	1657	3662	775	573	547	411
MAX	628	3740	5840	11600	12100	9990	2420	9480	2000	1600	2680	1400
MIN	270	335	362	475	748	1220	1140	1200	279	254	207	197

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1996, BY WATER YEAR (WY)

	MEAN	823	1149	1615	2405	2880	2968	2281	2055	972	563	476	480
MAX	3939	3991	5385	6861	6371	8081	7646	6067	3492	1855	1022	1606	
(WY)	1990	1978	1973	1974	1994	1975	1977	1984	1979	1979	1971	1989	
MIN	158	353	300	278	814	529	388	349	210	200	203	168	
(WY)	1970	1970	1981	1981	1992	1988	1986	1976	1988	1988	1969	1969	

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1969 - 1996

ANNUAL TOTAL	486165	620588		
ANNUAL MEAN	1332	1696		
HIGHEST ANNUAL MEAN			1549	
LOWEST ANNUAL MEAN			2459	1979
HIGHEST DAILY MEAN	12700	May 15	522	1988
LOWEST DAILY MEAN	147	Sep 7	69300	Apr 5 1977
ANNUAL SEVEN-DAY MINIMUM	157	Aug 25	66	Dec 3 1970
INSTANTANEOUS PEAK FLOW			103	Oct 10 1968
INSTANTANEOUS PEAK STAGE			227	Aug 28
INSTANTANEOUS LOW FLOW			13600	Jan 19
10 PERCENT EXCEEDS	3370		85500	Jan 30 1957
50 PERCENT EXCEEDS	636		24.71	Jan 19
90 PERCENT EXCEEDS	213		52.72	Jan 30 1957
			66	Dec 3 1970
			3610	
			765	
			232	

BIG SANDY RIVER BASIN
03210000 JOHNS CREEK NEAR META, KY

LOCATION.--Lat 37°34'01", long 82°27'29", Pike County, Hydrologic Unit 05070203, on left bank 10 ft downstream from bridge on U.S. Highway 119, 1,100 ft downstream from Ford Branch, 0.7 mi upstream from Raccoon Creek, 1.2 mi southwest of Meta, and at mile 42.7.

DRAINAGE AREA.--56.3 mi².

PERIOD OF RECORD.--April 1941 to September 1993, October 1994 to current year.

REVISED RECORDS.--WSP 1705: Drainage area. WRD KY-76-1: 1975. WDR KY-87-1: 1986.

GAGE.--Water-stage recorder. Datum of gage is 715.66 ft above sea level. See WDR KY-90-1 for history of changes prior to Dec. 21, 1965.

REMARKS.--Estimated daily discharges: Feb. 4-7, and Apr. 25-30. Record fair except for periods of estimated record, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1939 reached a stage of 15.6 ft, from floodmark, present datum, at site 600 ft upstream, discharge, 4,500 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	8.9	18	28	58	108	161	103	45	20	62	11
2	8.8	19	19	103	49	94	172	89	44	20	29	9.7
3	7.8	36	20	266	48	81	156	73	45	21	20	25
4	9.0	19	23	136	58	68	140	67	59	20	16	21
5	25	12	19	93	43	63	137	283	39	20	15	11
6	14	11	18	74	40	148	119	766	32	19	13	8.7
7	8.7	258	19	62	41	450	113	254	29	18	15	9.3
8	8.5	118	18	57	311	312	105	564	29	22	15	8.2
9	8.2	48	28	72	939	208	101	468	37	25	76	7.9
10	7.0	30	36	59	300	161	81	226	44	15	26	9.0
11	6.9	55	66	66	188	144	79	148	30	13	21	8.3
12	7.1	87	26	60	139	117	73	111	55	14	115	6.9
13	6.2	52	23	60	114	96	74	82	39	15	77	32
14	30	49	22	75	101	86	84	64	29	21	38	11
15	32	52	19	177	109	106	82	606	25	53	26	8.8
16	13	45	30	342	99	166	132	1690	24	26	24	43
17	9.8	37	34	725	84	329	122	318	23	13	22	28
18	7.1	32	40	426	81	211	112	177	21	12	19	16
19	6.7	28	152	1070	73	241	103	115	22	71	16	9.6
20	7.4	24	179	341	79	265	111	82	23	63	13	7.7
21	13	21	109	197	63	199	108	68	19	23	15	6.1
22	9.9	17	75	130	68	161	91	52	19	16	13	6.4
23	9.1	17	60	105	63	154	77	44	21	14	12	5.7
24	8.7	20	47	326	61	161	73	40	22	12	16	4.7
25	7.0	17	45	283	53	157	65	106	39	12	16	5.5
26	6.2	15	38	188	58	140	95	101	22	13	11	4.8
27	8.8	15	29	150	60	119	73	106	19	10	12	4.2
28	18	15	23	112	118	180	78	180	20	10	11	199
29	17	21	21	101	119	242	80	122	20	16	9.6	107
30	14	19	19	87	---	189	100	79	20	11	9.2	37
31	10	---	21	77	---	156	---	55	---	97	9.8	---
TOTAL	353.4	1197.9	1296	6048	3617	5312	3097	7239	915	735	792.6	672.5
MEAN	11.4	39.9	41.8	195	125	171	103	234	30.5	23.7	25.6	22.4
MAX	32	258	179	1070	939	450	172	1690	59	97	115	199
MIN	6.2	8.9	18	28	40	63	65	40	19	10	9.2	4.2
CFSM	.20	.71	.74	3.47	2.22	3.04	1.83	4.15	.54	.42	.45	.40
IN.	.23	.79	.86	4.00	2.39	3.51	2.05	4.78	.60	.49	.52	.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

MEAN	17.4	38.0	76.0	110	140	165	117	73.6	37.1	24.9	17.0	16.1
MAX	175	213	319	413	338	489	356	270	193	136	155	153
(WY)	1990	1974	1973	1974	1972	1955	1948	1984	1979	1956	1942	1966
MIN	.000	.23	.95	6.57	17.5	36.0	15.8	7.33	1.99	.42	.35	.000
(WY)	1954	1954	1966	1966	1954	1988	1963	1941	1969	1944	1943	1943

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1941 - 1996

ANNUAL TOTAL	22678.7	31275.4	
ANNUAL MEAN	62.1	85.5	69.2
HIGHEST ANNUAL MEAN			135
LOWEST ANNUAL MEAN			24.5
HIGHEST DAILY MEAN	1510	May 19	3340
LOWEST DAILY MEAN	3.4	Aug 30	.00
ANNUAL SEVEN-DAY MINIMUM	4.3	Aug 25	.00
INSTANTANEOUS PEAK FLOW			3320
INSTANTANEOUS PEAK STAGE			16.27
INSTANTANEOUS LOW FLOW			19.62
ANNUAL RUNOFF (CFSM)	1.10	1.52	1.23
ANNUAL RUNOFF (INCHES)	14.98	20.67	16.70
10 PERCENT EXCEEDS	130	180	157
50 PERCENT EXCEEDS	26	40	23
90 PERCENT EXCEEDS	7.2	9.3	1.9

BIG SANDY RIVER BASIN
03212500 LEVISA FORK AT PAINTSVILLE, KY

LOCATION.--Lat 37°48'55", long 82°47'30". Johnson County, Hydrologic Unit 05070203, on left bank 700 ft downstream from bridge on State Highway 40 at Paintsville, 900 ft downstream from Paint Creek, and at mile 65.2.

DRAINAGE AREA.--2,144 mi².

PERIOD OF RECORD.--June 1915 to September 1916, October 1916 to November 1920 (gage heights only), and October 1928 to current year. Monthly discharge only for October to December 1928, published in WSP 1305. Published. (as "at Thelma" prior to 1928.)

REVISED RECORDS.--WSP 953: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 566.84 ft above sea level. See WDR KY-90-1 for history of changes prior to Oct. 19, 1954.

REMARKS.--Estimated daily discharges: Jan. 12-14, 20, 21. Records good except for periods of estimated record, which are fair. Flow regulated since October 1968 by Fishtrap Lake (station 03207995), since August 1966 by North Fork Pound River Lake (station 03208680), since March 1965 by John W. Flannagan Lake (station 03208990), and since May 1950 by Dewey Lake (station 03211000).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1862 reached a stage of 46.6 ft, from levels to floodmark by U.S. Army Corps of Engineers

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	414	468	1040	738	3240	4180	3680	3130	3560	550	1520	374
2	391	578	910	1030	2710	3340	4370	3280	2890	530	1720	365
3	383	883	734	4110	2280	3150	4590	3190	2400	546	1170	411
4	453	1190	717	6250	1790	2460	4220	3260	2060	1610	671	573
5	597	1130	746	4640	1820	2160	3640	3000	1970	1640	569	675
6	632	974	718	2850	2310	2310	3040	6200	1820	884	525	579
7	615	1170	720	2170	2180	10000	2830	9610	1630	632	616	842
8	636	3870	677	1900	3040	16300	2950	10900	1450	558	625	662
9	713	4080	672	1860	12100	11800	2790	14500	4070	617	931	447
10	676	2830	656	1950	18100	7530	2540	11100	3520	735	1020	405
11	492	1770	678	1970	14300	5880	2370	6600	3180	688	659	391
12	431	1980	700	1850	9510	4470	2140	4460	2910	631	1010	421
13	407	2120	783	1700	6820	3630	1910	3860	3440	541	2800	540
14	403	2150	821	1600	4750	3140	2130	2950	2740	534	2600	557
15	452	1950	821	2540	3980	3040	2390	4140	2180	644	1480	585
16	686	1900	837	4810	3730	3500	2910	15500	1410	751	1070	823
17	694	1720	1020	9680	3380	5600	3440	14800	1210	1010	922	1160
18	587	1330	1150	13800	3120	7820	3980	12600	1070	1050	999	836
19	562	1240	2330	17100	2930	7610	3130	8710	901	842	823	631
20	552	1180	5310	18000	2840	8010	3020	5590	847	995	559	623
21	407	1110	6970	7200	2850	7870	3290	3410	825	1510	539	558
22	377	1090	4190	3470	2650	6270	3410	2500	851	1750	533	463
23	550	1120	2360	3270	2580	5070	3130	2280	919	1110	459	436
24	573	1050	1710	11700	2320	4510	3070	2200	796	659	432	422
25	479	1030	1500	14900	2080	4630	2840	6500	843	551	428	439
26	423	998	1280	11500	1990	4310	2430	7560	877	542	448	608
27	444	975	1270	7790	2250	3680	2260	6900	817	533	482	557
28	494	1040	998	8500	2680	3610	2310	7780	787	553	523	739
29	532	1120	829	7050	3630	6690	2320	9110	692	552	450	2720
30	685	1010	721	6780	---	6150	2580	8950	604	529	393	2170
31	655	---	725	4890	---	4110	---	5580	---	756	379	---
TOTAL	16395	45056	44593	187598	127960	172830	89710	210150	53269	25033	27355	21012
MEAN	529	1502	1438	6052	4412	5575	2990	6779	1776	808	882	700
MAX	713	4080	6970	18000	18100	16300	4590	15500	4070	1750	2800	2720
MIN	377	468	656	738	1790	2160	1910	2200	604	529	379	365

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1996, BY WATER YEAR (WY)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
MEAN	1150	1855	2839	4079	5011	5197	4087	3476	1637	868	780	728
MAX	6560	4908	8870	12030	11000	13160	10040	9664	5338	2384	1837	2054
(WY)	1990	1978	1973	1974	1994	1975	1987	1984	1989	1979	1977	1989
MIN	181	447	570	435	1467	963	594	519	278	257	291	239
(WY)	1970	1970	1981	1981	1988	1988	1986	1976	1988	1988	1969	1969

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1969 - 1996	
ANNUAL TOTAL	852315		1020961		2631	
ANNUAL MEAN	2335		2790		4234	
HIGHEST ANNUAL MEAN					830	
LOWEST ANNUAL MEAN					42000	
HIGHEST DAILY MEAN	18200	May 15	18100	Feb 10	Apr 6	1977
LOWEST DAILY MEAN	235	Sep 8	365	Sep 2	Oct 1	1968
ANNUAL SEVEN-DAY MINIMUM	251	Aug 25	414	Aug 28	Aug 27	1969
INSTANTANEOUS PEAK FLOW			18600	Jan 20	Jan 31	1957
INSTANTANEOUS PEAK STAGE			22.35	Jan 20	Jan 31	1957
INSTANTANEOUS LOW FLOW					98	Oct 1 1968
10 PERCENT EXCEEDS	5480		6920		6360	
50 PERCENT EXCEEDS	1040		1700		1250	
90 PERCENT EXCEEDS	329		524		372	

LITTLE SANDY RIVER BASIN

03216500 LITTLE SANDY RIVER AT GRAYSON, KY

LOCATION.--Lat 38°19'48", long 82°56'22", Carter County, Hydrologic Unit 05090104, on left bank 0.3 mi upstream from bridge on U.S. Highway 60, 0.5 mi downstream from Town Branch, 0.5 mi east of Grayson, and at mile 38.1.

DRAINAGE AREA.--400 mi².

PERIOD OF RECORD.--April 1938 to current year. Prior to October 1964, published as "near Grayson."

REVISED RECORDS.--WSP 1435: 1939(M), 1943(M), 1948(P). WSP 1725: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 557.95 ft above sea level. Prior to Aug. 11, 1939, nonrecording gage and Aug. 11, 1939 to Jan. 29, 1965, water-stage recorder at site 1.6 mi downstream at same datum. Apr. 6, 1948 to Jan. 29, 1965, supplementary nonrecording gage 800 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Feb. 3-6. Records good except for period of estimated record, which is fair. Flow regulated since March 1968 by Grayson Lake (station 03216300).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of February 1937 reached a stage of 25.0 ft, present datum, from floodmarks at site 1.6 mi downstream, discharge, 16,600 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	DAILY MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	52	246	105	506	432	1380	578	632	86	730	43
2	32	51	93	219	391	346	1990	516	411	81	210	42
3	34	51	80	1400	380	317	982	526	760	77	137	43
4	40	49	74	1140	360	327	977	2650	1060	69	110	42
5	204	48	39	529	380	368	1200	2710	643	66	93	42
6	143	46	34	320	400	470	883	4660	631	62	85	41
7	92	50	36	265	298	1900	700	3150	387	59	78	41
8	65	82	34	336	554	1930	501	2490	244	58	73	40
9	51	219	33	426	2000	1330	478	3310	1440	61	70	39
10	44	218	30	426	1390	1170	462	2990	1560	59	67	39
11	43	229	29	230	1150	989	402	2750	894	57	65	39
12	40	254	28	275	1030	656	354	2650	1370	53	63	38
13	39	352	28	284	898	552	309	2570	1700	51	69	39
14	48	575	29	306	608	568	453	2480	1090	49	74	40
15	61	614	32	580	493	1030	608	3020	516	510	69	40
16	64	524	54	796	416	2140	1550	5000	620	840	62	64
17	56	262	99	2330	267	2090	1780	2410	366	583	58	324
18	51	211	248	3430	254	1810	1120	1450	157	417	57	198
19	47	203	1750	3820	239	1800	713	857	128	260	55	209
20	46	200	2100	1900	439	2260	728	2640	114	2770	53	76
21	45	229	1390	631	897	2110	956	2470	153	2350	51	55
22	45	237	521	452	768	1630	779	2300	148	775	85	49
23	43	271	309	642	963	1170	949	1820	1490	383	66	44
24	41	317	252	3650	776	1090	1200	788	1810	292	55	42
25	40	336	224	2510	675	981	1070	395	1060	140	53	40
26	40	314	193	2840	638	745	799	409	421	125	52	38
27	44	345	130	2740	573	474	683	823	166	116	44	40
28	49	473	161	2590	509	625	610	2560	125	98	44	62
29	57	431	106	2320	481	1280	578	1570	110	89	43	137
30	57	267	93	1800	---	969	563	1490	97	83	40	116
31	55	---	98	963	---	608	---	1550	---	778	41	---
TOTAL	1748	7510	8573	40255	18733	34167	25757	65582	20303	11497	2852	2102
MEAN	56.4	250	277	1299	646	1102	859	2116	677	371	92.0	70.1
MAX	204	614	2100	3820	2000	2260	1990	5000	1810	2770	730	324
MIN	32	46	28	105	239	317	309	395	97	49	40	38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1996, BY WATER YEAR (WY)

MEAN	176	350	657	757	934	970	690	668	277	161	111	127
MAX	733	993	2630	1954	2886	2415	2291	2116	928	841	382	585
(WY)	1990	1987	1979	1974	1989	1994	1972	1996	1974	1971	1979	1979
MIN	30.1	28.4	53.6	45.2	249	133	113	62.1	39.1	37.5	34.7	33.3
(WY)	1981	1982	1982	1981	1969	1969	1986	1976	1988	1969	1988	1994

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1969 - 1996	
ANNUAL TOTAL	164958		239079			
ANNUAL MEAN	452		653		488	
HIGHEST ANNUAL MEAN					838	
LOWEST ANNUAL MEAN					116	
HIGHEST DAILY MEAN	5020	Jan 16	5000	May 16	12900	Dec 9 1978
LOWEST DAILY MEAN	28	Dec 12	28	Dec 12	5.8	Oct 1 1968
ANNUAL SEVEN-DAY MINIMUM	29	Sep 6	30	Dec 9	18	Nov 1 1968
INSTANTANEOUS PEAK FLOW			6110	May 16	24500	Sep 22 1950
INSTANTANEOUS PEAK STAGE			20.69	May 16	27.53	Sep 22 1950
INSTANTANEOUS LOW FLOW					1.5	Oct 12 1953
10 PERCENT EXCEEDS	1480		1950		1400	
50 PERCENT EXCEEDS	143		317		175	
90 PERCENT EXCEEDS	33		42		40	

OHIO RIVER MAIN STEM

03216600 OHIO RIVER AT GREENUP DAM NEAR GREENUP, KY

LOCATION.--Lat 38°38'48", long 82°51'38", Greenup County, Hydrologic Unit 05090103, at left bank at downstream end of lock guidewall in lower pool at Greenup locks, 1.1 mi upstream from Grays Branch, 4.7 mi downstream from Little Sandy River, 5.0 mi north of Greenup, and at mile 341.5.

DRAINAGE AREA.--62,000 mi², approximately.

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 472.43 ft above sea level or 472.97 ft Ohio River Datum. Record of Greenup Dam headwater, tailwater, gate openings and lockages used to determine discharge from Oct. 1, 1968 to Sept. 30, 1981. Auxiliary water-stage recorder is located at Portsmouth, Ohio, 14.1 mi downstream, established Oct. 1, 1981 and used in slope rating computation from Oct. 1, 1981 to Sept. 30, 1983. Datum of gage is 470.43 ft above sea level or 470.99 ft Ohio River Datum. Since Oct. 1, 1983, discharge has been computed using the Branch Flow Model. Stage record for this model is obtained from the Greenup Dam Tailwater and Portsmouth, Ohio gages.

REMARKS.--Estimated daily discharges: Jan. 21-23 and July 24. Records fair except those below 20,000 ft³/s, those computed using dam operations records, and for periods of estimated record, which are poor. Flow regulated by Ohio River system of locks, dams, and reservoirs.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18600	17200	73200	26900	294000	311000	214000	188000	160000	45400	156000	16100
2	13200	24400	74400	33200	315000	305000	190000	204000	123000	43200	160000	11200
3	12000	27400	66200	107000	300000	227000	182000	205000	92700	45400	127000	17700
4	15900	25000	63200	156000	264000	180000	156000	215000	88800	45100	74900	13200
5	20800	27200	61000	155000	215000	150000	138000	265000	75100	39200	73400	35400
6	25800	30400	52000	125000	174000	147000	126000	311000	86500	37800	69400	17400
7	33600	28500	54000	84500	147000	173000	118000	349000	67000	34400	60400	84500
8	35000	26600	50100	79700	123000	270000	103000	352000	76200	34200	45100	89700
9	39200	31700	52200	55300	160000	303000	82500	331000	121000	31400	63400	102000
10	31800	45600	43100	45600	228000	255000	86700	329000	139000	21600	51100	50500
11	22300	41600	35200	47600	258000	191000	77500	316000	119000	29300	43400	54400
12	18700	46800	27000	40600	206000	171000	72400	289000	133000	22000	53900	64600
13	18100	55400	26500	43800	180000	141000	70200	304000	120000	23800	72600	48800
14	13400	111000	22700	43800	159000	130000	61000	328000	113000	23800	116000	45100
15	48500	106000	28000	42900	142000	121000	64900	324000	106000	16400	121000	53100
16	31000	108000	38900	48000	137000	150000	104000	341000	92900	25500	85700	60800
17	27400	100000	55000	118000	101000	150000	150000	415000	72200	29200	74400	59200
18	25200	85300	75100	212000	80400	156000	164000	444000	52300	24600	57000	148000
19	19500	82300	148000	283000	79800	170000	156000	421000	73000	77900	42900	157000
20	16200	78200	205000	346000	83400	201000	145000	385000	126000	127000	35900	142000
21	15300	73800	206000	380000	145000	265000	141000	312000	138000	195000	25200	113000
22	21200	73500	172000	397000	186000	343000	124000	269000	123000	208000	17600	105000
23	18300	74900	157000	405000	180000	305000	106000	180000	114000	124000	28200	86500
24	21400	74300	128000	415000	176000	257000	117000	163000	109000	118000	29600	67600
25	23800	69200	88800	423000	173000	201000	121000	161000	92900	113000	26500	53700
26	16600	61200	65200	435000	165000	188000	130000	162000	112000	86200	28400	52600
27	20400	57000	49100	427000	161000	180000	132000	159000	92200	58000	24300	43000
28	23900	49500	40400	402000	204000	167000	120000	199000	79600	47900	24400	36200
29	14800	48300	37200	378000	266000	173000	113000	231000	59200	32100	22200	122000
30	19900	62000	37500	357000	---	192000	126000	228000	40500	37800	17300	149000
31	18300	---	31100	322000	---	203000	---	199000	---	135000	17500	---
TOTAL	700100	1742300	2263100	6434900	5302600	6376000	3691200	8579000	2997100	1932200	1844700	2099300
MEAN	22580	58080	73000	207600	182800	205700	123000	276700	99900	62330	59510	69980
MAX	48500	111000	206000	435000	315000	343000	214000	444000	160000	208000	160000	157000
MIN	12000	17200	22700	26900	79800	121000	61000	159000	40500	16400	17300	11200

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1996, BY WATER YEAR (WY)

MEAN	40480	71390	114500	120600	146800	164400	144400	107200	66170	45480	37610	34620
MAX	111300	208600	252700	242700	259100	268600	258400	276700	174000	100700	113600	86310
(WY)	1980	1986	1973	1974	1994	1994	1994	1996	1981	1972	1980	1979
MIN	11310	21910	38500	27170	66240	53550	52660	36610	13440	13060	11270	12000
(WY)	1992	1992	1990	1977	1978	1969	1986	1976	1988	1988	1988	1985

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1969 - 1996	
ANNUAL TOTAL	25760500		43962500			
ANNUAL MEAN	70580		120100		90860	
HIGHEST ANNUAL MEAN					120100	
LOWEST ANNUAL MEAN					49760	
HIGHEST DAILY MEAN	364000	May 20	444000	May 18	540000	Jan 12 1974
LOWEST DAILY MEAN	10500	Sep 7	11200	Sep 2	4810	Jul 24 1993
ANNUAL SEVEN-DAY MINIMUM	11900	Sep 1	16500	Aug 29	9050	Jul 11 1988
INSTANTANEOUS PEAK STAGE			56.63		59.19	Feb 28 1979
10 PERCENT EXCEEDS	164000		285000		206000	
50 PERCENT EXCEEDS	49800		86600		63500	
90 PERCENT EXCEEDS	14200		23800		17900	

TYGARTS CREEK BASIN

03217000 TYGARTS CREEK NEAR GREENUP, KY

LOCATION.--Lat 38°33'51", long 82°57'08", Greenup County, Hydrologic Unit 05090103, on downstream side of center pier of bridge on State Highway 7, 100 ft downstream from Lick Run, 0.4 mi upstream from White Oak Creek, 6.5 mi west of Greenup, and at mile 28.1.

DRAINAGE AREA.--242 mi².

PERIOD OF RECORD.--August 1940 to current year.

REVISED RECORDS.--WSP 1113: 1942-43, 1945-46. WSP 1625: 1958. WSP 1725: Drainage area. WRD KY 79-1: 1948(P), 1950(M), 1952(M), 1962(M), 1967(P), 1970(M), 1972-76(M), 1978(M).

GAGE.--Water-stage recorder. Datum of gage is 547.14 ft above sea level.

REMARKS.--Estimated daily discharges: Oct. 1-4, 6 to Feb. 7, Mar. 9, 10, 12, 13, and May 6, 7, 17-22. Records poor. Occasional regulation at low flow caused by withdrawal of water for cooling purposes by gas transmission plant above station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	74	86	340	280	365	2310	338	211	52	1750	6.6
2	45	70	76	660	300	327	2650	303	164	45	378	6.1
3	100	67	70	1000	320	291	1150	552	188	38	194	6.4
4	350	64	62	560	290	253	735	2480	189	33	133	6.2
5	156	58	58	370	270	244	665	3610	140	30	95	5.9
6	130	53	54	280	240	372	585	3020	108	23	76	5.7
7	100	76	50	320	220	1070	479	2240	116	19	64	5.8
8	80	130	46	370	1190	1120	391	2330	185	15	65	5.3
9	66	110	42	290	1520	618	323	2320	526	20	56	5.0
10	54	92	37	230	746	449	275	1190	405	43	45	4.8
11	48	250	35	250	545	385	252	678	233	27	38	4.6
12	42	230	42	220	409	340	232	508	261	16	40	4.2
13	37	190	60	350	348	300	216	370	275	11	38	5.5
14	130	160	92	700	327	280	207	280	175	9.0	39	7.3
15	240	140	140	1300	292	601	220	1540	138	130	48	8.1
16	160	120	250	3500	257	972	618	7610	112	486	39	9.7
17	110	100	500	3000	234	732	630	3000	90	142	32	35
18	90	86	1400	2400	219	621	422	1400	70	77	24	60
19	68	78	3100	5000	235	708	338	700	59	53	20	86
20	58	70	900	1500	1240	1720	323	460	51	647	16	57
21	68	62	600	800	945	1440	547	300	43	267	14	39
22	56	56	440	450	751	991	444	210	38	137	12	28
23	47	110	320	1500	730	845	620	168	917	100	10	20
24	41	300	250	7000	568	811	1030	141	1190	75	9.6	16
25	38	210	210	2300	419	723	649	146	333	58	10	13
26	35	170	170	840	453	560	495	171	242	49	11	11
27	76	140	150	1100	493	402	397	431	136	38	9.1	9.8
28	150	125	130	700	515	372	304	2020	102	32	7.7	12
29	110	110	110	560	475	1960	264	1180	79	27	7.4	23
30	88	94	100	420	---	1570	283	568	62	22	8.8	63
31	78	---	170	340	---	844	---	314	---	2400	8.1	---
TOTAL	2862	3595	9750	38650	14831	22286	18054	40578	6838	5121.0	3297.7	570.0
MEAN	92.3	120	315	1247	511	719	602	1309	228	165	106	19.0
MAX	350	300	3100	7000	1520	1960	2650	7610	1190	2400	1750	86
MIN	11	53	35	220	219	244	207	141	38	9.0	7.4	4.2
CFSM	.38	.50	1.30	5.15	2.11	2.97	2.49	5.41	.94	.68	.44	.08
IN.	.44	.55	1.50	5.94	2.28	3.43	2.78	6.24	1.05	.79	.51	.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1996, BY WATER YEAR (WY)

MEAN	59.1	157	390	490	612	682	522	395	170	118	83.2	69.4
MAX	509	869	1954	1665	1953	1556	1513	1309	994	645	445	1031
(WY)	1976	1987	1979	1950	1989	1967	1972	1996	1961	1960	1979	1950
MIN	.35	.70	3.23	31.1	20.7	80.8	90.9	27.6	5.13	5.39	2.09	1.31
(WY)	1954	1954	1954	1977	1954	1941	1941	1941	1988	1964	1944	1953

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1940 - 1996	
ANNUAL TOTAL	123002.3		166432.7		311	
ANNUAL MEAN	337		455		589	
HIGHEST ANNUAL MEAN					67.5	
LOWEST ANNUAL MEAN					1979	
HIGHEST DAILY MEAN	5610	May 19	7610	May 16	20900	Dec 9 1978
LOWEST DAILY MEAN	6.1	Sep 12	4.2	Sep 12	.00	Aug 24 1952
ANNUAL SEVEN-DAY MINIMUM	6.6	Sep 8	5.0	Sep 7	.00	Sep 17 1955
INSTANTANEOUS PEAK FLOW			8980	May 16	25400	Dec 9 1979
INSTANTANEOUS PEAK STAGE			19.17	May 16	22.75	Dec 9 1979
INSTANTANEOUS LOW FLOW					.00	Aug 24 1952
ANNUAL RUNOFF (CFSM)	1.39		1.88		1.29	
ANNUAL RUNOFF (INCHES)	18.91		25.58		17.46	
10 PERCENT EXCEEDS	916		1160		700	
50 PERCENT EXCEEDS	120		188		93	
90 PERCENT EXCEEDS	18		16		5.2	

KINNICONICK CREEK BASIN

03237250 KINNICONICK CREEK AT TANNERY, KY

LOCATION.--Lat 38°32'36", long 83°13'29", Lewis County, Hydrologic Unit 05090201, near right bank on downstream side of bridge on County Highway 1149, 0.35 mi upstream from Trace Creek, 0.5 mi west of Tannery, and 10.2 mi upstream from mouth.

DRAINAGE AREA.--201 mi²

PERIOD OF RECORD.--October 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage is 535.34 ft above sea level.

REMARKS.--Estimated daily discharges: Dec. 10-14, 26-31, Jan. 7-15, Feb. 1-7, May 15 to July 2, Aug. 28-30, and Sept. 8-11, 26-28. Records fair except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	85	85	111	275	343	2240	986	150	28	768	7.3
2	5.5	79	80	174	220	290	1950	827	110	20	354	4.0
3	5.8	84	74	1270	180	239	851	1130	130	14	229	2.5
4	56	100	68	653	155	188	535	4150	120	10	150	2.2
5	629	103	63	402	145	177	486	4000	98	8.5	98	1.4
6	1060	91	59	299	120	547	450	4390	82	7.0	66	1.2
7	261	87	56	275	105	980	381	1620	87	6.0	44	1.1
8	130	103	51	240	222	781	310	1860	140	5.1	30	1.0
9	85	117	45	200	840	577	261	2020	300	4.6	22	.99
10	61	106	40	180	583	453	219	1290	260	4.2	16	.98
11	47	108	34	160	417	323	188	952	190	3.9	11	.97
12	37	433	29	145	315	310	169	843	250	3.7	7.3	1.5
13	30	318	25	120	249	285	154	702	230	3.3	5.6	2.9
14	54	246	22	110	235	256	145	599	180	2.9	12	4.4
15	269	199	37	250	214	456	143	2700	150	292	13	4.5
16	181	155	53	583	180	912	534	3800	110	259	8.8	11
17	113	124	158	2410	157	567	501	1100	83	91	4.4	29
18	83	105	513	1770	148	417	590	550	66	47	1.9	57
19	65	92	3020	2780	136	534	707	350	54	49	1.4	57
20	55	80	1640	1090	404	1510	762	250	43	461	1.3	20
21	51	70	616	553	690	953	1130	180	35	170	1.3	8.6
22	51	63	381	379	481	671	901	140	29	96	2.1	2.4
23	51	61	276	405	483	612	1010	97	350	78	2.2	1.4
24	42	175	218	2910	409	867	1260	85	500	54	1.5	1.2
25	37	247	181	1430	302	774	999	90	300	34	1.4	1.1
26	31	188	145	695	292	528	866	110	200	21	1.3	1.0
27	34	154	110	1010	411	384	795	215	120	15	1.2	.92
28	114	130	85	879	588	359	685	750	75	9.5	1.1	.89
29	154	108	69	559	453	1830	642	500	54	5.9	1.0	1.1
30	117	92	55	405	---	1190	818	310	38	9.2	1.0	4.4
31	97	---	45	312	---	654	---	210	---	3180	3.0	---
TOTAL	4022.3	4103	8333	22759	9409	18967	20682	36806	4534	4992.8	1860.8	233.95
MEAN	130	137	269	734	324	612	689	1187	151	161	60.0	7.80
MAX	1060	433	3020	2910	840	1830	2240	4390	500	3180	768	57
MIN	5.5	61	22	110	105	177	143	85	29	2.9	1.0	.89
CFSM	.65	.68	1.34	3.65	1.61	3.04	3.43	5.91	.75	.80	.30	.04
IN.	.74	.76	1.54	4.21	1.74	3.51	3.83	6.81	.84	.92	.34	.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1996, BY WATER YEAR (WY)

	1992	1993	1994	1995	1996
MEAN	38.3	137	257	590	451
MAX	130	340	381	1025	816
(WY)	1996	1994	1992	1994	1994
MIN	2.32	20.8	194	295	293
(WY)	1993	1992	1995	1992	1995

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1992 - 1996
ANNUAL TOTAL	94264.1	136702.85	
ANNUAL MEAN	258	374	288
HIGHEST ANNUAL MEAN			389
LOWEST ANNUAL MEAN			221
HIGHEST DAILY MEAN	5610	4390	6930
LOWEST DAILY MEAN	1.1	.89	.26
ANNUAL SEVEN-DAY MINIMUM	3.1	1.1	.48
INSTANTANEOUS PEAK FLOW		9480	e10400
INSTANTANEOUS PEAK STAGE		16.20	e17.00
INSTANTANEOUS LOW FLOW		.89	.89
ANNUAL RUNOFF (CFSM)	1.28	1.86	1.43
ANNUAL RUNOFF (INCHES)	17.45	25.30	19.44
10 PERCENT EXCEEDS	631	924	734
50 PERCENT EXCEEDS	100	145	97
90 PERCENT EXCEEDS	11	3.8	2.6

e Estimated

LICKING RIVER BASIN

03248500 LICKING RIVER NEAR SALYERSVILLE, KY

LOCATION.--Lat 37°45'03", long 83°05'04", Magoffin County, Hydrologic Unit 05100101, on left bank on downstream side of bridge on State Highway 30, 0.8 mi upstream from Gardner Branch, 1.2 mi west of Salyersville, 2.9 mi downstream from State Road Fork, and at mile 266.9.

DRAINAGE AREA.--140 mi².

PERIOD OF RECORD.--October 1938 to September 1992, October 1994 to current year. Monthly discharge only for October to December 1938, published in WSP 1305.

REVISED RECORDS.--WSP 923: 1939-40, drainage area. WSP 1505: 1955(M), 1956(P).

GAGE.--Water-stage recorder. Datum of gage is 823.80 ft above sea level. Prior to Feb. 27, 1939, nonrecording gage at same site and datum. Feb. 27, 1939 to Sept. 27, 1965, water-stage recorder on upstream side of bridge at same datum.

REMARKS.--Estimated daily discharges: Dec. 8-15, 26-31, Jan. 7-13, and Feb. 2-7. Records fair except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	DAILY MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	22	38	49	184	206	394	193	247	31	130	9.9
2	5.4	21	47	129	160	190	640	167	187	30	46	9.8
3	5.4	25	51	609	140	167	457	150	208	33	31	12
4	32	27	46	301	130	139	350	143	160	31	24	18
5	88	26	41	186	120	130	322	165	127	27	22	19
6	96	24	36	143	110	257	260	591	103	24	18	14
7	42	102	31	110	100	626	231	250	90	23	17	12
8	25	218	29	92	409	691	202	656	152	28	17	11
9	18	95	28	80	1590	391	188	1250	2580	30	21	11
10	15	59	27	74	757	289	162	446	1190	22	28	10
11	13	53	26	69	413	265	143	286	385	20	18	9.9
12	11	78	25	65	298	239	132	225	555	19	58	9.7
13	10	74	24	62	242	215	123	169	632	20	95	11
14	17	56	23	122	216	187	170	138	334	22	44	27
15	28	47	34	310	201	171	215	335	228	62	29	17
16	25	41	49	425	178	231	757	1210	168	47	24	63
17	19	35	51	854	153	367	412	484	130	32	28	118
18	15	31	60	1020	143	314	303	291	108	24	22	52
19	13	28	333	1300	132	305	255	201	94	29	19	34
20	12	25	459	965	160	336	270	149	81	61	17	25
21	12	24	215	407	170	318	313	125	70	38	17	20
22	12	22	137	295	158	304	270	147	62	26	32	18
23	11	21	105	255	154	338	249	108	70	21	22	16
24	10	24	84	1040	142	322	223	156	62	20	17	14
25	10	24	71	925	128	300	194	687	83	18	15	14
26	9.9	22	60	432	123	260	226	546	53	19	14	13
27	16	21	51	531	120	213	220	872	45	18	13	14
28	34	20	44	406	218	312	185	1370	40	16	12	36
29	33	25	39	320	245	759	170	1480	36	15	11	84
30	29	31	35	267	---	518	203	1230	34	15	11	51
31	25	---	32	226	---	373	---	379	---	161	10	---
TOTAL	697.9	1321	2331	12069	7294	9733	8239	14599	8314	982	882	773.3
MEAN	22.5	44.0	75.2	389	252	314	275	471	277	31.7	28.5	25.8
MAX	96	218	459	1300	1590	759	757	1480	2580	161	130	118
MIN	5.4	20	23	49	100	130	123	108	34	15	10	9.7
CFSM	.16	.31	.54	2.78	1.80	2.24	1.96	3.36	1.98	.23	.20	.18
IN.	.19	.35	.62	3.21	1.94	2.59	2.19	3.88	2.21	.26	.23	.21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1996, BY WATER YEAR (WY)

MEAN	32.7	92.3	209	269	369	382	312	198	93.2	62.3	41.8	29.4
MAX	343	443	803	824	1015	1162	940	648	454	261	305	276
(WY)	1990	1974	1979	1950	1972	1955	1972	1984	1974	1939	1947	1950
MIN	.084	.63	1.96	25.4	27.3	89.3	40.6	25.4	6.06	3.01	1.07	.23
(WY)	1954	1956	1956	1940	1954	1983	1986	1941	1966	1944	1957	1955

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1939 - 1996

ANNUAL TOTAL	60374.2	67235.2	173	1975
ANNUAL MEAN	165	184	40.3	1954
HIGHEST ANNUAL MEAN			300	
LOWEST ANNUAL MEAN			40.3	
HIGHEST DAILY MEAN	2720	May 19	9010	Dec 9 1978
LOWEST DAILY MEAN	2.6	Aug 30	.00	Sep 15 1943
ANNUAL SEVEN-DAY MINIMUM	3.2	Aug 25	.00	Oct 1 1943
INSTANTANEOUS PEAK FLOW			4100	Jun 9 1939
INSTANTANEOUS PEAK STAGE			20.72	Jun 9 1939
ANNUAL RUNOFF (CFSM)	1.18	1.31	25.40	Feb 3 1939
ANNUAL RUNOFF (INCHES)	16.04	17.87	1.24	
10 PERCENT EXCEEDS	363	417	16.82	
50 PERCENT EXCEEDS	51	80	401	
90 PERCENT EXCEEDS	8.0	15	59	
			4.2	

LICKING RIVER BASIN

03251200 NORTH FORK LICKING RIVER NEAR MOUNT OLIVET, KY

LOCATION.--Lat 38°35'41", long 84°01'13", Bracken County, Hydrologic Unit 05100101, on right bank, downstream side of bridge on State Highway 875, 4 mi northeast of Mt. Olivet, and at mile 26.1.

DRAINAGE AREA.--226 mi²

PERIOD OF RECORD.--June 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage is 622.46 ft above sea level.

REMARKS.--Estimated daily discharges: Dec. 24-Jan. 1, Jan. 7-13, and Feb. 2-7. Records good except for periods of estimated record, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	32	25	42	212	468	2920	551	210	30	1220	2.5
2	1.3	21	21	186	160	323	3640	374	162	24	300	2.3
3	1.6	16	20	1030	130	247	1900	943	153	20	102	2.3
4	1.8	14	17	1030	110	188	656	2760	184	14	58	2.0
5	2.2	12	15	376	95	167	440	3960	219	11	37	1.8
6	3.4	14	14	233	84	386	341	4780	149	8.4	25	1.7
7	93	14	12	180	75	864	279	3320	1420	7.0	18	1.7
8	91	15	12	150	151	908	229	2510	2270	5.4	13	1.7
9	44	15	11	130	329	514	190	2840	2940	4.9	21	1.6
10	25	12	8.7	120	490	365	161	1800	1600	4.1	18	1.5
11	16	20	7.0	110	291	349	138	1690	1010	3.5	17	1.3
12	11	58	6.0	98	203	353	119	1310	1040	3.0	18	1.2
13	8.3	181	5.8	90	156	311	107	710	753	2.8	12	1.3
14	6.9	156	6.6	125	136	263	115	428	473	3.7	9.1	1.3
15	5.2	122	6.9	251	127	556	220	2280	309	62	7.1	1.3
16	4.4	101	30	464	112	694	359	5800	238	42	5.6	2.1
17	3.5	65	45	1760	93	525	397	4590	179	34	4.5	3.2
18	2.9	46	586	2540	84	346	242	1380	146	20	3.9	3.4
19	2.6	33	1950	2850	77	929	187	457	133	20	3.2	3.0
20	3.6	26	2360	2880	520	1790	605	305	97	16	2.8	2.9
21	9.8	22	1040	821	743	1700	455	227	75	176	2.5	6.5
22	7.9	17	310	347	518	1090	333	176	63	99	2.5	8.0
23	6.3	15	194	803	435	774	754	138	427	41	2.3	11
24	5.1	15	130	4700	382	575	662	113	495	28	2.5	11
25	4.8	125	90	4740	271	442	476	103	378	34	2.4	9.6
26	4.9	125	65	1850	313	341	325	92	183	20	2.4	8.1
27	5.4	68	54	895	444	264	236	625	110	12	2.2	7.0
28	11	48	46	1180	1210	232	184	1120	73	8.6	2.3	252
29	13	37	40	571	950	852	165	1050	55	6.4	2.5	543
30	50	31	36	367	---	910	713	494	40	4.9	2.5	236
31	52	---	32	282	---	664	---	308	---	529	2.6	---
TOTAL	499.3	1476	7196.0	31201	8901	18390	17548	47234	15584	1294.7	1921.9	1132.3
MEAN	16.1	49.2	232	1006	307	593	585	1524	519	41.8	62.0	37.7
MAX	93	181	2360	4740	1210	1790	3640	5800	2940	529	1220	543
MIN	1.3	12	5.8	42	75	167	107	92	40	2.8	2.2	1.2
CFSM	.07	.22	1.03	4.45	1.36	2.62	2.59	6.74	2.30	.18	.27	.17
IN.	.08	.24	1.18	5.14	1.47	3.03	2.89	7.77	2.57	.21	.32	.19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1996, BY WATER YEAR (WY)

MEAN	11.9	149	353	740	440	698	417	634	209	123	68.1	24.6
MAX	31.4	454	727	1165	794	872	676	1524	519	296	123	62.7
(WY)	1994	1994	1992	1994	1994	1993	1994	1996	1996	1992	1995	1991
MIN	1.31	14.1	182	369	284	416	235	87.4	4.41	5.45	6.87	1.06
(WY)	1995	1992	1993	1992	1995	1995	1995	1993	1991	1995	1993	1995

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1991 - 1996

ANNUAL TOTAL	98435.30	152378.2	
ANNUAL MEAN	270	416	325
HIGHEST ANNUAL MEAN			425
LOWEST ANNUAL MEAN			233
HIGHEST DAILY MEAN	5010	May 19	5910
LOWEST DAILY MEAN	.77	Sep 15	.44
ANNUAL SEVEN-DAY MINIMUM	.85	Sep 4	.48
INSTANTANEOUS PEAK FLOW			6500
INSTANTANEOUS PEAK STAGE			22.52
INSTANTANEOUS LOW FLOW			.24
ANNUAL RUNOFF (CFSM)	1.19		1.84
ANNUAL RUNOFF (INCHES)	16.20		25.08
10 PERCENT EXCEEDS	691		1060
50 PERCENT EXCEEDS	58		78
90 PERCENT EXCEEDS	1.4		2.3

LICKING RIVER BASIN

03252300 HINKSTON CREEK NEAR CARLISLE, KY

LOCATION.--Lat 38°14'33", long 84°03'18", Bourbon County, Hydrologic Unit 05100102, at upstream side bridge on State Highway 13, 0.5 mi upstream from Taylors Creek, 5.0 mi south of Carlisle, and at mile 29.0.

DRAINAGE AREA.--154 mi².

PERIOD OF RECORD.--October 1991 to current year.

REVISED RECORDS.--WRD KY-93-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 764.88 ft above sea level.

REMARKS.--Estimated daily discharges: Dec. 25-31, Jan. 6-12, and Feb. 2-5. Records good except for periods of estimated record, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	26	56	74	154	144	814	182	182	11	108	5.0
2	1.2	29	49	355	125	129	862	122	141	9.5	50	5.2
3	1.6	100	43	1380	111	114	451	116	128	8.5	22	5.6
4	2.3	60	38	499	101	93	293	1240	113	8.0	12	5.1
5	181	44	35	260	94	84	225	1260	85	7.8	7.5	4.5
6	436	42	32	186	90	344	186	3440	66	6.9	7.0	4.2
7	136	48	28	142	87	1150	156	2550	96	6.2	5.8	4.3
8	54	83	25	116	113	739	134	729	198	5.8	9.2	5.3
9	27	97	22	111	301	370	118	940	206	5.6	10	5.9
10	16	82	19	111	217	270	102	446	191	5.5	5.8	7.5
11	10	120	15	106	164	241	90	289	188	5.3	6.1	7.0
12	7.8	205	14	111	137	219	80	227	266	5.1	5.6	7.5
13	6.2	177	14	111	117	188	72	163	332	5.0	48	6.3
14	5.9	134	15	121	110	161	71	129	180	4.9	44	5.4
15	5.9	111	30	371	105	487	84	1570	131	28	18	5.0
16	18	87	466	578	93	580	194	4090	99	135	26	7.1
17	17	70	258	1660	81	361	139	1870	76	52	138	103
18	9.5	57	659	925	74	295	101	384	62	24	49	114
19	6.3	48	1690	2540	71	660	87	242	56	20	21	54
20	5.8	40	1060	1290	399	951	251	172	54	32	10	26
21	5.9	34	372	355	384	753	370	132	46	19	6.9	14
22	5.9	29	225	237	308	692	187	107	34	17	6.1	10
23	8.0	185	168	340	375	689	219	85	47	30	5.8	7.4
24	8.3	467	137	3410	266	506	262	67	78	20	5.7	7.1
25	6.7	238	111	2400	184	362	175	62	99	10	5.6	7.8
26	5.8	149	87	495	155	258	146	163	57	7.5	5.4	6.4
27	13	116	73	915	137	191	125	1220	37	6.3	5.2	5.6
28	58	95	64	509	150	171	97	2680	26	6.0	4.6	531
29	89	80	55	312	179	354	89	1550	21	5.9	4.5	551
30	51	66	51	235	---	333	238	611	16	6.8	4.4	166
31	31	---	55	190	---	241	---	275	---	147	4.6	---
TOTAL	1230.90	3119	5966	20445	4882	12130	6418	27113	3311	661.6	661.8	1694.2
MEAN	39.7	104	192	660	168	391	214	875	110	21.3	21.3	56.5
MAX	436	467	1690	3410	399	1150	862	4090	332	147	138	551
MIN	.80	26	14	74	71	84	71	62	16	4.9	4.4	4.2
CFSM	.26	.68	1.25	4.28	1.09	2.54	1.39	5.68	.72	.14	.14	.37
IN.	.30	.75	1.44	4.94	1.18	2.93	1.55	6.55	.80	.16	.16	.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1996, BY WATER YEAR (WY)

	MEAN	24.6	111	225	499	299	482	212	398	89.3	38.2	74.2	20.3
MAX	48.2	302	394	675	526	755	436	875	143	89.3	121	56.5	
(WY)	1994	1994	1992	1994	1994	1994	1994	1996	1993	1992	1993	1996	
MIN	2.29	16.5	70.6	166	168	272	97.6	41.3	38.3	17.2	21.3	5.31	
(WY)	1993	1992	1993	1992	1996	1995	1992	1992	1992	1993	1996	1995	

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1992 - 1996
ANNUAL TOTAL	78732.13	87632.50	
ANNUAL MEAN	216	239	206
HIGHEST ANNUAL MEAN			284
LOWEST ANNUAL MEAN			128
HIGHEST DAILY MEAN	4420	4090	4420
LOWEST DAILY MEAN	.56	.80	.56
ANNUAL SEVEN-DAY MINIMUM	.88	4.8	.88
INSTANTANEOUS PEAK FLOW		4450	4630
INSTANTANEOUS PEAK STAGE		25.32	25.98
ANNUAL RUNOFF (CFSM)	1.40	1.55	1.34
ANNUAL RUNOFF (INCHES)	19.02	21.17	18.21
10 PERCENT EXCEEDS	476	537	497
50 PERCENT EXCEEDS	60	93	67
90 PERCENT EXCEEDS	5.0	5.9	4.9

LICKING RIVER BASIN

03253500 LICKING RIVER AT CATAWBA, KY

LOCATION.--Lat 38°42'31", long 84°18'38", Pendleton County, Hydrologic Unit 05100101, on right bank 1 mi southeast of Catawba, 1.5 mi upstream from Kincaid Creek, 2.3 mi north of Falmouth, and at mile 48.0.

DRAINAGE AREA.--3,300 mi.²

PERIOD OF RECORD.--January 1914 to July 1920 (January 1914 to July 1915 and October 1917 to July 1920, gage heights only), July 1928 to current year. Published as "at Falmouth" 1914-16. Gage-height records collected in this vicinity since 1887 are published in reports of the National Weather Service.

REVISED RECORDS.--WSP 853: 1937. WSP 1003: 1943. WSP 1385: 1942. WSP 1705: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 500.01 ft above sea level (levels by U.S. Army Corps of Engineers). Jan. 1, 1914 to July 31, 1916, nonrecording gage at site 3.8 mi upstream at datum 12.2 ft higher. July 14, 1916 to July 5, 1920, nonrecording gage at site 1.4 mi downstream at present datum.

REMARKS.--Estimated daily discharges: Dec. 8-14, 25-28, Jan. 7-13 and Feb. 3-7. Records good except for periods of estimated record, which are fair. Flow regulated since December 1973 by Cave Run Lake (station 03249498).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	746	1670	867	6500	5160	27800	7130	6410	1240	3900	133
2	83	689	1460	1270	6080	4000	23300	5360	5430	1080	4700	132
3	95	612	1110	8730	5200	3240	18100	7070	5090	980	1940	129
4	100	604	921	11700	5000	2770	11800	15700	4860	778	972	126
5	181	586	793	8010	4800	2580	8040	18000	4730	554	701	115
6	2400	676	702	4580	4600	3580	7100	31500	4500	465	520	101
7	5350	644	597	3500	4800	5170	6640	32800	11500	419	402	96
8	3620	582	530	3200	4980	12700	5950	31300	10800	398	325	94
9	1610	1260	490	2700	5730	12000	5340	28800	10600	385	420	92
10	982	1570	460	2400	7460	7900	4470	19200	10800	402	534	92
11	714	1820	440	2100	7840	6460	3230	19100	9070	362	350	92
12	556	2970	420	1900	6500	6130	2330	12200	10700	313	506	89
13	460	3160	370	1800	5890	5790	1910	8310	10500	288	334	87
14	400	3530	350	1830	5450	5330	1830	6800	8460	263	270	84
15	358	3070	379	2630	5170	6520	1850	16500	6720	247	239	84
16	342	2480	759	3880	4520	8600	3430	47400	5420	444	212	99
17	497	2110	2840	14700	3490	9730	4810	41200	4710	2070	198	134
18	522	1870	8470	20700	2460	8390	4720	28100	4930	2630	207	179
19	466	1710	19600	27800	1910	11400	3120	13500	6250	2170	251	812
20	396	1590	21700	24800	6110	16700	5260	5440	4210	2130	218	1670
21	354	1490	14800	17600	6850	17000	5700	3800	3940	1370	213	1910
22	326	1420	7750	8100	6950	14300	5540	4120	3810	1100	198	1150
23	312	1380	4780	6370	6120	12400	10000	4640	16200	915	169	672
24	300	1930	3790	33100	5880	11100	9130	4380	8100	682	151	325
25	288	4080	3000	36000	5190	9790	7930	4210	9560	539	140	198
26	278	4000	2500	26600	4590	8340	6640	4530	5530	464	130	160
27	282	2970	2000	14100	4960	7150	5290	7300	4550	397	127	150
28	327	2310	1600	10200	9490	6090	4210	14400	4060	340	125	11100
29	589	2000	1410	9450	6650	8910	5200	22800	3170	296	109	7730
30	695	1810	1250	7630	---	9800	12200	18700	1960	259	104	5400
31	688	---	1030	6900	---	10200	---	10700	---	585	121	---
TOTAL	23658	55669	107971	325147	161170	259230	222870	494990	206570	24565	18786	33235
MEAN	763	1856	3483	10490	5558	8362	7429	15970	6886	792	606	1108
MAX	5350	4080	21700	36000	9490	17000	27800	47400	16200	2630	4700	11100
MIN	83	582	350	867	1910	2580	1830	3800	1960	247	104	84

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1996, BY WATER YEAR (WY)

	MEAN	1486	2902	5997	6940	7663	8195	5937	5065	2859	1447	1261	1559
MAX	7178	6516	18500	15110	21140	15220	11920	16660	8212	6962	4630	12860	
(WY)	1976	1987	1979	1974	1989	1975	1975	1983	1974	1979	1974	1979	
MIN	264	298	1092	420	2321	1247	666	371	134	291	103	110	
(WY)	1988	1988	1981	1981	1977	1983	1986	1976	1988	1984	1986	1995	

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1974 - 1996	
ANNUAL TOTAL	1474351		1933861			
ANNUAL MEAN	4039		5284		4261	
HIGHEST ANNUAL MEAN					7730	
LOWEST ANNUAL MEAN					2006	
HIGHEST DAILY MEAN	49800	May 19	47400	May 16	74800	Feb 17 1989
LOWEST DAILY MEAN	71	Sep 15	83	Oct 2	25	Jul 8 1988
ANNUAL SEVEN-DAY MINIMUM	76	Sep 5	89	Sep 9	38	Jul 3 1988
INSTANTANEOUS PEAK FLOW			48800	May 16	95000	Mar 10 1964
INSTANTANEOUS PEAK STAGE			32.83	May 16	52.60	Mar 10 1964
INSTANTANEOUS LOW FLOW					2.5	Aug 5 1930
10 PERCENT EXCEEDS	10100		12500		10700	
50 PERCENT EXCEEDS	1590		3030		1730	
90 PERCENT EXCEEDS	157		198		254	

OHIO RIVER MAIN STEM

03277200 OHIO RIVER AT MARKLAND DAM NEAR WARSAW, KY

LOCATION.--Lat 38°46'29", long 84°57'52", Gallatin County, Hydrologic Unit 05090203, at left end of Markland Dam, 0.4 mi upstream from Stephens Creek, 3.4 mi west of Warsaw, and at mile 531.5.

DRAINAGE AREA.--83,170 mi², approximately.

PERIOD OF RECORD.--May 1970 to current year.

REVISED RECORDS.--WDR KY-88-1: 1987.

GAGE.--Gate opening and water-stage recorders on left bank. Turbine recorders in powerplant on right bank. Datum of headwater gage 0.5 mi upstream is 443 ft Ohio River datum. Datum of tailwater gage 0.4 mi downstream is 35 ft lower.

REMARKS.--Estimated daily discharges: Nov. 1-30, Jan. 17 to Feb. 29, May 1-21, and Jul. 1 to Sept. 30. Records fair except for periods below 20,000 ft³/s and for periods of estimated record, which are poor. Daily discharge computed from head, gate openings, turbine flow, and tailwater rating. Flow regulated by Ohio River system of locks, dams, and reservoirs upstream from station.

COOPERATION.--U.S. Army Corps of Engineers.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 26, 1937, reached a stage of 76.1 ft (tailwater gage).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11600	21300	91000	42600	431000	327000	288000	326000	280000	60500	122000	18700
2	10200	28700	97000	55500	389000	326000	305000	295000	223000	45600	161000	17700
3	13000	36000	94500	87100	333000	323000	280000	310000	175000	51700	163000	20700
4	25000	32100	81000	151000	317000	289000	251000	358000	139000	46200	143000	11100
5	45400	33000	79200	180000	219000	226000	212000	392000	129000	46800	85100	16300
6	63500	31600	68700	175000	155000	212000	181000	381000	123000	39300	63600	26000
7	67400	39000	72900	152000	119000	218000	167000	399000	154000	33300	55500	34600
8	69700	28800	69200	108000	108000	265000	147000	418000	178000	49900	47200	75900
9	69900	35500	68200	65500	110000	315000	129000	432000	215000	17100	43700	77400
10	50700	56200	65800	71800	153000	327000	115000	432000	226000	17100	58200	89100
11	25600	61500	53400	77600	212000	297000	111000	449000	216000	37400	48300	45300
12	21800	62300	34100	72700	266000	252000	97700	452000	201000	16400	38300	42500
13	25300	80200	28300	78600	278000	206000	88100	432000	205000	25800	53300	50200
14	12500	94800	30700	77100	245000	171000	85000	404000	191000	27700	66700	45000
15	37500	112000	31700	78900	207000	155000	82300	395000	173000	24100	91000	52100
16	32000	112000	51200	92400	173000	165000	94200	455000	167000	31200	108000	72300
17	39300	108000	76700	131000	141000	192000	128000	466000	139000	37900	91200	70900
18	34600	104000	132000	196000	114000	197000	163000	458000	112000	31200	55000	87600
19	20100	83900	194000	272000	90800	230000	178000	456000	115000	53100	34500	129000
20	16100	77200	242000	354000	85300	279000	190000	454000	121000	80100	41000	148000
21	13300	83300	266000	406000	114000	291000	190000	442000	158000	119000	22800	144000
22	29200	80700	259000	439000	152000	336000	173000	371000	164000	181000	17000	114000
23	21000	83500	215000	451000	197000	356000	177000	331000	178000	219000	37600	85800
24	21100	79700	146000	478000	214000	353000	207000	256000	153000	176000	25000	65500
25	32600	79000	102000	505000	220000	328000	194000	227000	123000	121000	33600	45600
26	16800	76800	84100	534000	216000	285000	194000	213000	122000	108000	36100	49800
27	29100	74500	72000	536000	213000	252000	193000	235000	130000	91600	24300	50900
28	26200	67500	55000	529000	237000	223000	188000	277000	112000	53800	30900	60400
29	14100	54500	53600	513000	263000	209000	309000	322000	94000	41100	22900	99400
30	28500	64200	50100	494000	---	222000	319000	325000	70500	35400	20600	128000
31	28200	---	45300	464000	---	232000	---	311000	---	49600	14800	---
TOTAL	951300	1981800	3009700	7867800	5972100	8059000	5436300	11474000	4786500	1967900	1855200	1973800
MEAN	30690	66060	97090	253800	205900	260000	181200	370100	159500	63480	59850	65790
MAX	69900	112000	266000	536000	431000	356000	319000	466000	280000	219000	163000	148000
MIN	10200	21300	28300	42600	85300	155000	82300	213000	70500	16400	14800	11100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1996, BY WATER YEAR (WY)

	MEAN	50000	87550	146200	151100	178700	211300	182700	141400	89090	59780	46720	42010
MAX	144100	230600	288700	289900	291200	335400	292200	370100	219100	109500	146200	143800	
(WY)	1980	1986	1973	1974	1975	1975	1972	1996	1981	1972	1980	1979	
MIN	13910	26500	42150	34060	77100	98440	61160	43510	16250	18530	13060	14980	
(WY)	1992	1992	1990	1977	1992	1990	1986	1976	1988	1988	1988	1995	

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1970 - 1996
ANNUAL TOTAL	32655300	55335400	
ANNUAL MEAN	89470	151200	115600
HIGHEST ANNUAL MEAN			157300
LOWEST ANNUAL MEAN			60450
HIGHEST DAILY MEAN	336000	May 22	542000
LOWEST DAILY MEAN	8100	Sep 7	4320
ANNUAL SEVEN-DAY MINIMUM	12300	Sep 4	7310
INSTANTANEOUS PEAK STAGE			55.25
10 PERCENT EXCEEDS	194000	334000	261000
50 PERCENT EXCEEDS	76700	109000	80100
90 PERCENT EXCEEDS	16600	28000	21900

KENTUCKY RIVER BASIN

03277400 LEATHERWOOD CREEK AT DAISY, KY

LOCATION.--Lat 37°06'48", long 83°05'33", Perry County, on right bank on downstream side of bridge, at mouth of Hicks Branch, at Daisy, 0.6 mi upstream from Little Leatherwood Creek, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--40.9 mi², includes that of Hicks Branch.

PERIOD OF RECORD.--October 1964 to September 1974. October 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage is 938.64 ft above sea level.

REMARKS.--Estimated daily discharges: Feb. 3-7. Records good except for period of estimated record, which is poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	DAILY MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	5.3	11	24	47	88	200	61	70	12	25	4.3
2	4.4	21	10	244	43	73	228	71	56	24	15	4.0
3	4.3	21	10	212	41	59	166	64	51	145	12	5.2
4	5.2	11	11	85	37	47	125	57	49	31	9.9	6.6
5	26	8.7	9.1	54	33	52	102	56	38	20	8.7	5.0
6	12	7.2	7.8	44	30	607	87	75	32	16	7.9	4.1
7	7.0	178	9.6	41	28	718	75	108	30	14	8.0	4.8
8	5.2	54	9.9	37	396	315	72	255	46	83	31	5.5
9	5.4	23	16	36	486	177	67	209	78	71	56	4.8
10	5.2	15	17	31	205	127	58	120	46	29	22	4.2
11	3.7	34	15	31	132	103	53	108	34	20	17	4.0
12	3.6	39	12	35	96	88	49	87	38	17	127	4.2
13	3.3	24	13	32	76	77	49	67	33	15	61	22
14	15	22	16	59	72	69	47	56	27	15	28	9.0
15	16	20	16	180	133	82	55	89	24	25	15	6.1
16	8.0	15	31	227	114	95	68	72	21	23	11	5.6
17	4.9	13	30	230	93	145	56	59	20	15	8.0	6.5
18	4.9	12	36	130	79	118	52	47	23	13	7.3	4.8
19	4.9	10	162	618	67	134	51	38	29	12	5.9	4.1
20	5.2	8.5	144	196	62	124	100	33	24	26	4.7	3.6
21	8.2	7.4	61	113	53	113	109	336	18	14	4.0	3.5
22	6.9	7.0	40	76	49	107	86	258	17	12	3.9	3.6
23	7.3	7.6	31	62	46	111	74	90	16	12	3.4	3.5
24	6.4	10	26	220	43	110	61	61	15	11	3.8	3.3
25	5.5	8.0	22	174	37	112	55	47	24	15	11	4.0
26	5.6	7.2	19	119	36	96	88	68	15	20	6.6	3.5
27	15	6.3	17	138	42	84	70	62	13	13	7.2	4.0
28	21	6.9	15	105	166	206	61	337	13	11	15	111
29	11	14	13	87	115	214	56	579	12	10	7.2	38
30	7.6	13	12	68	---	158	74	167	12	11	5.3	17
31	5.6	---	14	60	---	133	---	95	---	23	4.5	---
TOTAL	248.4	629.1	856.4	3768	2857	4742	2494	3832	924	778	552.3	309.8
MEAN	8.01	21.0	27.6	122	98.5	153	83.1	124	30.8	25.1	17.8	10.3
MAX	26	178	162	618	486	718	228	579	78	145	127	111
MIN	3.3	5.3	7.8	24	28	47	47	33	12	10	3.4	3.3
CFSM	.20	.51	.68	2.97	2.41	3.74	2.03	3.02	.75	.61	.44	.25
IN.	.23	.57	.78	3.43	2.60	4.31	2.27	3.49	.84	.71	.50	.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1996, BY WATER YEAR (WY)

MEAN	16.9	32.9	77.4	97.3	94.3	140	105	75.2	30.8	17.7	18.0	12.6
MAX	65.1	135	182	256	241	259	205	182	149	102	47.2	59.2
(WY)	1965	1974	1973	1974	1994	1973	1972	1971	1974	1973	1992	1974
MIN	3.29	3.23	1.75	4.06	22.2	32.0	42.9	12.4	4.06	1.19	2.50	1.59
(WY)	1966	1966	1966	1966	1968	1966	1995	1969	1966	1970	1970	1969

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1965 - 1996	
ANNUAL TOTAL	16087.9		21991.0			
ANNUAL MEAN	44.1		60.1		59.6	
HIGHEST ANNUAL MEAN					108	
LOWEST ANNUAL MEAN					22.7	
HIGHEST DAILY MEAN	1150	May 19	718	Mar 7	2310	Nov 27 1973
LOWEST DAILY MEAN	1.8	Aug 31	3.3	Oct 13	.17	Jul 20 1970
ANNUAL SEVEN-DAY MINIMUM	2.9	Aug 26	3.6	Sep 20	.49	Jul 14 1970
INSTANTANEOUS PEAK FLOW			1820	May 21	7370	Mar 7 1967
INSTANTANEOUS PEAK STAGE			6.89	May 21	12.26	Mar 7 1967
INSTANTANEOUS LOW FLOW			3.3	Oct 13	.14	Jul 20 1970
ANNUAL RUNOFF (CFSM)	1.08		1.47		1.46	
ANNUAL RUNOFF (INCHES)	14.63		20.00		19.80	
10 PERCENT EXCEEDS	84		135		132	
50 PERCENT EXCEEDS	17		30		21	
90 PERCENT EXCEEDS	4.3		5.2		2.8	

KENTUCKY RIVER BASIN

03280000 NORTH FORK KENTUCKY RIVER AT JACKSON, KY

LOCATION.--Lat 37°32'46", long 83°22'21", Breathitt County, Hydrologic Unit 05100201, on left bank at city water plant on Armory Drive at Jackson, 2.8 mi downstream from Quicksand Creek, and at mile 305.0.

DRAINAGE AREA.--1,101 mi².

PERIOD OF RECORD.--June 1928 to September 1931, December 1936 to February 1937, April 1938 to current year. Gage-height records collected at same site during periods 1904-07, 1921-31, and February to December 1934 (above 8.0 ft only), January 1935 to September 1976 are published in reports of National Weather Service.

REVISED RECORDS.--WSP 853: 1929(M). WSP 1335: 1928(M), 1929, 1931(M). WSP 1435: 1954-55. WSP 1505: 1948. WSP 1555: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 697.67 ft above sea level. See WDR KY-90-1 for history of changes prior to Aug. 22, 1980.

REMARKS.--Estimated daily discharges: Feb. 3-8, Jun. 14-19. Records good except for periods of estimated record, which are poor. Small diversions by city of Jackson waterworks. Flow regulated by Carr Fork Lake (station 03277446) beginning January 1976.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	257	394	487	1420	2340	3320	1640	2790	299	1630	137
2	119	240	410	909	1210	1850	4540	1540	2260	284	785	130
3	109	475	386	4590	930	1660	4030	1630	1820	490	472	128
4	166	695	408	3670	740	1370	3260	1570	1500	655	346	154
5	411	534	488	2160	600	1160	2810	1370	1460	490	293	188
6	723	390	463	1590	500	2100	2330	1570	1080	352	261	215
7	459	1210	432	1290	440	8310	2010	2040	904	300	241	209
8	335	3590	418	1070	2000	9890	1780	3290	984	299	233	190
9	239	1850	413	1010	11100	4970	1680	7160	4510	285	408	175
10	192	1070	401	1010	8400	3280	1490	4130	4030	490	1230	199
11	162	835	501	942	4300	2670	1350	2770	2760	376	500	191
12	145	1190	468	944	3170	2300	1210	2250	3220	285	1050	149
13	134	1330	444	996	2510	2040	1140	1840	4030	252	1910	236
14	138	998	432	1030	2110	1830	1230	1660	2900	246	1290	369
15	217	852	444	1970	1870	1680	1360	1760	2200	275	758	303
16	316	776	501	3950	2160	1950	2930	2150	1800	381	495	404
17	333	672	709	6570	2110	3600	2260	1660	1300	366	398	659
18	265	554	865	7030	1840	3740	1790	1270	1000	327	389	426
19	229	446	1580	8370	1570	3130	1560	1060	850	281	362	312
20	208	383	4440	8700	1510	3140	1720	907	690	342	312	252
21	203	350	3330	4080	1500	2980	2390	804	670	314	268	216
22	201	324	1950	2850	1330	2720	2280	2650	549	279	265	197
23	201	298	1390	2160	1240	2810	1960	2850	481	284	266	186
24	195	293	1100	4500	1130	2870	1710	1270	453	248	211	173
25	193	293	912	5370	1010	2810	1460	1530	524	209	199	166
26	189	283	739	3920	939	2670	1520	2100	501	221	189	159
27	184	271	671	3430	896	2230	1710	3540	459	211	195	150
28	262	260	577	3060	1560	2510	1550	6320	386	215	186	236
29	371	293	535	2470	2890	4900	1380	11300	348	219	168	1130
30	382	336	460	2020	---	4430	1530	8700	327	199	167	1210
31	312	---	451	1700	---	3480	---	3810	---	248	148	---
TOTAL	7734	21348	26712	93848	62985	97420	61290	88141	46786	9722	15625	8849
MEAN	249	712	862	3027	2172	3143	2043	2843	1560	314	504	295
MAX	723	3590	4440	8700	11100	9890	4540	11300	4510	655	1910	1210
MIN	109	240	386	487	440	1160	1140	804	327	199	148	128
CFSM	.23	.65	.78	2.75	1.97	2.85	1.86	2.58	1.42	.28	.46	.27
IN.	.26	.72	.90	3.17	2.13	3.29	2.07	2.98	1.58	.33	.53	.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1996, BY WATER YEAR (WY)

	MEAN	539	929	1700	2050	2694	2718	2248	1943	1004	458	426	320
MAX	4189	3019	4649	5168	6392	7268	4479	7189	4166	1200	945	1154	
(WY)	1990	1986	1992	1979	1994	1994	1994	1984	1989	1992	1977	1989	
MIN	92.8	152	196	155	790	541	452	614	136	90.2	85.6	83.0	
(WY)	1981	1982	1981	1981	1988	1988	1986	1977	1988	1988	1988	1983	

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1977 - 1996

ANNUAL TOTAL	470518	540460	1413	1994
ANNUAL MEAN	1289	1477	477	1988
HIGHEST ANNUAL MEAN			2570	1994
LOWEST ANNUAL MEAN			477	1988
HIGHEST DAILY MEAN	21100	May 19	52200	May 8 1984
LOWEST DAILY MEAN	42	Sep 11	26	Aug 20 1988
ANNUAL SEVEN-DAY MINIMUM	57	Sep 6	30	Aug 16 1988
INSTANTANEOUS PEAK FLOW			53500	Jan 30 1957
INSTANTANEOUS PEAK STAGE			43.10	Feb 4 1939
INSTANTANEOUS LOW FLOW			.00	Oct 16 1930
ANNUAL RUNOFF (CFSM)	1.17	1.34	1.28	
ANNUAL RUNOFF (INCHES)	15.90	18.26	17.44	
10 PERCENT EXCEEDS	3010	3440	3200	
50 PERCENT EXCEEDS	590	905	646	
90 PERCENT EXCEEDS	124	199	126	

KENTUCKY RIVER BASIN

03280700 CUTSHIN CREEK AT WOOTON, KY

LOCATION.--Lat 37°09'54", long 83°18'29", Leslie County, Hydrologic Unit 05100202, on right bank 15 ft downstream from bridge on State Highway 80, 400 ft upstream from Poundmill Branch, 600 ft upstream from Rockhouse Branch, 0.7 mi downstream from Saw Branch, 1.0 mi southwest of Wooton, and at mile 10.7.

DRAINAGE AREA.--61.3 mi².

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 869.84 ft above sea level. Prior to Dec. 26, 1957, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Nov. 7, Feb. 2-7, Mar. 11, 12, 23-29. Records good except for periods of estimated record, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1957 reached a stage of 19.43 ft. from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES													
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	1	2.2	8.9	16	50	86	149	279	108	83	7.9	49	6.5
	2	2.1	33	15	409	70	117	314	133	68	45	22	6.3
	3	2.6	43	15	371	63	86	235	123	58	118	15	19
	4	7.6	22	17	175	57	69	185	105	64	26	11	11
	5	36	16	16	120	52	80	148	112	45	17	9.4	11
	6	14	15	15	102	48	695	124	184	35	13	8.9	7.3
	7	6.2	450	18	110	45	1160	108	253	50	12	9.3	9.7
	8	4.0	75	16	84	605	432	101	495	280	144	17	8.1
	9	3.4	39	24	90	696	237	93	345	401	97	43	7.1
	10	3.4	27	21	77	282	185	82	193	168	41	15	6.4
	11	3.4	70	22	80	179	155	77	146	97	25	11	6.1
	12	3.1	61	20	86	127	130	72	110	103	21	171	7.0
	13	3.3	38	24	84	100	114	67	85	89	26	80	38
	14	16	35	28	141	98	102	62	70	64	21	43	13
	15	19	30	28	338	177	116	68	101	48	35	28	8.4
	16	8.4	25	54	429	163	153	84	78	39	28	21	19
	17	6.0	21	59	445	131	229	76	68	32	18	30	14
	18	4.9	19	94	268	109	190	75	58	35	16	43	9.6
	19	4.2	16	350	610	92	199	77	48	33	18	20	8.0
	20	4.6	15	249	262	83	181	119	41	29	26	15	6.9
	21	8.1	14	132	174	70	166	142	209	23	14	13	6.7
	22	7.9	17	90	132	65	156	128	221	20	12	9.6	6.8
	23	6.4	15	69	113	62	160	114	90	17	10	8.4	6.2
	24	5.9	13	56	311	56	165	90	61	17	8.7	9.9	6.0
	25	5.6	11	48	218	50	170	84	49	22	10	15	6.5
	26	5.8	10	42	177	49	150	114	112	14	15	9.0	6.1
	27	15	9.6	39	178	80	145	93	119	11	8.7	23	6.4
	28	33	9.9	34	149	316	300	85	754	9.6	7.4	23	133
	29	14	18	31	133	203	315	80	771	8.9	8.9	10	63
	30	9.7	18	27	121	---	250	118	225	8.2	9.0	7.9	28
	31	8.1	---	34	100	---	209	---	128	---	76	7.2	---
TOTAL	273.9	1194.4	1703	6137	4214	6965	3494	5595	1971.7	934.6	797.6	491.1	
MEAN	8.84	39.8	54.9	198	145	225	116	180	65.7	30.1	25.7	16.4	
MAX	36	450	350	610	696	1160	314	771	401	144	171	133	
MIN	2.1	8.9	15	50	45	69	62	41	8.2	7.4	7.2	6.0	
CFSM	.14	.65	.90	3.23	2.37	3.67	1.90	2.94	1.07	.49	.42	.27	
IN.	.17	.72	1.03	3.72	2.56	4.23	2.12	3.40	1.20	.57	.48	.30	

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1996, BY WATER YEAR (WY)

MEAN	28.1	61.9	113	147	173	202	160	117	55.9	32.6	24.4	18.9
MAX	287	309	359	597	371	620	428	449	423	144	107	125
(WY)	1990	1978	1973	1974	1994	1975	1977	1983	1989	1958	1966	1974
MIN	.26	6.64	3.30	6.97	27.0	21.4	16.6	14.0	3.17	2.17	1.16	.73
(WY)	1964	1966	1966	1981	1968	1988	1963	1964	1988	1970	1988	1969

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR			FOR 1996 WATER YEAR			WATER YEARS 1958 - 1996		
ANNUAL TOTAL	24352.2			33771.3			94.1		
ANNUAL MEAN	66.7			92.3			212		
HIGHEST ANNUAL MEAN							27.6		
LOWEST ANNUAL MEAN							1974		
HIGHEST DAILY MEAN	1570	May	19	1160	Mar	7	4890	May	7 1984
LOWEST DAILY MEAN	1.1	Sep	6	2.1	Oct	2	.00	Sep	29 1959
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep	4	3.8	Oct	7	.01	Sep	11 1964
INSTANTANEOUS PEAK FLOW				2040	Mar	7	14200	Mar	12 1963
INSTANTANEOUS PEAK STAGE				6.09	Mar	7	16.23	Mar	12 1963
INSTANTANEOUS LOW FLOW				2.1	Oct	2	.00	Sep	29 1959
ANNUAL RUNOFF (CFSM)	1.09			1.51			1.54		
ANNUAL RUNOFF (INCHES)	14.78			20.49			20.86		
10 PERCENT EXCEEDS	132			219			205		
50 PERCENT EXCEEDS	25			48			33		
90 PERCENT EXCEEDS	2.6			7.8			2.8		

KENTUCKY RIVER BASIN

03281000 MIDDLE FORK KENTUCKY RIVER AT TALLEGA, KY

LOCATION.--Lat 37°33'18", long 83°35'38", Lee County, Hydrologic Unit 05100202, on left bank 100 ft downstream of bridge on State Highway 708, 150 ft upstream from Lynam Creek, 0.5 mi southwest of Tallega, 8.3 mi upstream from confluence with North Fork, and at mile 8.3.

DRAINAGE AREA.--537 mi².

PERIOD OF RECORD.--October 1930 to March 1932, October 1939 to current year.

REVISED RECORDS.--WSP 1113: 1931, 1940. WSP 1385: 1931-32, 1948, drainage area. WSP 1505: 1946(M), 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 642.13 ft above sea level. Prior to Feb. 6, 1940, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges Aug. 18-21. Records good except for period of estimated record, which is fair. Flow regulated by Buckhorn Lake beginning December 1960 (station 03280800).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	347	183	185	905	2090	2010	435	3470	118	490	137
2	48	337	110	392	660	1240	2580	1220	2790	93	631	74
3	47	351	108	1450	529	1340	2680	1230	2770	152	265	59
4	98	351	109	2450	299	715	2120	1170	1420	458	182	64
5	309	343	132	2730	297	660	1240	778	549	301	154	68
6	342	340	128	1600	552	1170	738	684	419	205	80	78
7	149	911	169	1290	412	3480	454	1170	425	150	69	91
8	94	1710	258	1210	576	4130	400	1190	312	104	68	94
9	76	1800	272	452	2470	3800	383	2600	2020	117	73	98
10	68	1220	251	488	2880	3630	291	3180	3560	286	79	145
11	64	583	210	685	3300	3480	274	2310	3500	361	71	122
12	63	627	182	593	3120	3290	264	1810	3100	290	320	100
13	60	657	182	657	3030	2450	233	1240	2410	217	330	122
14	67	630	231	705	1540	1520	212	780	1780	154	545	230
15	80	485	222	1010	1340	904	303	651	589	170	381	196
16	79	449	212	2600	2020	739	898	674	678	158	299	283
17	70	543	220	3840	1670	1620	486	865	434	150	230	431
18	266	544	233	3930	1340	2270	350	614	387	249	120	275
19	268	338	554	4130	414	2290	330	457	288	285	135	187
20	268	287	1720	3580	805	2020	692	409	272	269	180	132
21	268	335	2560	3450	1050	2040	1180	283	266	174	140	123
22	266	313	2410	2520	896	1720	1510	363	196	155	111	117
23	265	273	1150	1590	815	1690	1470	792	149	142	109	116
24	265	272	617	2680	609	1710	1360	425	141	133	102	113
25	265	265	518	2470	646	1680	1060	373	176	105	77	110
26	262	284	346	2760	528	1890	958	792	155	105	74	84
27	273	214	311	2310	386	1750	958	1740	136	107	64	80
28	303	183	313	2030	604	1460	438	3150	133	106	62	120
29	321	221	257	2210	1680	2330	279	4700	131	131	72	276
30	349	229	219	1410	---	3050	355	3720	131	110	117	708
31	386	---	202	1170	---	2780	---	3600	---	149	143	---
TOTAL	5788	15442	14589	58577	35373	64938	26506	43405	32787	5704	5773	4833
MEAN	187	515	471	1890	1220	2095	884	1400	1093	184	186	161
MAX	386	1800	2560	4130	3300	4130	2680	4700	3560	458	631	708
MIN	47	183	108	185	297	660	212	283	131	93	62	59
CFSM	.35	.96	.88	3.52	2.27	3.90	1.65	2.61	2.04	.34	.35	.30
IN.	.40	1.07	1.01	4.06	2.45	4.50	1.84	3.01	2.27	.40	.40	.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1996, BY WATER YEAR (WY)

MEAN	324	582	965	1315	1477	1678	1174	939	463	215	179	180
MAX	2225	1715	2826	3320	3634	3672	3280	2762	2599	687	623	784
(WY)	1990	1978	1973	1974	1994	1994	1994	1971	1989	1992	1992	1989
MIN	47.5	148	45.5	56.8	270	241	98.7	57.9	49.1	43.6	45.0	45.9
(WY)	1989	1961	1966	1981	1968	1988	1986	1986	1988	1988	1988	1987

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1961 - 1996

ANNUAL TOTAL	267415	313715	
ANNUAL MEAN	733	857	788
HIGHEST ANNUAL MEAN			1492
LOWEST ANNUAL MEAN			267
HIGHEST DAILY MEAN	7450	May 19	10300
LOWEST DAILY MEAN	45	Sep 8	11
ANNUAL SEVEN-DAY MINIMUM	45	Sep 6	12
INSTANTANEOUS PEAK FLOW			5280
INSTANTANEOUS PEAK STAGE			18.07
INSTANTANEOUS LOW FLOW			47
ANNUAL RUNOFF (CFSM)	1.36	1.60	1.47
ANNUAL RUNOFF (INCHES)	18.52	21.73	19.93
10 PERCENT EXCEEDS	2400	2530	2520
50 PERCENT EXCEEDS	265	358	300
90 PERCENT EXCEEDS	50	99	66

KENTUCKY RIVER BASIN

03281040 RED BIRD RIVER NEAR BIG CREEK, KY

LOCATION.--Lat 37°10'43", long 83°35'35" Clay County, Hydrologic Unit 05100203, on right bank adjacent to State Highway 66, 0.1 mi upstream from Fish Trap Branch, 0.6 mi downstream from Britton Branch, 1.2 mi downstream from Big Creek, 1.7 mi northwest of Big Creek, and at mile 58.9.

DRAINAGE AREA.--155 mi².

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

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 815.74 ft above sea level.

REMARKS.--Estimated daily discharges: Nov. 8-13, and Feb. 3-8. Records good except for periods of estimated record, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of 1947 and 1957 reached a stage of 29.27 ft and 27.60 ft, respectively, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	22	46	103	260	550	749	578	193	14	345	13
2	5.1	58	46	710	222	373	822	652	165	32	113	18
3	4.8	93	48	1540	136	259	679	582	231	165	65	12
4	7.9	90	77	711	120	189	512	422	170	63	43	25
5	168	61	83	409	95	187	397	335	114	34	31	41
6	157	42	79	307	80	3080	298	556	94	24	23	26
7	56	1750	74	277	70	3490	254	567	96	20	18	16
8	28	1000	72	215	400	1480	227	1740	152	137	15	29
9	17	250	74	193	3150	734	230	1410	582	148	18	21
10	13	150	83	204	1110	482	196	695	546	68	21	12
11	9.5	260	80	193	661	364	179	464	286	38	14	8.2
12	9.1	500	86	223	426	297	173	325	267	27	133	6.7
13	9.3	170	82	219	293	252	166	227	246	22	186	39
14	23	137	86	274	268	211	161	177	182	18	74	40
15	42	109	93	936	538	268	176	266	140	34	46	16
16	39	85	225	1430	612	474	350	273	113	58	34	55
17	22	71	270	1980	440	1250	310	219	91	39	33	52
18	15	62	334	1090	335	779	275	171	78	33	67	32
19	12	55	1300	2140	256	690	255	137	66	23	37	21
20	10	49	1390	1030	230	658	502	114	57	35	24	14
21	10	43	596	625	188	557	763	95	51	39	17	11
22	10	40	331	415	167	490	553	125	44	23	13	8.6
23	10	35	233	313	157	573	418	88	37	20	11	6.3
24	10	35	180	1390	146	664	302	75	32	16	11	5.3
25	11	32	150	978	126	721	250	71	34	12	18	4.9
26	11	27	130	651	122	647	386	240	36	23	13	5.0
27	23	25	117	807	190	500	352	506	24	41	57	20
28	64	24	100	746	1590	678	300	3030	21	22	138	215
29	66	34	89	580	879	1130	267	1630	19	16	43	324
30	38	45	73	423	---	896	538	576	16	15	20	84
31	27	---	78	330	---	652	---	295	---	671	14	---
TOTAL	933.8	5354	6705	21442	13267	23575	11040	16641	4183	1930	1695	1181.0
MEAN	30.1	178	216	692	457	760	368	537	139	62.3	54.7	39.4
MAX	168	1750	1390	2140	3150	3490	822	3030	582	671	345	324
MIN	4.8	22	46	103	70	187	161	71	16	12	11	4.9
CFSM	.19	1.15	1.40	4.46	2.95	4.91	2.37	3.46	.90	.40	.35	.25
IN.	.22	1.28	1.61	5.15	3.18	5.66	2.65	3.99	1.00	.46	.41	.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1996, BY WATER YEAR (WY)

MEAN	90.3	228	385	466	520	599	430	349	166	83.1	51.5	40.6
MAX	758	796	1180	1150	1244	1678	954	1176	998	351	192	138
(WY)	1990	1978	1991	1974	1994	1975	1977	1984	1989	1992	1990	1979
MIN	3.93	7.84	37.5	19.0	164	99.6	60.8	41.2	10.3	5.28	2.51	1.81
(WY)	1979	1988	1981	1981	1988	1988	1986	1986	1988	1988	1988	1983

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1973 - 1996

ANNUAL TOTAL	89732.82	107946.8	
ANNUAL MEAN	246	295	283
HIGHEST ANNUAL MEAN			513
LOWEST ANNUAL MEAN			92.2
HIGHEST DAILY MEAN	5750 May 14	3490 Mar 7	16200 May 7 1984
LOWEST DAILY MEAN	.35 Sep 10	4.8 Oct 3	.20 Oct 4 1983
ANNUAL SEVEN-DAY MINIMUM	.52 Sep 5	7.9 Sep 20	.52 Sep 5 1995
INSTANTANEOUS PEAK FLOW		5430 Mar 6	28500 Oct 17 1989
INSTANTANEOUS PEAK STAGE		8.22 Mar 6	21.14 Oct 17 1989
INSTANTANEOUS LOW FLOW		4.8 Oct 3	.20 Oct 4 1983
ANNUAL RUNOFF (CFSM)	1.59	1.90	1.83
ANNUAL RUNOFF (INCHES)	21.54	25.91	24.82
10 PERCENT EXCEEDS	595	710	612
50 PERCENT EXCEEDS	83	125	96
90 PERCENT EXCEEDS	5.3	15	7.3

KENTUCKY RIVER BASIN

03281100 GOOSE CREEK AT MANCHESTER, KY

LOCATION.--Lat 37°09'07", long 83°45'37", Clay County, Hydrologic Unit 05100203, on left bank on downstream side of Second Street bridge at Manchester, 0.9 mi upstream from Little Goose Creek, and at mile 21.7.

DRAINAGE AREA.--163 mi².

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

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 819.37 ft above sea level. Prior to September 15, 1975, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Feb. 2-8. Records good except for period of estimated record, which is poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 28, 1947, Jan. 29, 1957, and Mar. 12, 1963, reached a stage of 40.6 ft, discharge, 38,000 ft³/s, 37.3 ft, discharge, 29,800 ft³/s, and 33.5 ft, discharge, 21,500 ft³/s, respectively, present site.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	DAILY MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	27	70	102	253	548	664	706	164	13	258	12
2	9.2	60	70	532	200	396	689	613	131	16	81	13
3	8.0	193	72	1670	180	296	577	513	232	35	44	14
4	25	123	156	727	150	224	449	400	182	33	30	31
5	294	77	195	431	115	219	371	315	126	20	22	28
6	291	55	178	326	85	2050	295	321	91	15	18	26
7	91	1870	153	292	74	2820	259	382	73	13	15	27
8	49	1500	133	234	400	1480	233	1050	110	41	15	30
9	33	341	140	203	2610	651	233	1270	2610	36	14	37
10	25	196	149	214	1190	446	202	590	2370	29	13	31
11	21	330	142	216	629	351	185	435	553	19	12	26
12	17	701	132	245	424	297	174	332	419	15	83	27
13	17	338	120	238	318	251	168	243	455	12	127	41
14	31	230	113	273	282	214	164	195	319	11	51	52
15	42	169	106	795	376	245	165	287	214	17	32	46
16	37	126	215	1190	464	331	341	333	145	23	23	74
17	28	101	310	1670	396	959	329	270	104	47	28	67
18	22	82	366	1150	338	697	296	206	81	52	51	58
19	19	74	1070	2470	278	591	274	153	67	27	24	39
20	20	64	1480	1050	271	558	392	116	54	23	18	30
21	27	57	629	579	256	493	733	90	44	19	15	25
22	26	49	374	402	235	447	530	88	38	18	12	22
23	25	46	262	322	226	511	405	65	33	23	10	19
24	26	48	200	1290	208	510	312	53	29	16	11	17
25	27	43	162	1040	176	527	257	45	28	16	12	17
26	25	39	135	607	163	512	305	225	24	49	10	16
27	37	37	116	788	182	432	291	442	21	37	11	24
28	76	36	98	705	1390	549	258	1960	18	22	14	141
29	65	46	81	527	966	982	240	978	16	17	14	211
30	44	62	71	419	---	829	635	422	14	14	12	78
31	34	---	73	328	---	586	---	246	---	196	11	---
TOTAL	1502.2	7120	7571	21035	12835	20002	10426	13344	8765	924	1091	1279
MEAN	48.5	237	244	679	443	645	348	430	292	29.8	35.2	42.6
MAX	294	1870	1480	2470	2610	2820	733	1960	2610	196	258	211
MIN	8.0	27	70	102	74	214	164	45	14	11	10	12
CFSM	.30	1.46	1.50	4.16	2.72	3.96	2.13	2.64	1.79	.18	.22	.26
IN.	.34	1.62	1.73	4.80	2.93	4.56	2.38	3.05	2.00	.21	.25	.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1996, BY WATER YEAR (WY)

MEAN	90.3	203	381	450	496	533	421	313	149	96.0	52.3	46.0
MAX	600	646	1229	1205	1196	1665	983	1158	975	381	178	185
(WY)	1990	1978	1991	1974	1972	1975	1972	1984	1989	1965	1977	1979
MIN	2.13	11.4	28.3	22.9	70.5	111	50.7	29.3	6.48	2.03	3.72	2.11
(WY)	1970	1988	1966	1981	1968	1969	1986	1965	1988	1966	1988	1965

SUMMARY STATISTICS FOR 1995 CALENDAR YEAR FOR 1996 WATER YEAR WATER YEARS 1965 - 1996

ANNUAL TOTAL	89706.8	105894.2	
ANNUAL MEAN	246	289	268
HIGHEST ANNUAL MEAN			456
LOWEST ANNUAL MEAN			107
HIGHEST DAILY MEAN	4160	May 14	13700
LOWEST DAILY MEAN	3.1	Aug 25	11
ANNUAL SEVEN-DAY MINIMUM	3.7	Sep 5	19
INSTANTANEOUS PEAK FLOW			5670
INSTANTANEOUS PEAK STAGE			19.07
INSTANTANEOUS LOW FLOW			8.0
ANNUAL RUNOFF (CFSM)	1.51		1.78
ANNUAL RUNOFF (INCHES)	20.47		24.17
10 PERCENT EXCEEDS	541		691
50 PERCENT EXCEEDS	101		143
90 PERCENT EXCEEDS	8.4		17

KENTUCKY RIVER BASIN

03281500 SOUTH FORK KENTUCKY RIVER AT BOONEVILLE, KY

LOCATION.--Lat 37°27'45", long 83°40'38", Owsley County, Hydrologic Unit 05100203, on right bank 600 ft downstream from Buck Creek, 0.2 mi downstream from bridge on State Highway 30 at Booneville, 0.5 mi downstream from Meadow Creek, and at mile 11.5.

DRAINAGE AREA.--722 mi².

PERIOD OF RECORD.--March 1925 to September 1931, October 1939 to current year. Monthly discharge only for October 1939, published in WSP 1305.

REVISED RECORDS.--WSP 893: 1929(M). WSP 1335: WSP 1555: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 642.49 ft above sea level. See WDR KY-92-1 for history of changes prior to Nov. 27, 1929.

REMARKS.--Estimated daily discharges: Feb. 4-8. Records good except for period of estimated record, which is poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	DAILY MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	194	233	338	1130	2240	2430	2420	1120	108	2650	80
2	53	171	265	802	929	1620	2930	2080	872	169	836	66
3	43	204	279	5470	711	1250	2580	2030	1480	286	438	60
4	138	494	438	4040	520	971	2070	1610	1510	391	280	59
5	753	404	722	2070	420	831	1740	1280	1050	251	200	66
6	1590	307	651	1410	360	3080	1400	1180	771	173	154	106
7	723	1690	558	1220	300	10300	1230	1150	603	131	126	111
8	391	5800	490	1070	1600	9140	1080	1720	551	110	119	93
9	250	1990	449	861	7820	3610	1020	4560	2620	177	142	114
10	182	844	426	901	6040	2180	912	2710	7780	335	101	146
11	142	737	418	859	2840	1650	791	1690	3050	207	97	95
12	114	1780	404	943	1880	1380	731	1340	3600	148	251	84
13	96	1490	403	989	1390	1210	705	1040	3130	118	462	176
14	108	911	386	1020	1180	1060	769	820	1780	103	520	205
15	138	692	371	2270	1190	986	856	827	1170	156	293	169
16	210	547	378	4100	1590	1190	2100	1200	848	145	204	442
17	206	449	635	6380	1450	2890	1830	1050	645	153	183	717
18	168	381	780	5990	1260	3140	1430	856	507	171	265	492
19	134	335	1450	8840	1090	2500	1240	687	411	305	410	307
20	113	299	4580	6830	1060	2590	1310	557	367	375	232	219
21	104	268	3030	2890	1120	2260	2850	481	314	218	158	166
22	96	241	1610	1870	1030	1990	2640	417	267	173	123	134
23	95	224	1040	1410	976	2030	2040	394	230	143	103	112
24	90	218	785	4230	899	2080	1660	322	206	115	99	97
25	82	204	640	5450	780	2040	1330	295	219	106	89	85
26	77	191	546	2930	705	2030	1300	564	204	96	101	74
27	100	177	486	3140	669	1690	1550	1780	169	105	98	80
28	186	171	427	3190	1900	1810	1320	7240	146	172	92	192
29	295	185	380	2400	3740	3940	1170	15200	127	204	207	812
30	310	200	324	1820	---	3810	1490	4680	113	116	148	739
31	243	---	311	1410	---	2670	---	1770	---	167	102	---
TOTAL	7298	21798	23895	87143	46579	80168	46504	63950	35860	5627	9283	6298
MEAN	235	727	771	2811	1606	2586	1550	2063	1195	182	299	210
MAX	1590	5800	4580	8840	7820	10300	2930	15200	7780	391	2650	812
MIN	43	171	233	338	300	831	705	295	113	96	89	59
CFSM	.33	1.01	1.07	3.89	2.22	3.58	2.15	2.86	1.66	.25	.41	.29
IN.	.38	1.12	1.23	4.49	2.40	4.13	2.40	3.29	1.85	.29	.48	.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1996, BY WATER YEAR (WY)

MEAN	218	665	1366	1835	2139	2325	1698	1118	578	398	259	150
MAX	2843	2380	4935	5461	5905	7400	4633	5130	2710	2666	1700	827
(WY)	1990	1974	1991	1974	1956	1975	1972	1984	1989	1941	1942	1989
MIN	.084	.32	12.1	104	178	568	222	119	36.7	3.67	4.56	.68
(WY)	1954	1954	1954	1981	1941	1988	1963	1941	1966	1944	1930	1930

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1925 - 1996	
ANNUAL TOTAL	354765.8		434403			
ANNUAL MEAN	972		1187		1062	
HIGHEST ANNUAL MEAN					1808	1994
LOWEST ANNUAL MEAN					413	1988
HIGHEST DAILY MEAN	15900	May 19	15200	May 29	51300	Jan 30 1957
LOWEST DAILY MEAN	4.3	Sep 12	43	Oct 3	.00	Oct 11 1953
ANNUAL SEVEN-DAY MINIMUM	5.9	Sep 9	77	Aug 31	.00	Oct 11 1953
INSTANTANEOUS PEAK FLOW			17100	May 29	66100	Jan 30 1957
INSTANTANEOUS PEAK STAGE			26.61	May 29	43.40	Jan 30 1957
INSTANTANEOUS LOW FLOW			40	Oct 3	.00	Oct 11 1953
ANNUAL RUNOFF (CFSM)	1.35		1.64		1.47	
ANNUAL RUNOFF (INCHES)	18.28		22.38		19.98	
10 PERCENT EXCEEDS	2310		2860		2420	
50 PERCENT EXCEEDS	404		619		354	
90 PERCENT EXCEEDS	53		106		26	