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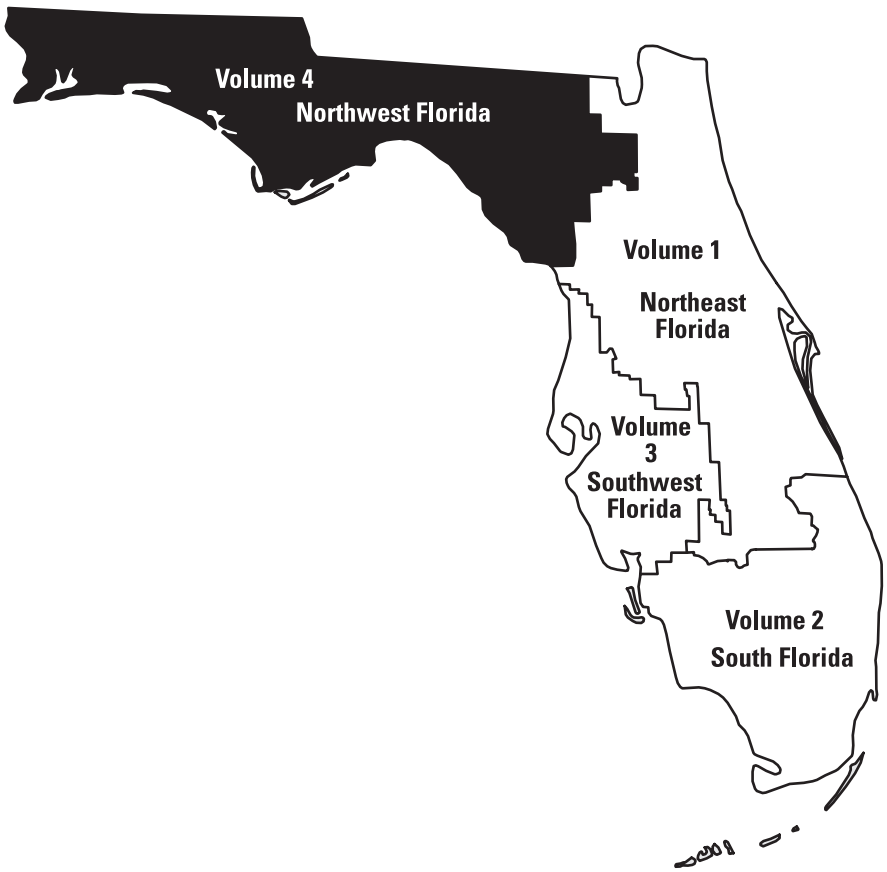
Water Resources Data Florida Water Year 1999

Volume 4. Northwest Florida

Water-Data Report FL-99-4



U.S. Department of the Interior
U.S. Geological Survey

Prepared in cooperation with the State of Florida and with other agencies

CALENDAR FOR WATER YEAR 1999

1998

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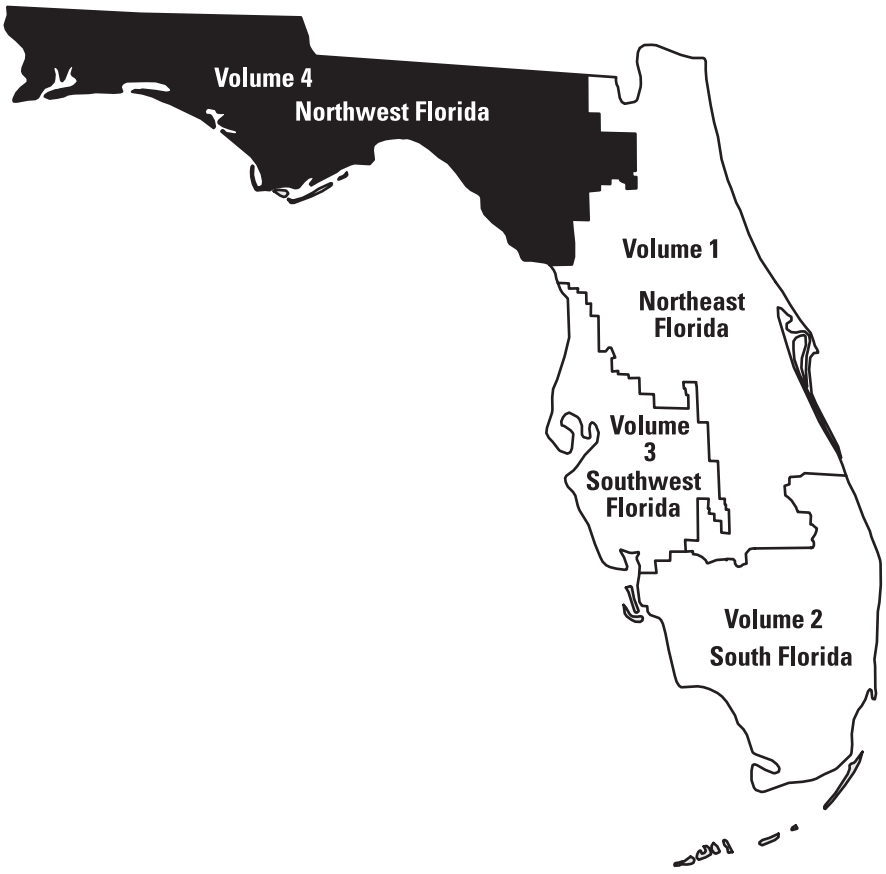
U.S. Department of the Interior
U.S. Geological Survey

Water Resources Data Florida Water Year 1999

Volume 4. Northwest Florida

By Marvin Franklin, Paul Meadows, and Ernie Alvarez

Water-Data Report FL-99-4



Prepared in cooperation with the
State of Florida and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

U. S. GEOLOGICAL SURVEY

Charles G. Groat, Director

Prepared in cooperation with the
State of Florida
and with other agencies as listed
under cooperation

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U.S. Geological Survey
227 North Bronough Street, Suite 3015
Tallahassee, Florida 32301

2000

PREFACE

This volume of the annual hydrologic data report of Florida is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Florida are contained in four volumes:

Volume 1. Northeast Florida
Volume 2. South Florida
Volume 3. Southwest Florida
Volume 4. Northwest Florida

This report was prepared for publication by Patsy R. Mixson under the supervision of M.A. Franklin, and P.E. Meadows. The following individuals contributed significantly to the collection, processing, and tabulation of the data:

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This report was prepared in cooperation with the State of Florida and with other agencies listed on page 1.

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13. ABSTRACT *(Maximum 200 words)*

This report series for the 1999 water year for the state of Florida consists of records for continuous or daily discharge for 354 streams, periodic discharge for 17 streams, continuous or daily stage for 121 streams, periodic stage for 1 stream, peak stage and discharge for 38 streams; continuous or daily elevations for 21 lakes, and periodic elevations for 42 lakes; continuous ground-water levels for 408 wells, and periodic ground-water levels for 1,715 wells; quality-of-water for 131 surface-water sites and 198 wells.

This volume (Volume 4, Northwest Florida) contains records of continuous or daily discharge for 54 streams, periodic discharge for 1 stream, continuous or daily stage for 15 streams, periodic stage for 1 stream, peak stage and discharge for 30 streams; continuous or daily elevations for 1 lake, periodic elevations for 1 lake; continuous ground-water levels for 1 well, periodic ground-water levels for 0 wells; and quality-of-water for 2 surface-water sites and 0 wells.

These data represent the National Water Data System records collected by the U.S. Geological Survey and cooperating local, State, and Federal agencies in Florida.

14. SUBJECT TERMS
*Florida, *Hydrologic data, *Surface water, *Ground water, *Water-quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water analyses, Elevations, Water wells

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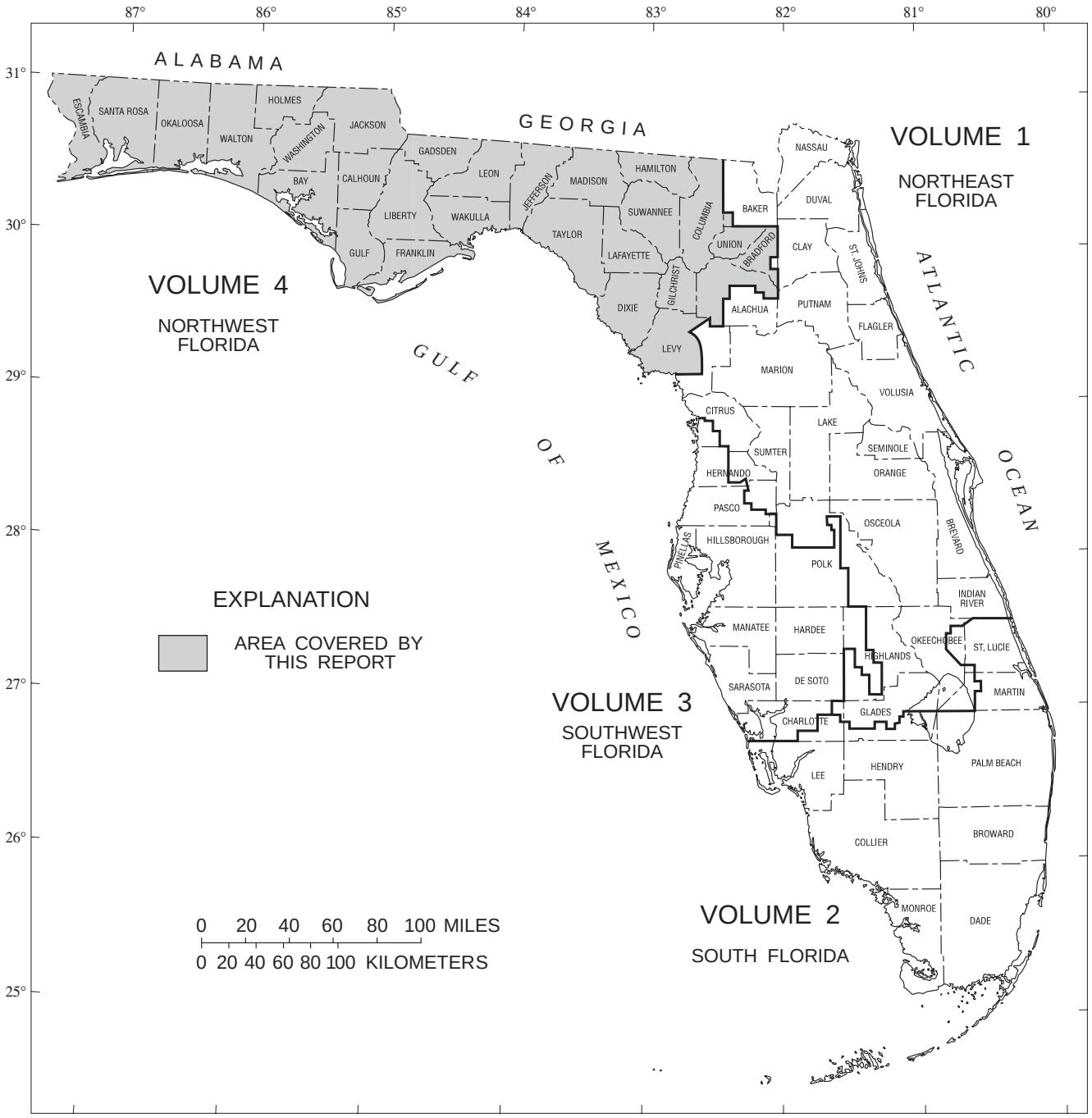

Figure 1. Geographic area covered by this report.

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ILLUSTRATIONS

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

[Letters after station names designate type of data: (d) discharge, (dm) discharge measurements only, (c) chemical, (b) biological, (m) microbiological, (s) sediment, (t) temperature, (e) elevation, gage heights, or contents]

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

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GROUND-WATER WELLS, BY COUNTY, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

The following continuous-record surface-water discharge stations (gaging stations) in Florida have been discontinued. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. Those stations with an asterisk (*) after the station number are currently operated as crest-stage partial-record stations. Discontinued project stations with less than 3 years of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page of this report.

Station name	Station number	Drainage area (mi^2)	Period of record
Waccasassa River near Otter Creek, FL	02313500	300†	1944-53
Otter Creek at Otter Creek, FL	02314000		1945-53
Tenmile Creek near Lebanon Station. F:	02314200	26	1963-92
Rocky Creek near Belmont, FL	02314986	50	1976-83
Hunter Creek near Belmont, FL	02315005	25.4	1979-88
Deep Creek near Suwannee Valley, FL	02315200	88.6	1976-81
			1990-98
Robinson Creek near Suwannee Valley, FL	02315392	27.4	1976-81
Swift Creek at Facil, FL	02315520	65.3	1976-88
Suwannee River at Suwannee Springs, FL	02315550	2630	1975-96
Alapaha River near Jennings, FL	02317620	1680	1976-87
Santa Fe River near Graham, FL	02320700	94.9	1957-98
Swift Creek near Lake Butler, FL	02321700	46.0	1957-60
Olustee Creek near Providence, FL	02321800	163	1957-60
Pareners Branch near Bland, FL	02321900	4.5	1993-96
Santa Fe River near High Springs, FL	02322000	950	1931-71
Blues Creek near Gainesville, FL	02322016	5.12	1984-94
Cannon Creek near Lake City, FL	02322616	2.33	1992-98
Suwannee River near Bell, FL	02323000	9390	1932-56
Fenholloway River at Foley, FL	02324500	120	1946-92
			1993-95
Aucilla River at Lamont, FL	02326500	747	1950-79;
			1981-82;
			1983-92
Aucilla River near Scanlon, FL	02326512	805	1977-97
Northeast Drainage Ditch at Weems Road, FL	02326845	17.1	1979-83
Munson Slough at Capital Circle, FL	02327017	52.9	1979-83
Little River near Quincy, FL	02329500	237	1950-91
Quincy Creek at S267 at Quincy, FL	02329534	16.8	1974-92
Quincy Creek at Quincy, FL	02329542	21.9	1974-78
Rocky Comfort Creek near Quincy, FL	02329700	9.46	1964-81
New River near Wilma, FL	02330300	81.7	1964-81
North Mosquito Creek at Chattahoochee, FL	02358500	57.9	1936-42
Apalachicola River near Wewahitchka, FL	02358754	17800	1950-96
Econfina Creek near Compass Lake, FL	02359350	40.5	1962-65
Econfina Creek near Fountain, FL	02359450	70.2	1965-78
Bear Creek near Youngstown, FL	02359550	67.2	1962-65
Choctawhatchee River at Caryville, FL	02365500	3499	1929-94
			1996-97
Seven Runs Bay near Redbay, FL	02365800	25.8	1969-70
Holmes Creek at Vernon, FL	02366000	386	1950-81
Magnolia Creek near Freeport, FL	02366900	11.2	1968-83

Station name	Station number	Drainage area (mi^2)	Period of record
Alaqua Creek near DeFuniak Springs, FL	02367000	65.6	1951-78
Alaqua Creek near Portland, FL	02367006	83.7	1977-94
Rocky Creek near Portland, FL	02367240	42.4	1980-83
Rocky Creek near Niceville, FL	02367250	67.0	1966-68
Turkey Creek near Niceville, FL	02367305	22.7	1966-68
Turkey Creek at SR123 near Niceville, FL	02367307	30.1	1980-81
Juniper Creek at State Hwy. 85 near Niceville, FL	02367310	27.6	1966-75, 1978-93
East Bay River near Wynnehaven Beach, FL	02367320	62.0	1966-68
Turkey Creek at Government RR near Niceville, FL	02367355	60.8	1977-81
Turtle Creek near Ft. Walton Beach, FL	02367388	14.3	1977
Turtle Creek near Ocean City, FL	02367390	22.3	1977-81
Yellow River at Milligan, FL	02368000	624	1938-93, 1996-98
Baggett Creek near Milligan, FL	02368300	7.80	1965-82
Shoal River near Mossy Head, FL	02368500	123	1951-78
Pond Creek near Dorcas, FL	02368800	94.8	1966-68
Yellow River near Holt, FL	02369500	1210	1933-41
Titi Creek near Crestview, FL	02368990	62.9	1966-68
Big Juniper Creek near Munson, FL	02370200	36.0	1958-67
West Fork Big Coldwater at Cobbtown, FL	02370300	39.5	1958-62
Pond Creek near Milton, FL	02370700	58.7	1958-79
Pine Barren Creek near Barth, FL	02376000	75.3	1952-94
Eightmile Creek near West Pensacola, FL	02376140	11.2	1988-91
Brushy Creek near Walnut Hill, FL	02376300	49.0	1958-91
Jacks Branch near Muscogee, FL	02376700	23.2	1958-62

† Includes drainage area for Otter Creek.

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State, local, and Federal agencies, obtains a large amount of data pertaining to the water resources of Florida each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Florida."

This report series for the 1999 water year for the state of Florida consists of records for continuous or daily discharge for 354 streams, periodic discharge for 17 streams, continuous or daily stage for 121 streams, periodic stage for 1 stream, peak stage and discharge for 38 streams; continuous or daily elevations for 21 lakes, and periodic elevations for 42 lakes; continuous ground-water levels for 408 wells, and periodic ground-water levels for 1,715 wells; quality-of-water for 131 surface-water sites and 198 wells.

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This series of annual reports for Florida began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the l975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Florida were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from Distribution Branch, Text products Section, U.S. Geological Survey, Branch of Information Services, Open-File Reports Section, Box 25286, Federal Center, Denver, CO 80225-00286.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report FL-99-4." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the Office Chief at the address given on the back of the title page or by telephone (850) 942-9500.

COOPERATION

The U.S. Geological Survey and agencies of the State of Florida have had cooperative agreements for the collection of water-resource records since 1930. Organizations that assisted in collecting the data in this report through cooperative agreement with the Survey are:

Florida Department of Environmental Protection
Northwest Florida Water Management District
Suwannee River Water Management District
County of Walton
City of Century
City of Perry
City of Tallahassee
Corps of Engineers, U.S. Army, Mobile District

Assistance with funds or services was given by the U.S. Army Corps of Engineer, Mobile District, in collecting records for 5 hydrologic gaging stations throughout northwest Florida.

SUMMARY OF HYDROLOGIC CONDITIONS

Rainfall

Rainfall across northwest Florida varied from 4 to more than 18 in. below normal for the 1999 water year. Based on rainfall data at 5 National Oceanic and Atmospheric Administration stations, (Perry, Lake City, Tallahassee, De Funiak Springs, and Pensacola), total rainfall for the 12-month period ranged from 43.79 in. at Lake City to 60.27 in. at De Funiak Springs. The cumulative monthly departures for the water year ranged from -4.03 in. at De Funiak Springs to -18.80 in. at Tallahassee. The distribution of rainfall differed slightly geographically and seasonally with the middle panhandle around DeFunik Springs and the Big Bend area around Perry receiving more than average rainfall for the spring quarter (April-June). All of the remaining areas were deficient for the entire year. Rainfall during the fall quarter (October-December), one of the dryer periods, ranged from 2.75 to 8.59 in. below normal across northwest Florida. During the winter quarter (January-March), normally the wet period in northwest Florida, rainfall departures from normal ranged from -7.40 in. at Tallahassee to -2.62 in. at De Funiak Springs. The spring quarter (April-June) departures from normal rainfall ranged from -2.37 in. at Pensacola to +6.87 in. at De Funiak Springs. Rainfall amounts during the summer quarter (July-September), also normally a wet period, ranged from 1.04 in. below normal at Lake City to 5.79 in. below normal at Perry. The following summary lists the cumulative rainfall and departure from the 30-year normal (1961-90) for each of the stations.

Cumulative rainfall and departure from the 30-year normal (1961-90)

Station	October - December		January - March		April - June		July - September		Water Year	
	Total Rain	Departure	Total Rain	Departure	Total Rain	Departure	Total Rain	Departure	Total Rain	Departure
Perry	2.74	-5.97	8.41	-4.87	18.35	+4.70	16.72	-5.79	46.22	-11.93
Lake City	3.83	-4.42	7.64	-5.41	13.41	-0.83	18.91	-1.04	43.79	-11.70
Tallahassee	3.23	-8.59	9.14	-7.40	15.31	-0.11	19.23	-2.70	46.91	-18.80
De Funiak Springs	9.89	-2.75	14.15	-2.62	21.53	+6.87	14.73	-5.53	60.27	-4.03
Pensacola	8.49	-3.55	11.55	-4.16	12.00	-2.37	15.28	-4.85	47.32	-14.93

Surface Water

Annual mean streamflow for the 1999 water year in northwest Florida ranged from 32 to 124 percent of the long-term average. Flow in the upper Suwannee and Santa Fe Rivers, with about 32 percent of normal was the lowest, and the Shoal River basin with 124 percent of normal was the highest. Generally, flows were about 30 to 60 percent of normal over the area east of the Apalachicola River and 100 to 125 percent west of the Apalachicola River. The above normal rainfall as a result of Hurricane Georges in late September 1998 resulted in maximum or near maximum monthly flows for October. The deficiency in rainfall during the fall and winter resulted in a steady decline in flows in the eastern part of the area until July when some recovery occurred. Flows declined from the October high to near normal by December and then remained near the average for the remainder of the year in the western part of the area.

Discharge hydrographs for some representative streams in northwest Florida are shown in figures 2 through 8. The upper graph (A) shows the 1999 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period of record at that site. The lower graph (B) shows the monthly mean discharge for the period 1990-1999.

Ground Water

A hydrograph for the USGS well near Wausau is shown in figure 9. The upper graph (A) shows the 1999 monthly maximum water level compared to the maximum, minimum, and mean monthly maximum water level for the period 1963-99. The lower graph (B) shows the monthly maximum water level for the period 1998-99. Water levels declined from above average in October to average by March and remained near normal for the remainder of the water year.

Water Quality

Insufficient water quality data was collected in north Florida during the water year to provide any analysis of conditions that exist in the area.

SANTA FE RIVER NEAR WORTHINGTON SPRINGS, FLORIDA

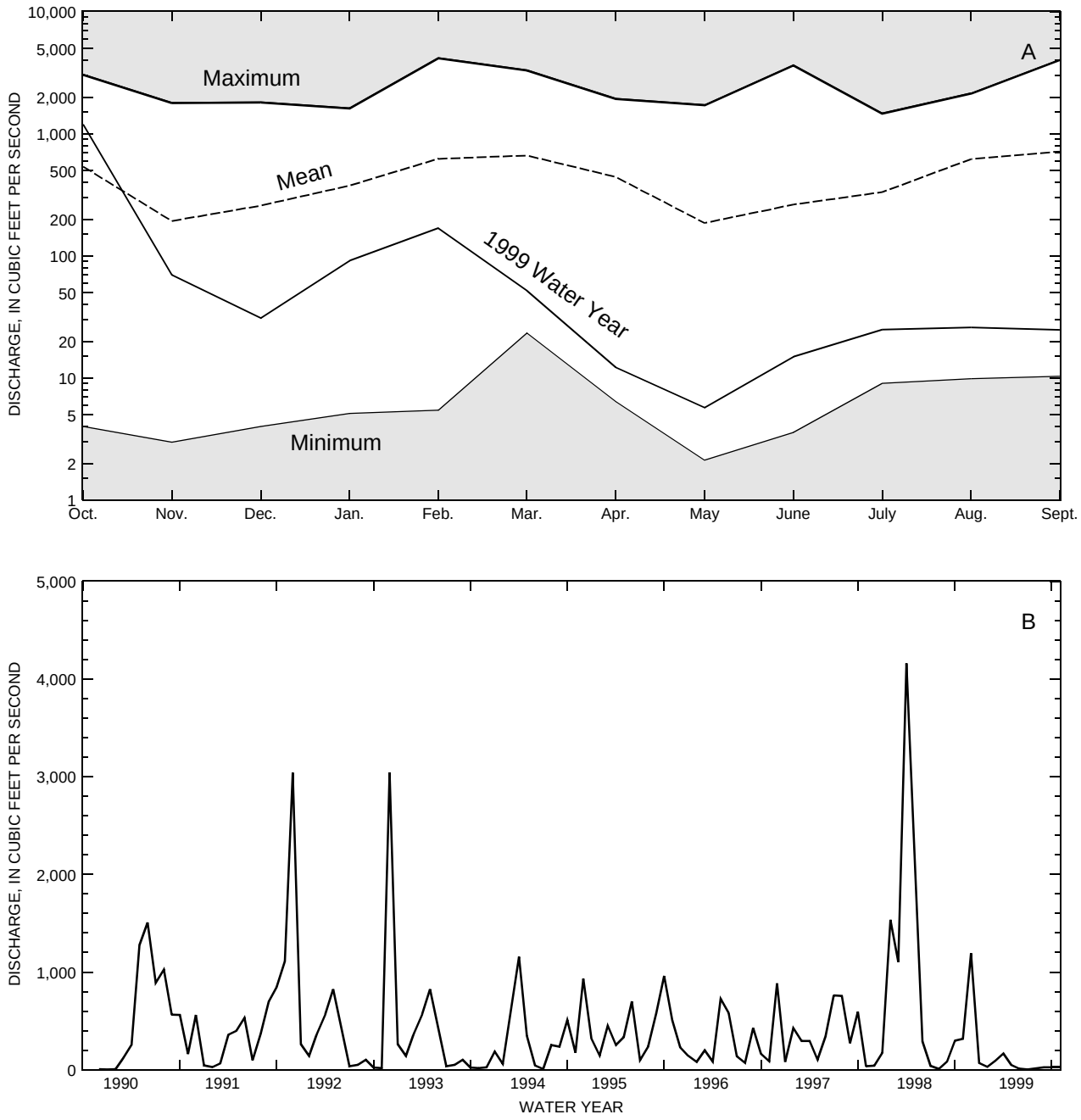

Figure 2. Santa Fe River near Worthington Springs (A) 1999 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period 1932-99, and (B) the monthly mean discharge for the period 1990-99.

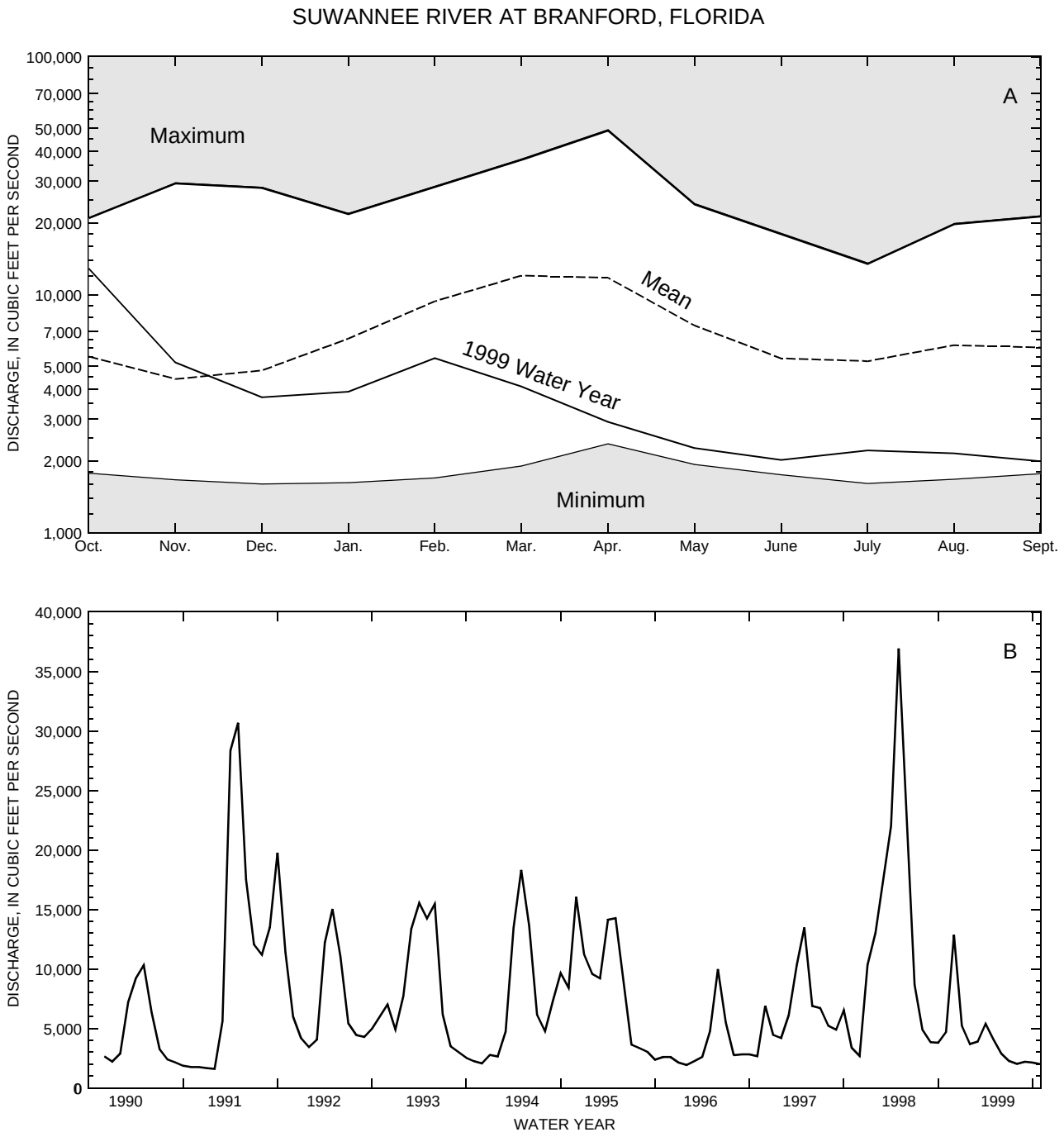

Figure 3. Suwannee River at Branford (A) 1999 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period 1931-99, and (B) the monthly mean discharge for the period 1990-99.

STEINHATCHEE RIVER NEAR CROSS CITY, FLORIDA

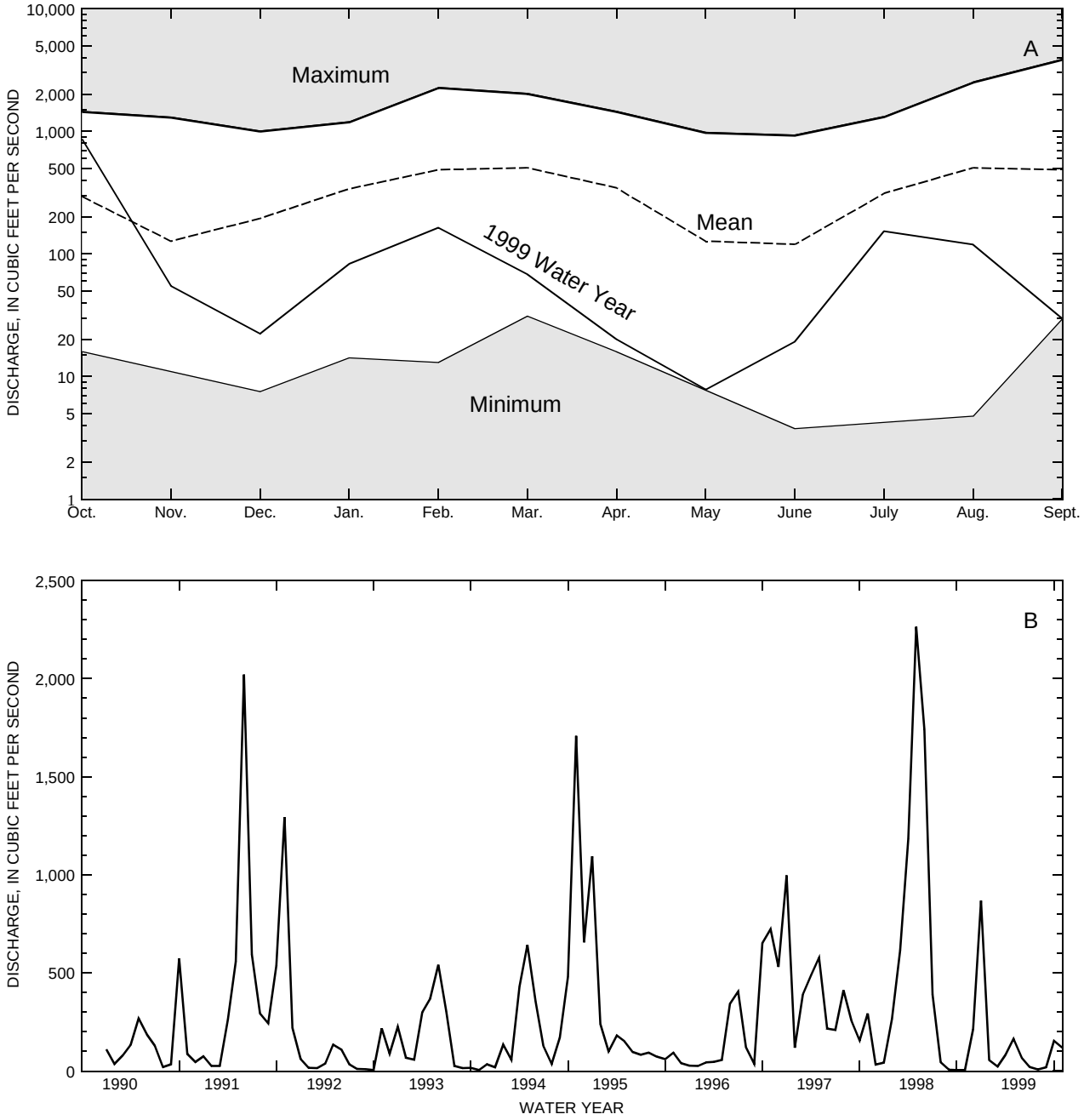

Figure 4. Steinhatchee River near Cross City (A) 1999 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period 1950-99, and (B) the monthly mean discharge for the period 1990-99.

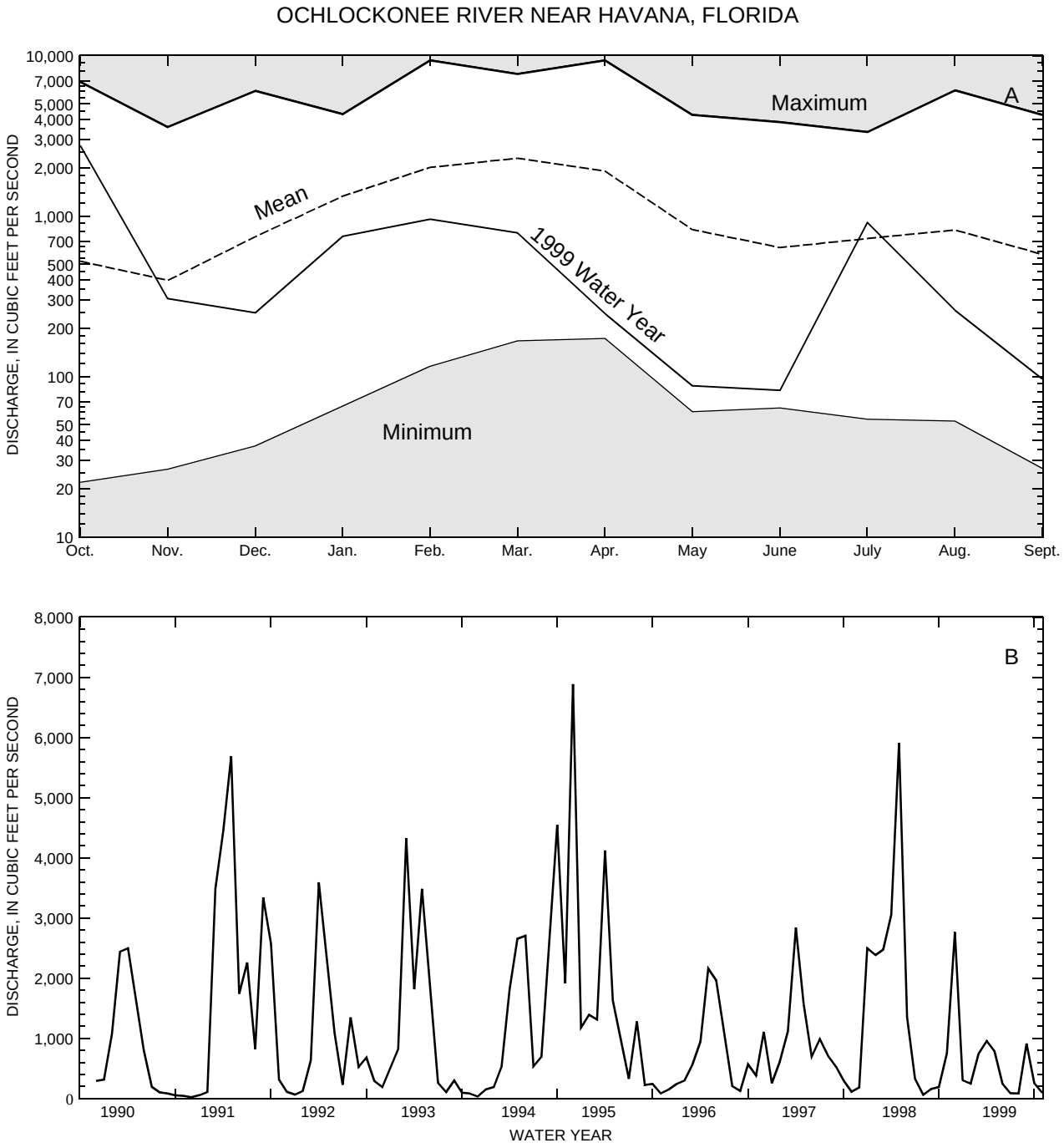

Figure 5. Ochlockonee River near Havana (A) 1999 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period 1926-99, and (B) the monthly mean discharge for the period 1990-99.

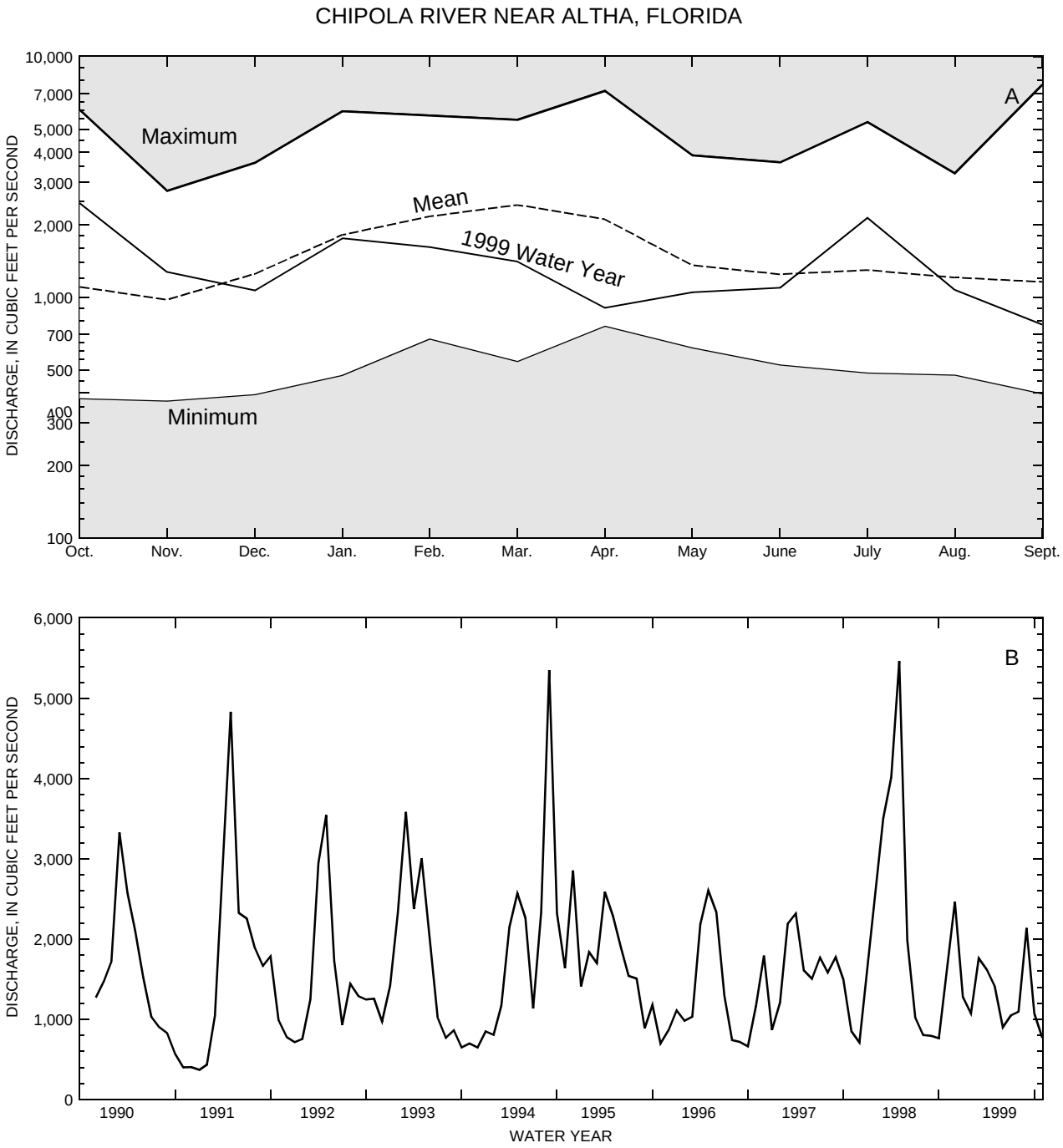

Figure 6. Chipola River near Altha (A) 1999 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period 1943-99, and (B) the monthly mean discharge for the period 1990-99.

SHOAL RIVER NEAR CRESTVIEW, FLORIDA

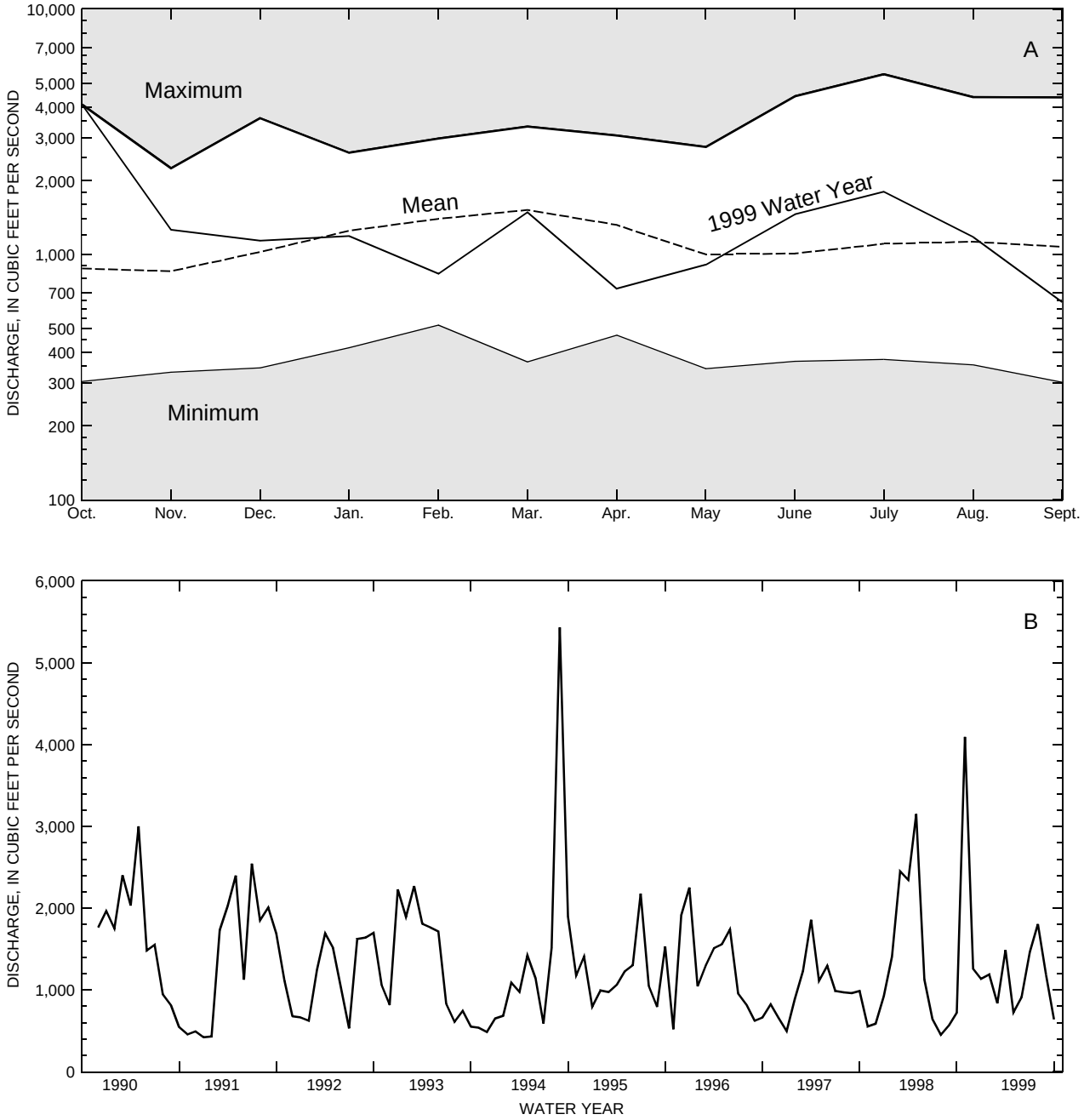

Figure 7. Shoal River near Crestview (A) 1999 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period 1938-99, and (B) the monthly mean discharge for the period 1990-99.

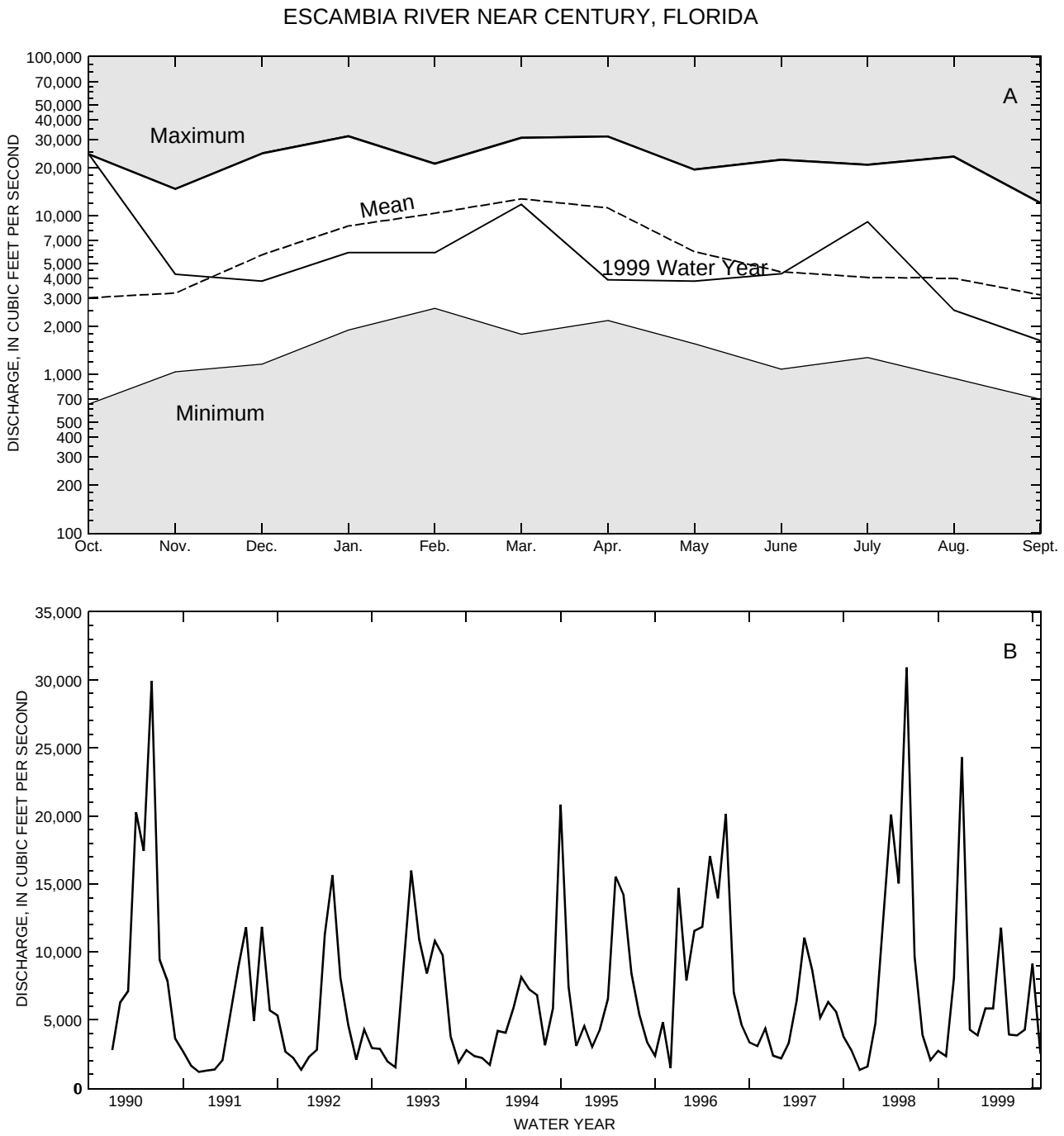

Figure 8. Escambia River near Century (A) 1999 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period 1934-99, and (B) the monthly mean discharge for the period 1990-99.

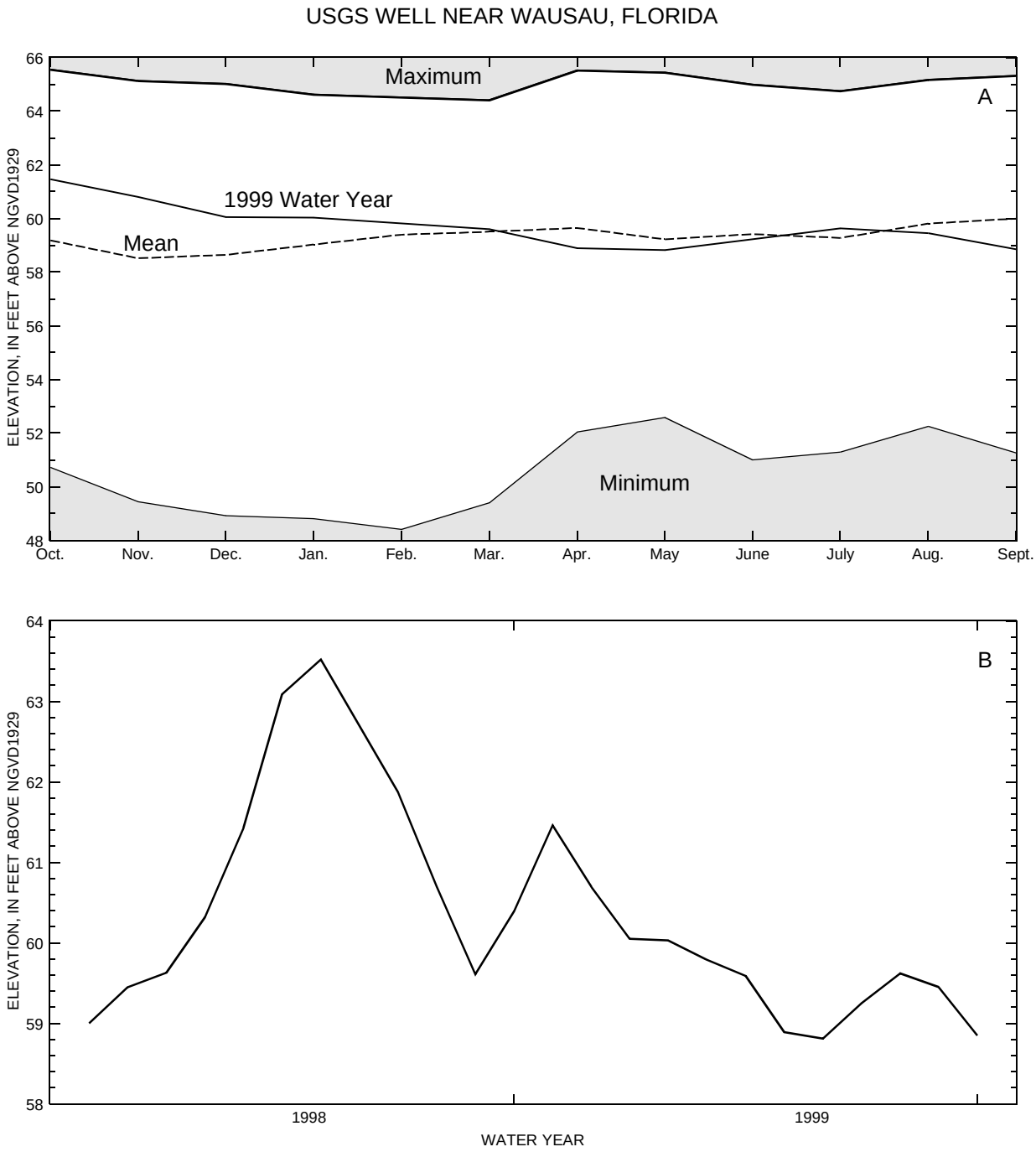

Figure 9. USGS Well near Wausau (A) Monthly maximum water level for the 1999 water year compared to maximum, minimum, and mean monthly maximum water levels for the period 1963-99 and (B) the monthly maximum water level for the period 1998-99.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 50 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 human activities.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within four of the Nation's largest river basins--the Mississippi, Columbia, Colorado, and Rio Grande. The network consists of 39 stations. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to accomplish the following objectives; (1) Provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 191 precipitation chemistry monitoring sites. (2) Provide the mechanism to evaluate the effectiveness of the significant reduction in SO_2 emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred. (3) Provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO_2 and NO_x scheduled to begin in 2000.

Data from the network, as well as information about individual sites, are available through the world wide web at:

http://nadp.nrel.colostate.edu/NADP

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 53 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies.

Additional information about the NAWQA Program is available through the world wide web at:

http://wwwrvares.er.usgs.gov/nawqa/

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1999 water year that began October 1, 1998, and ended September 30, 1999. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

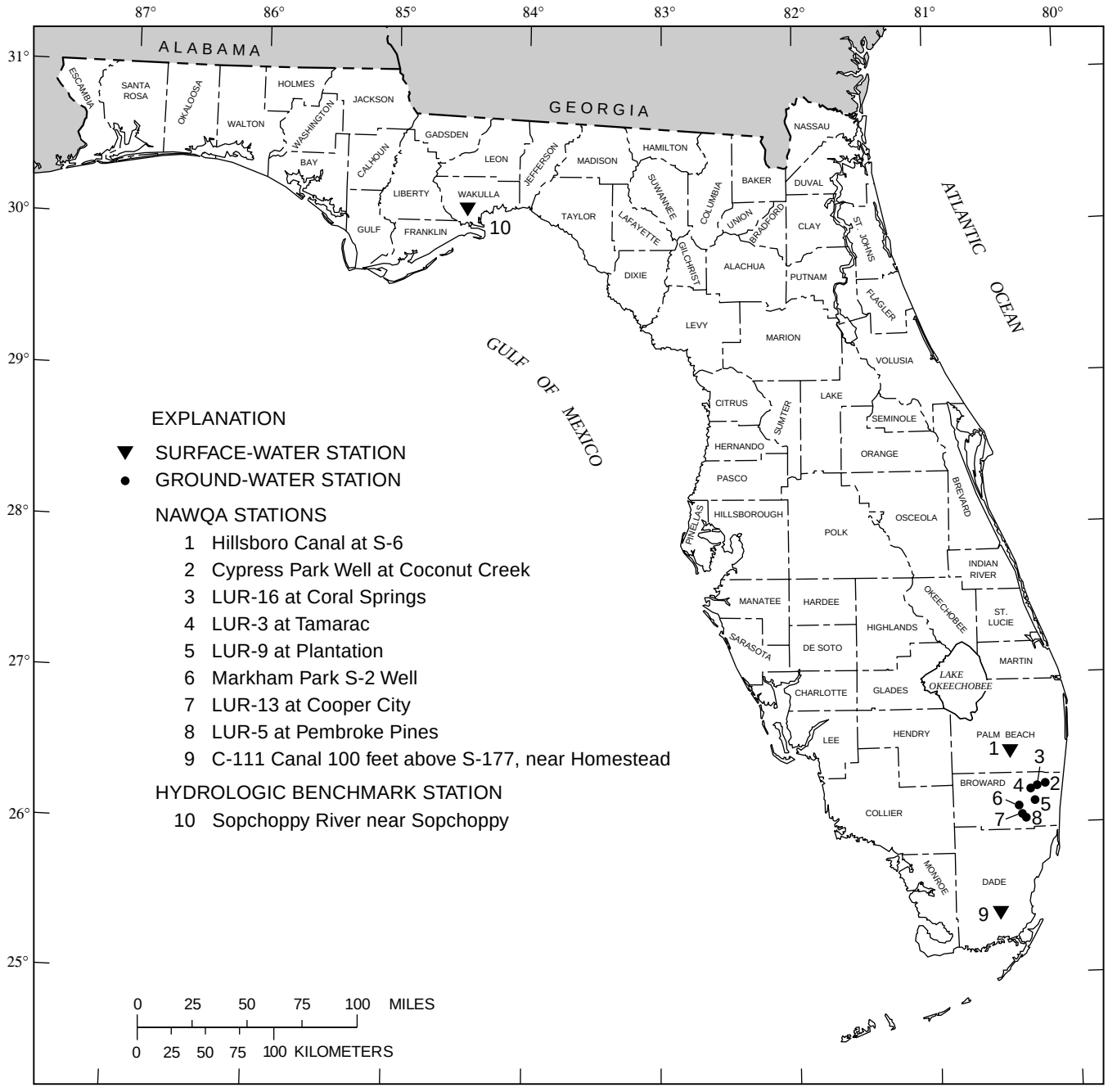

Figure 10. NAWQA stations in the State of Florida.

Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and for surface-water stations where only miscellaneous measurements are made.

Downstream Order System

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete number for each station, such as 02326500, which appears just to the left of the station name, includes the two-digit Part number "02" plus the 6 to 13 digit downstream-order number "326500." The part number refers to an area whose boundaries coincide with natural drainage lines; for example, Part "02" is the South Atlantic Slope and eastern Gulf of Mexico basins.

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a unique number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure 11, page 14.)

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a recording device through which either instantaneous or mean daily discharges may be computed for any period of time. Complete records of lake or reservoirs, similarly, are those for which stage or content may be computed for any period of time. They may be obtained using a recording device or daily readings. Because daily mean discharges or elevations commonly are published for such stations, they are referred to as "daily stations."

Location of all complete-record stations for which data are given in this report are shown in figures preceding each sub-basin.

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records."

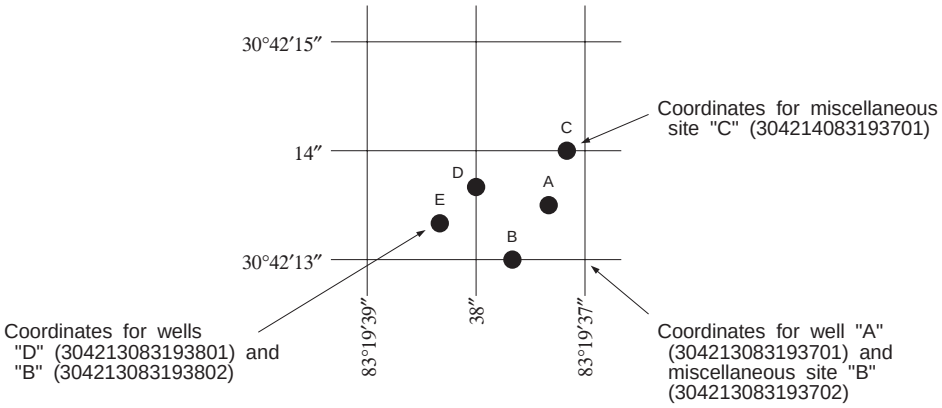

Figure 11. System for numbering wells and miscellaneous sites (latitude and longitude).

Data Collection and Computation

The base data collected at gaging stations consist of records of gage heights and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of gage height are obtained from either direct readings on a nonrecording gage or from a water-stage recorder that gives the fluctuations on a paper tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any gage height are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to define the extremes of discharge, they are made on the basis of indirect measurements of peak discharge; such as slope-area, contracted opening measurements, computations of flow over dams or weirs, step backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily figures. If the stage-discharge relation was subjected to change because of occasional or continual change in the physical features of the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by the technician are used in applying the gage-height corrections to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by the same method.

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

At some stations there is no relation between stage and discharge because of the flat stream gradients and/or tidal fluctuations. Discharge is determined from ratings which are based on a relation between recorded velocity index unit at a fixed point and mean velocity at a fixed measuring section, and a relation between recorded stage and cross-sectional area at the measuring site.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge. This happens when the recorder stops or otherwise fails

to operate properly, intakes are plugged, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

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

Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts, the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration.

Station Manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which records have been published for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that flow at it can reasonably be considered equivalent to flow at the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see Definition of Terms, page 24), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District Office (address given on the back of the title page of this report) to determine if the published records were ever revised after the station was discontinued. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, AND EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents.

Data Table of Daily Mean Values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second for the month; and the lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for each month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN."), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Statistics of Monthly Mean Data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as "FOR WATER YEARS _____-_____, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary Statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS ____-____," will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (see line headings below), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--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.)

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period. Note that secondary instantaneous peak discharges above a selected base discharge are stored in District computer files for stations meeting certain criteria. Those discharge values may be obtained by writing to the District Office. (See address on back of title page of this report.)

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

Acre-foot (AC-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.

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

Inches (INCHES) indicates the depth to which the drainage area would be covered if all the runoff for a given period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that is exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that is exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that is exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Accuracy of the Records

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

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true values; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second (ft^3/s) for values less than 1 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value.

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

Other Records Available

Information used in the preparation of the records in this publication, such as discharge measurement notes, gage-height records, temperature measurements, and rating tables is on file in the Tallahassee office of the Florida District. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the offices whose addresses are given on the back of the title page of this report.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represents the quality of the water in its natural state. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the natural water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see Definition of Terms, page 24) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

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

Sediment

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

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

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

Information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each complete-record station. Comments that follow clarify information presented under the various headings of the station description.

Manuscript

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

PRINTED OUTPUT	REMARK
E	Estimated value
>	Actual value is known to be greater than the value show
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
V	Analyte was detected in both the environmental sample and the associated blanks.
&	Biological organism estimated as dominant

Dissolved Trace-Element Concentrations

NOTE: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (µg/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the µg/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994.

Change in National Trends Network Procedures

NOTE: Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).

Water Quality-Control Data

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this district are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collect in this district are:

Field blank - a blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank - a blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank - a blank solution that is processed through all equipment used for collecting and processing an environmental sample similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank - a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank - a blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank - a blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used foran environmental sample.

Preservation blank - a blank solution that is treated with the sampler preservatives used for an environmental sample.

Reference Samples

Reference material is a solution or material prepared by a laboratory whose composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are: Sequential samples - a type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample - a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

Records of Ground-Water Levels

Ground-water level data from a statewide network of wells are published herein. The records include data from wells equipped with water-level recorders and data from wells where water levels are measured periodically.

Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table.

Water-level records are obtained from direct measurements with a steel tape, pressure gage, manometer, or from the graph or punched tape of a water-level recorder. The measurements in this report are given in feet above or below National Geodetic Vertical Datum of 1929 or in some tables as feet below land-surface datum. Land-surface datum is a datum plane that is approximately at land surface at each well. The elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description.

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

Data Presentation

Each well record consists of three parts, the station description and the data table of water levels observed during the water year. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings of the well description.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); a landline location designation; the hydrologic-unit number; and the distance and direction from a geographic point of reference; and the owner's name.

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

INSTRUMENTATION.--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on weekly, monthly, or some other frequency of measurement.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and son on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level are listed. For wells equipped with recorders, only abbrevi-

ated tables are published; generally, only water-level lows are listed for every fifth day and at the end of the month (EOM). The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that, for most sampling sites, they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes only slowly; therefore, for most general purposes, one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

Data Collection and Computation

Methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed at the end of the introductory text. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casing.

Data Presentation

The records of ground-water quality are published with the ground-water-level records for each county. Data for quality of ground water are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. The Remark Codes listed for surface-water-quality records are also applicable to ground-water-quality records.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at

http://www.water.usgs.gov

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various electronic formats. 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 District Offices (see address on the back of the title page).

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.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

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, 325,851 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 measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

Algae are mostly aquatic single-celled, colonial, or multicelled 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 phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "filtered" sample.

Annual runoff is the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters.

Cubic foot per second per square mile [CFSM, $(ft^3/s)/mi^2$] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area.

Inch (IN., in.) as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were uniformly distributed on it.

Aroclor is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type and the last two digits represent the weight percent of the hydrogen substituted chlorine.

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. This group includes coliforms that inhabit the intestine of warm-blooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that 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 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 that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that 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.

Enterococcus bacteria are commonly found in the feces of humans and other warm-blooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar and subsequent transfer to EIA medium. Enterococci include *Streptococcus feacalis, Streptococcus feacium,*

Streptococcus avium, and their variants.

Escherichia coli (E. coli) are bacteria present in the intestine and feces of warm-blooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium. Their concentrations are expressed as number of colonies per 100 mL of sample.

Base flow is flow in a channel sustained by ground-water discharge in the absence of direct runoff.

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

Benthic organisms (invertebrates) are the group of animals inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

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

Biomass is the amount of living matter present at any given time, expressed as 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. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square meter (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 is 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. 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.

Biomass pigment ratio is an indicator of the total proportion of periphyton which are autotrophic (plants). This is also called the Autotrophic Index.

Bottom material: See "Bed material."

Cells/volume refers to the number of plankton cells or natural units counted using a microscope and grid or counting cell. Results are generally reported as cells or units per milliliter.

Cells volume (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are frequently used in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (μm^3) is determined by obtaining critical cell measurements on cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

sphere $4/3\,\pi r^3$ cone $1/3\,\pi r^3 h$ cylinder $\pi r^3 h$.

From cell volume, total algal biomass expressed as biovolume ($\mu m^3/mL$) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes over all species.

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 BOD 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.

Colloid is any substance with particles in such a fine state of subdivision dispersed in a medium (for example, water) that they do not settle out; but not in so fine a state of subdivision that they can be said to be truly dissolved.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases the water level can rise above the ground surface, yielding a flowing well.

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.

Continuous-record station is a site that meets either of the following conditions:

1. Stage or streamflow are recorded at some interval on a continuous basis. The recording interval is usually 15 minutes, but may be less or more frequent.

2. Water-quality, sediment, or other hydrologic measure-ments are recorded at least daily.

Control designates a feature in the channel downstream from a gaging station that physically influences the water-surface elevation and thereby determines the stage-discharge relation at the station. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, 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 saltwater.

Cubic foot per second (CFS, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second, 448.8 gallons per minute, or 0.02832 cubic meters per second.

Cubic foot per second-day (CFS-DAY, Cfs-day, [$(ft^3/s)/d$]) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.9835 acre-feet, 646,317 gallons, or 2,447 cubic meters.

Daily record is a summary of streamflow, sediment, or water-quality values computed from data collected with sufficient frequency to obtain reliable estimates of daily mean values.

Daily record station is a site for which daily records of streamflow, sediment, or water-quality values are computed.

Datum, as used in this report, is an elevation above mean sea level to which all gage height readings are referenced.

Diel is of or pertaining to a 24-hour period of time; a regular daily cycle.

Discharge, or flow, is the volume of water (or more broadly, volume of fluid including solid- and dissolved-phase material), that passes a given point in a given period of time.

Annual 7-day minimum is the lowest mean discharge for 7 consecutive days in a 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.)

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

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

Dissolved refers to that material in a representative water sample that passes through a 0.45-micrometer 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 oxygen (DO) content of water in equilibrium with air is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved solids, with small temperature changes having the more significant offset. Photosynthesis and respiration may cause diurnal variations in dissolved-oxygen concentration in water from some streams.

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 that 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 0.4926 to reflect the change. Alternatively, alkalinity concentration (as mg/L $CaCO_3$) can be converted to carbonate concentration by multiplying by 0.60.

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

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

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

Drainage area of a site on a stream is that area, measured in a horizontal plane, that has a common outlet at the site for its surface runoff. 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 Earth's surface that is occupied by a drainage system with a common outlet for its surface runoff (see "Drainage area").

Dry weight refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue.

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

Gage datum is the elevation of the zero point of the reference gage from which gage height is determined as compared to sea level (see "Datum"). This elevation is established by a system of levels from known benchmarks, by approximation from topographic maps, or by geographical positioning system.

Gage height (G.H.) is the water-surface elevation referenced to the 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 site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

Ground-water level is the elevation of the water table or another potentiometric surface at a particular location.

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

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. *See NOAA web site: http://www.co-ops.nos.noaa.gov/tideglos.html*

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

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic

feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the U.S. Geological Survey. Each hydrologic unit is identified by an 8-digit number.

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

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation

$$I = I_o e^{-\lambda L} \quad ,$$

where I_o is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light attenuation coefficient is defined as

$$\lambda = -\frac{1}{L}\log_e \frac{I}{I_o} \quad .$$

Lipid is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. *See NOAA web site: http://www.co-ops.nos.noaa.gov/tideglos.html*

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that are usually arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

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

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

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 (UG/G, µg/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 kilogram (UG/KG, µg/kg) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter.

Microsiemens per centimeter (US/CM, µS/cm) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent 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.

Miscellaneous site, or miscellaneous station, is a site where streamflow, sediment, and/or water-quality data are collected once, or more often on a random or discontinuous basis.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

Nanograms per liter (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

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 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. *See NOAA web site:*

http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88

Nekton are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

Nephelometric turbidity unit (NTU) is the measurement for reporting turbidity that is based on use of a standard suspension of Formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

Open or screened interval is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

Organic carbon (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediments. May be reported as dissolved organic carbon (DOC), suspended organic carbon (SOC), or total organic carbon (TOC).

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 (m^2), 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.

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

Particle size is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method utilizes the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, Sedigraph) 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:

Classification	Size (mm)			Method of analysis
Clay	0.00024	-	0.004	Sedimentation
Silt	.004	-	.062	Sedimentation
Sand	.062	-	2.0	Sedimentation/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 or **percent of total** is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, or volume.

Periodic station is a site where stage, discharge, sediment, chemical, or other hydrologic measurements are made one or more times during a year, but at a frequency insufficient to develop a daily record.

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. Periphyton are useful indicators of water quality.

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

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7 are termed "acidic," and solutions with a pH greater than 7 are termed "basic." Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

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

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL of sample).

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 (*Cyanophyta*) 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.

Euglenoids (*Euglenophyta*) are a group of algae that are usually free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark.

Fire algae (*Pyrrhophyta*) are a group of algae that are free-swimming unicells characterized by a red pigment spot.

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.

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

Polychlorinated naphthalenes (PCN's) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCB's) and have been identified in commercial PCB preparations.

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 (carbon method) by the plants.

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [mg C/(m^2/time)] for periphyton and macrophytes or per volume [mg C/(m^3/time)] for phytoplankton. Carbon method defines 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.

Primary productivity (oxygen method) is expressed as milligrams of oxygen per area per unit time [mg O/(m^2/time)] for periphyton and macrophytes or per volume [mg O/(m^3/time)] for phytoplankton. Oxygen method defines 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.

Radioisotopes are isotopic forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

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.

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or non-exceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the non-exceedances of the $7Q_{10}$ occur less than 10 years after the previous non-exceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous non-exceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

Replicate samples are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

River mile is the distance of a point on a river measured in miles from the river's mouth along the low-water channel.

River mileage is the linear distance along the meandering path of a stream channel determined in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council.

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

Sea level refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of 1929. *See*: *http://www.co-ops.nos.noaa.gov/glossary/gloss_n.html#NGVD*

Sediment is solid material that is transported by, suspended in, or deposited from water. It originates mostly from disintegrated rocks; it also 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 or very close to the bed. In this report, bed load is considered to consist of particles in transit from the bed to an elevation equal to the top of the bed-load sampler nozzle (usually within 0.25 ft of the streambed).

Bed-load discharge (tons per day) is the quantity of sediment moving as bed load, reported as dry weight, that passes a cross section in a given time.

Suspended sediment is the sediment that 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). The entire sample is used for the analysis.

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

Suspended-sediment discharge (tons/day) is the quantity of sediment moving in suspension, reported as dry weight, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is a term that refers to material in suspension. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment 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, reported as dry weight, that passes a cross section in a given time.

Total sediment load or total load is a term that refers to the total sediment (bed load plus suspended-sediment load) that is in transport. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with total sediment discharge.

Seven-day 10-year low flow (7Q10, $7Q_{10}$) is the minimum flow averaged over 7 consecutive days that is expected to occur on average, once in any 10-year period. The 7Q10 has a 10-percent chance of occurring in any given year.

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 from 55 to 75 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.

Stable isotope ratio (per MILL/MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific waters, to evaluate mixing of different waters, as an aid in determining reaction rates, and other chemical or hydrologic processes.

Stage: See "Gage height."

Stage-discharge relation is the relation between the water-surface elevation, termed stage (gage height), and the volume of water flowing in a channel per unit time.

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.

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 plexiglass strips for periphyton collection.

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

Surface area of a lake or impoundment is that area encompassed by the boundary of the lake or impoundment as shown on USGS topographic maps, or on other available maps or photographs. The computed surface areas reflect the water levels of the lakes or impoundments at the times when the information for the maps or photographs was obtained.

Surficial bed material is the top 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 suspended-sediment sample that is retained on a 0.45-micrometer 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 suspended-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. 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.

Synoptic Studies are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

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

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

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 is 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, tons/d) is the rate representing a mass of 1 ton of a constituent in streamflow passing a cross section in 1 day. It is equivalent to 2,000 pounds per day, or 0.9072 metric tons per day.

Total is the total amount of a given constituent in a representative 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 suspended-sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total discharge is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

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

Total length (fish) is the straight-line distance from the anterior point of a fish specimen's snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

Total load refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

Total recoverable is the amount of a given constituent that is in solution after a representative 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.

Turbidity is a measurement of the collective optical properties of a water sample that cause light to be scattered and absorbed rather than transmitted in straight lines; the higher the intensity of scattered light, the higher the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU) or Formazin turbidity units (FTU) depending on the method and equipment used.

Volatile organic compounds (VOC's) are organic compounds that can be isolated from the water phase of a

sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOC's are manmade chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

Water level is the water-surface elevation or stage of the free surface of a body of water above or below any datum (see "Gage height"), or the surface of water standing in a well, usually indicative of the position of the water table or other potentiometric surface.

Water table is the surface of a ground-water body at which the water is at atmospheric pressure.

Water-table aquifer is an unconfined aquifer within which is found the water table.

Water year in U.S. 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, 1999, is called the "1999 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.

Well is an excavation (pit, hole, tunnel), generally cylindrical in form and often walled in, drilled, dug, driven, bored, or jetted into the ground to such a depth as to penetrate water-yielding geologic material and allow the water to flow or to be pumped to the surface.

Wet weight refers to the weight of animal tissue or other substance including its contained water.

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.

The reports listed below are for sale by the U.S. Geological Survey, Branch of Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

Book 1. Collection of Water Data by Direct Measurement

Section D. Water Quality

1-D1. *Water temperature—influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J.F. Ficke, and G. F. Smoot: USGS–TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI Book 1, Chapter D2. 1976. 24 pages.

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

2-D1. *Application of surface geophysics to ground-water investigations*, by A.A. R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS–TWRI Book 2, Chapter D1. 1974. 116 pages.

2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS–TWRI Book 2, Chapter D2. 1988. 86 pages.

Section E. Subsurface Geophysical Methods

2-E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS–TWRI Book 2, Chapter E1. 1971. 126 pages.

2-E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS–TWRI Book 2, Chapter E2. 1990. 150 pages.

Section F. Drilling and Sampling Methods

2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS–TWRI Book 2, Chapter F1. 1989. 97 pages.

Book 3. Applications of Hydraulics

Section A. Surface-Water Techniques

3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS–TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS–TWRI Book 3, Chapter A2. 1967. 12 pages.

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

3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS-TWRI Book 3, Chapter A4. 1967. 44 pages.

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

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

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

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

3-A9. *Measurement of time of travel in streams by dye tracing,* by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS–TWRI Book 3, Chapter A9. 1989. 27 pages.

3-Al0. *Discharge ratings at gaging stations,* by E.J. Kennedy: USGS–TWRI Book 3, Chapter A10. 1984. 59 pages.

3-A11. *Measurement of discharge by the moving-boat method,* by G.F. Smoot and C.E. Novak: USGS–TWRI Book 3, Chapter A11. 1969. 22 pages.

3-A12. *Fluorometric procedures for dye tracing,* Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS–TWRI Book 3, Chapter A12. 1986. 34 pages.

3-A13. *Computation of continuous records of streamflow,* by E.J. Kennedy: USGS–TWRI Book 3, Chapter A13. 1983. 53 pages.

3-A14. *Use of flumes in measuring discharge,* by F.A. Kilpatrick and V.R. Schneider: USGS–TWRI Book 3, Chapter A14. 1983. 46 pages.

3-A15. *Computation of water-surface profiles in open channels,* by Jacob Davidian: USGS–TWRI Book 3, Chapter A15. 1984. 48 pages.

3-A16. *Measurement of discharge using tracers,* by F.A. Kilpatrick and E.D. Cobb: USGS–TWRI Book 3, Chapter A16. 1985. 52 pages.

3-A17. *Acoustic velocity meter systems,* by Antonius Laenen: USGS–TWRI Book 3, Chapter A17. 1985. 38 pages.

3-A18. *Determination of stream reaeration coefficients by use of tracers,* by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS–TWRI Book 3, Chapter A18. 1989. 52 pages.

3-A19. *Levels at streamflow gaging stations,* by E.J. Kennedy: USGS–TWRI Book 3, Chapter A19. 1990. 31 pages.

3-A20. *Simulation of soluable waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS–TWRI Book 3, Chapter A20. 1993. 38 pages.

3-A21. *Stream-gaging cableways,* by C. Russell Wagner: USGS–TWRI Book 3, Chapter A21. 1995. 56 pages.

Section B. Ground-Water Techniques

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

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction,* by G.D. Bennett: USGS–TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers,* by J.E. Reed: USGS–TWRI Book 3, Chapter B3. 1980. 106 pages.

3-B4. *Regression modeling of ground-water flow,* by R.L. Cooley and R.L. Naff: USGS–TWRI Book 3, Chapter B4. 1990. 232 pages.

3-B4. *Supplement 1. Regression modeling of ground-water flow --Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems,* by R.L. Cooley: USGS–TWRI Book 3, Chapter B4. 1993. 8 pages.

3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction,* by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS–TWRI Book 3, Chapter B5. 1987. 15 pages.

3-B6. *The principle of superposition and its application in ground-water hydraulics,* by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS–TWRI Book 3, Chapter B6. 1987. 28 pages.

3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow,* by E.J. Wexler: USGS–TWRI Book 3, Chapter B7. 1992. 190 pages.

Section C. Sedimentation and Erosion Techniques

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

3-C2. *Field methods for measurement of fluvial sediment,* by H.P. Guy and V.W. Norman: USGS–TWRI Book 3, Chapter C2. 1970. 59 pages.

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

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

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

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

Section B. Surface Water

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

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

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

Section D. Interrelated Phases of the Hydrologic Cycle

4-D1. *Computation of rate and volume of stream depletion by wells,* by C.T. Jenkins: USGS–TWRI Book 4, Chapter D1. 1970. 17 pages.

Book 5. Laboratory Analysis

Section A. Water Analysis

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments,* by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI Book 5, Chapter A1. 1989. 545 pages.

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

5-A3. *Methods for the determination of organic substances in water and fluvial sediments,* edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI Book 5, Chapter A3. 1987. 80 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples,* by L.J. Britton and P.E. Greeson, editors: USGS–TWRI Book 5, Chapter A4. 1989. 363 pages.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments,* by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS–TWRI Book 5, Chapter A5. 1977. 95 pages.

5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments,* by L.C. Friedman and D.E. Erdmann: USGS–TWRI Book 5, Chapter A6. 1982. 181 pages.

Section C. Sediment Analysis

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

Book 6. Modeling Techniques

Section A. Ground Water

6-A1. *A modular three-dimensional finite-difference ground-water flow model,* by M.G. McDonald and A.W. Harbaugh: USGS–TWRI Book 6, Chapter A1. 1988. 586 pages.

6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model,* by S.A. Leake and D.E. Prudic: USGS–TWRI Book 6, Chapter A2. 1991. 68 pages.

6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual,* by L.J. Torak: USGS–TWRI Book 6, Chapter A3. 1993. 136 pages.

6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions,* by R.L. Cooley: USGS–TWRI Book 6, Chapter A4. 1992. 108 pages.

6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS–TWRI Book 6, Chapter A5, 1993. 243 pages.

6-A6. A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction, by Eric D. Swain and Eliezer J. Wexler. 1996. 125 pages.

Book 7. Automated Data Processing and Computations

Section C. Computer Programs

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS–TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS–TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI Book 7, Chapter C3. 1981. 110 pages.

Book 8. Instrumentation

Section A. Instruments for Measurement of Water Level

8-A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS–TWRI Book 8, Chapter A1. 1968. 23 pages.

8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI Book 8, Chapter A2. 1983. 57 pages.

Section B. Instruments for Measurement of Discharge

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

Book 9. Handbooks for Water-Resources Investigations

Section A. National Field Manual for the Collection of Water-Quality Data

9-A1. *National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.

9-A2. *National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.

9-A3. *National Field Manual for the Collection of Water-Quality Data: Cleaning of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A3. 1998. 75 p.

9-A4. *National Field Manual for the Collection of Water-Quality Data: Collection of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.

9-A5. *National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999, 149 p.

9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI Book 9, Chapter A6. 1998. Variously paginated.

9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, by D.N. Myers and F.D. Wilde: USGS–TWRI Book 9, Chapter A7. 1997. 49 pages.

9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI Book 9, Chapter A8. 1998. 48 pages.

9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS–TWRI Book 9, Chapter A9. 1998. 60 pages.

STAGE, DISCHARGE, AND WATER QUALITY OF STREAMS

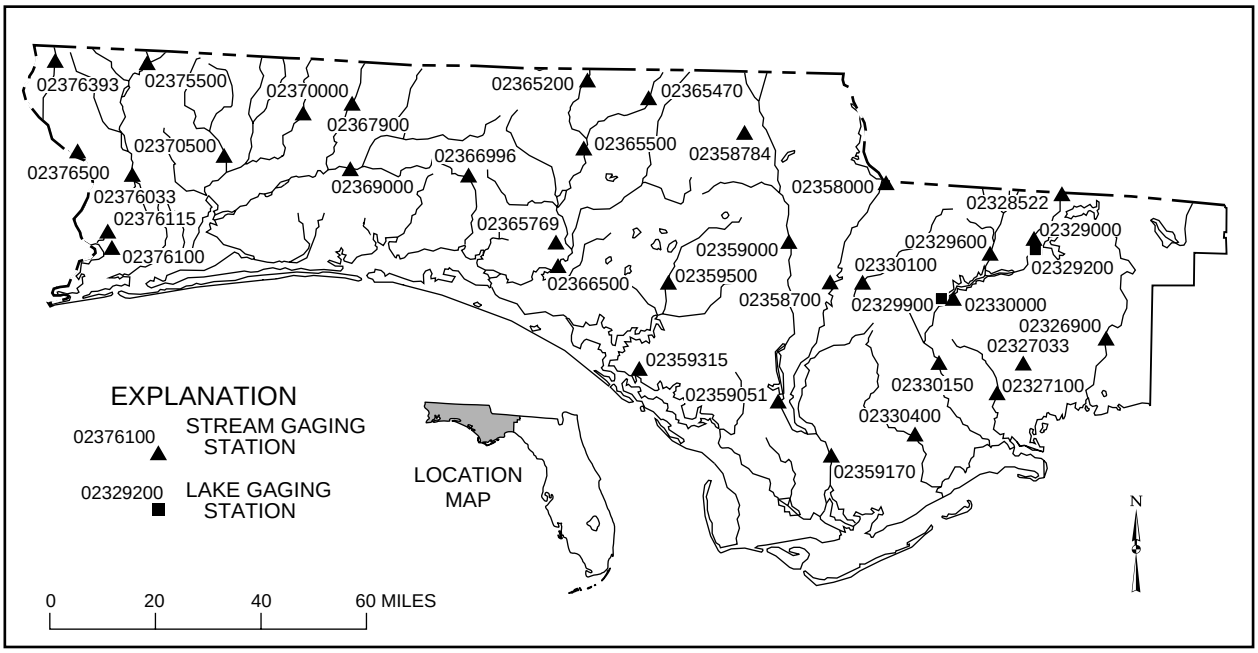

Figure 12. Location of stream gaging and lake gaging stations in Northwest Florida Water Management District.

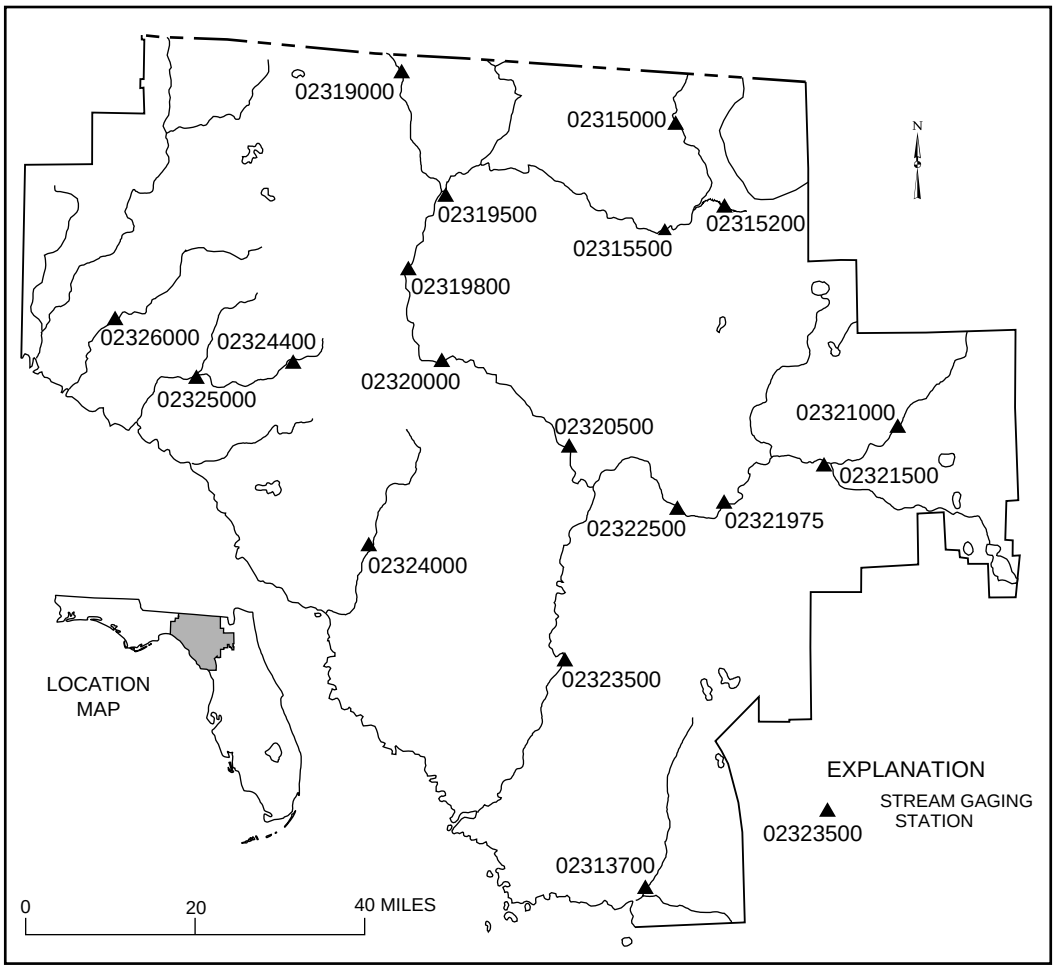

Figure 13. Location of stream gaging stations in Suwannee River Water Management District.

02313700 WACCASASSA RIVER NEAR GULF HAMMOCK, FL

LOCATION.--Lat 29°12′14″, long 82°46′09″ in SW¼ sec. 2, T. 15 S., R.15 E., Levy County, Hydrologic Unit 03110101, near right bank at abandoned railroad grade, 0.5 mi upstream from Otter Creek, 3.6 mi upstream from mouth, and 4 mi southwest of Gulf Hammock.

DRAINAGE AREA.--480 mi^2, approximately, including that of Otter Creek.

PERIOD OF RECORD.--March 1963 to September 1978. November 1980 to September 1984 (fragmentary). October 1984 to September 1992, October 1998 to September 1999.

REVISED RECORDS.--WSP 2105: 1969. WRD FL-72-1: Drainage area.

GAGE.--Water-stage and water-current meter recorders. Datum of gage is 10.51 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 24, 1980, water-stage and deflection-meter recorders at same site at datum 10.00 ft higher.

REMARKS.--Records poor. Flow affected by tide. Discharge computed from continuous velocity record obtained from water-current meter. Records include flow of Otter Creek. Above bankfull stage, discharge measurements are made along abandoned railroad fill and include all flow from about 1.5 mi northwest to 0.8 mi northeast of gaging station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e150	201	238	247	167	252	216	133	81	206	114	58
2	e225	227	222	e210	276	233	202	153	73	229	114	69
3	e300	214	214	357	235	160	177	137	129	226	101	24
4	e375	348	196	256	229	204	107	122	129	194	71	58
5	e450	339	218	239	241	186	134	56	178	186	52	54
6	e525	225	193	175	222	198	152	31	126	331	174	80
7	e600	229	191	164	160	170	99	e20	70	e210	406	108
8	e675	184	176	154	200	194	95	12	36	86	401	106
9	e750	166	168	167	177	e200	e85	59	184	123	347	123
10	e825	164	156	285	198	251	76	124	140	122	287	97
11	e900	208	154	170	129	177	139	180	205	81	268	142
12	e1000	190	e140	221	257	93	188	169	247	114	320	103
13	e900	e180	197	e300	316	e70	236	175	167	93	219	81
14	e750	223	308	e360	261	160	133	141	86	96	175	81
15	603	237	162	426	228	367	e200	217	121	108	178	65
16	529	192	e195	194	218	203	338	128	155	113	156	51
17	444	245	226	258	185	236	225	135	242	96	134	27
18	377	239	209	232	203	186	183	62	247	80	139	33
19	387	223	232	231	165	140	171	45	159	92	120	e45
20	349	203	187	221	226	149	121	122	136	54	128	57
21	342	219	249	195	211	97	118	69	170	55	125	125
22	354	172	216	122	196	184	39	138	188	62	153	136
23	363	179	180	145	102	149	53	144	171	76	146	116
24	323	153	187	496	127	105	e130	81	191	95	141	97
25	286	157	197	344	87	e125	211	160	198	110	151	133
26	238	159	190	296	186	147	142	153	207	133	138	134
27	221	179	175	215	217	190	153	167	114	113	125	142
28	175	127	e165	271	200	155	171	191	192	123	101	109
29	125	169	164	315	---	208	175	180	197	104	95	108
30	158	199	309	319	---	219	195	125	213	127	78	126
31	248	---	250	317	---	132	---	136	---	121	109	---
MEAN	450	205	202	255	201	179	155	121	158	128	170	89.6
MAX	1000	348	309	496	316	367	338	217	247	331	406	142
MIN	125	127	140	122	87	70	39	12	36	54	52	24
IN.	1.08	.48	.49	.61	.44	.43	.36	.29	.37	.31	.41	.21

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1999, BY WATER YEAR (WY)

MEAN	212	139	190	276	392	371	215	119	150	236	500	398
MAX	771	359	485	707	964	909	814	428	709	1169	1724	2355
(WY)	1966	1986	1965	1965	1965	1978	1970	1964	1966	1964	1965	1964
MIN	46.0	31.6	48.0	71.3	101	59.8	41.8	-5.67	32.7	55.5	-16.8	29.1
(WY)	1985	1992	1992	1992	1968	1985	1968	1985	1967	1977	1989	1991

SUMMARY STATISTICS	FOR 1999 WATER YEAR		WATER YEARS 1963 - 1999	
ANNUAL MEAN	193		288	
HIGHEST ANNUAL MEAN			629	1965
LOWEST ANNUAL MEAN			130	1968
HIGHEST DAILY MEAN	e1000	Oct 12	11400	Sep 12 1964
LOWEST DAILY MEAN	12	May 8	-2310	Aug 31 1985
INSTANTANEOUS PEAK FLOW	2340	Feb 18	12200	Sep 12 1964
INSTANTANEOUS PEAK STAGE	13.11	Feb 18	16.96	Sep 12 1964
ANNUAL RUNOFF (INCHES)	5.46		8.15	
10 PERCENT EXCEEDS	318		595	
50 PERCENT EXCEEDS	175		156	
90 PERCENT EXCEEDS	81		33	

e Estimated

0231427398 ALLIGATOR CREEK NEAR FARGO, GA

LOCATION.--Lat 30°48′02″, long 82°30′38″, Clinch County, Hydrologic Unit 03110201, on upstream side of concrete bridge on Perimeter Road in Superior Forest, 8.5 mi northeast of Fargo.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--November 1998 to September 1999, gage height only.

GAGE.--Water-stage recorder.

REMARKS.--No estimated daily gage heights. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 4.63 ft, Feb. 1, 1999; minimum gage height, 1.59 ft, June 24, 1999

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 4.63 ft, Feb. 1; minimum gage height, 1.59 ft, June 24.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	4.13	4.11	4.60	4.54	4.23	3.89	3.06	1.92	3.47	3.55
2	---	---	4.12	4.14	4.62	4.52	4.24	3.87	3.02	2.09	3.43	3.52
3	---	---	4.12	4.32	4.61	4.51	4.23	3.84	3.00	2.18	3.41	3.48
4	---	---	4.11	4.31	4.62	4.50	4.21	3.81	3.03	2.34	3.39	3.44
5	---	---	4.10	4.29	4.60	4.49	4.20	3.79	3.03	2.55	3.35	3.41
6	---	---	4.10	4.28	4.59	4.47	4.18	3.80	3.06	2.63	3.30	3.37
7	---	---	4.09	4.27	4.58	4.47	4.17	3.82	3.04	3.00	3.32	3.33
8	---	---	4.08	4.25	4.56	4.45	4.15	3.86	3.04	3.88	3.38	3.30
9	---	---	4.07	4.26	4.55	4.45	4.14	3.83	3.01	3.97	3.39	3.27
10	---	---	4.06	4.28	4.55	4.43	4.12	3.80	3.01	3.98	3.38	3.25
11	---	---	4.06	4.27	4.55	4.42	4.10	3.77	3.01	3.96	3.35	3.21
12	---	---	4.07	4.26	4.54	4.41	4.08	3.74	2.98	3.99	3.32	3.17
13	---	---	4.09	4.25	4.53	4.40	4.05	3.72	3.02	4.02	3.28	3.14
14	---	---	4.09	4.24	4.53	4.44	4.04	3.70	3.12	4.03	3.26	3.10
15	---	---	4.08	4.27	4.52	4.46	4.02	3.67	3.10	4.01	3.35	3.07
16	---	---	4.07	4.27	4.52	4.45	4.01	3.64	3.08	3.99	3.34	3.04
17	---	---	4.06	4.26	4.52	4.43	4.00	3.61	3.07	3.95	3.31	2.99
18	---	---	4.05	4.29	4.58	4.40	3.99	3.58	3.06	3.92	3.28	2.97
19	---	---	4.04	4.29	4.59	4.36	3.97	3.54	3.02	3.91	3.24	2.99
20	---	4.22	4.04	4.28	4.57	4.35	3.95	3.51	2.98	3.88	3.20	3.06
21	---	4.21	4.03	4.27	4.56	4.34	3.93	3.47	2.79	3.85	3.17	3.08
22	---	4.20	4.03	4.26	4.55	4.33	3.91	3.44	1.94	3.82	3.14	3.09
23	---	4.20	4.03	4.35	4.54	4.32	3.89	3.41	1.70	3.80	3.12	3.07
24	---	4.20	4.03	4.61	4.54	4.30	3.87	3.37	1.64	3.77	3.10	3.04
25	---	4.19	4.03	4.60	4.53	4.29	3.86	3.33	1.72	3.74	3.30	3.01
26	---	4.18	4.10	4.58	4.52	4.28	3.85	3.29	1.67	3.71	3.32	3.01
27	---	4.17	4.12	4.57	4.51	4.27	3.82	3.26	1.66	3.67	3.33	3.20
28	---	4.16	4.12	4.55	4.53	4.25	3.84	3.22	1.69	3.63	3.60	3.30
29	---	4.15	4.13	4.54	---	4.24	3.90	3.18	1.75	3.60	3.62	3.32
30	---	4.14	4.14	4.53	---	4.23	3.90	3.14	1.84	3.56	3.61	3.34
31	---	---	4.12	4.54	---	4.21	---	3.10	---	3.52	3.58	---
MEAN	---	---	4.08	4.34	4.56	4.39	4.03	3.58	2.64	3.51	3.34	3.20
MAX	---	---	4.14	4.61	4.62	4.54	4.24	3.89	3.12	4.03	3.62	3.55
MIN	---	---	4.03	4.11	4.51	4.21	3.82	3.10	1.64	1.92	3.10	2.97

0231427399 BAY CREEK NEAR FARGO, GA

LOCATION.--Lat 30°47′37″, long 82°26′27″, Clinch County, Hydrologic Unit 03110201, on right bank, 0.5 mi northeast of Perimeter Road in Superior Forest, and about 10.5 mi northeast of Fargo.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--November 1998 to September 1999, gage height only.

GAGE.--Water-stage recorder.

REMARKS.--No estimated daily gage heights. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 4.60 ft, Feb. 8, 1999; minimum gage height, .44 ft, July 27 to Aug. 24, 1999, and Sept. 10-26, 1999.

.EXTREMES FOR CURRENT YEAR.--Maximum gage height, 4.60 ft, Feb. 8; minimum gage height, .44 ft, July 27 to Aug. 24, and Sept. 10-26.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	1.53	1.09	3.90	3.36	1.38	.63	.46	.46	.44	.73
2	---	---	1.50	1.12	4.13	3.24	1.38	.61	.46	.46	.44	.68
3	---	---	1.45	1.65	4.25	3.16	1.32	.57	.46	.47	.44	.64
4	---	---	1.41	1.57	4.40	3.09	1.26	.53	.46	.46	.44	.60
5	---	---	1.37	1.53	4.50	3.00	1.20	.56	.46	.46	.44	.57
6	---	---	1.33	1.51	4.54	2.91	1.15	.60	.46	.48	.44	.55
7	---	---	1.29	1.51	4.57	2.83	1.09	.63	.46	.52	.44	.53
8	---	---	1.25	1.50	4.59	2.73	1.03	.67	.46	.60	.44	.53
9	---	---	1.21	1.52	4.58	2.62	.97	.61	.46	.56	.44	.49
10	---	---	1.16	1.61	4.58	2.55	.93	.57	.46	.58	.44	.45
11	---	---	1.12	1.58	4.56	2.46	.89	.53	.46	.53	.44	.44
12	---	---	1.11	1.56	4.54	2.38	.85	.50	.46	.62	.44	.44
13	---	---	1.12	1.54	4.51	2.30	.81	.49	.46	.59	.44	.44
14	---	---	1.09	1.53	4.45	2.35	.78	.47	.46	.56	.44	.44
15	---	---	1.05	1.65	4.39	2.40	.75	.46	.46	.60	.44	.44
16	---	---	1.01	1.65	4.33	2.35	.73	.46	.46	.72	.44	.44
17	---	---	.98	1.65	4.27	2.29	.73	.46	.46	.64	.44	.44
18	---	---	.95	1.68	4.24	2.22	.71	.46	.46	.59	.44	.44
19	---	---	.93	1.69	4.17	2.15	.69	.46	.46	.56	.44	.44
20	---	2.02	.92	1.65	4.10	2.09	.66	.46	.46	.58	.44	.44
21	---	1.96	.91	1.63	4.02	2.06	.64	.46	.46	.66	.44	.44
22	---	1.92	.91	1.61	3.94	2.02	.62	.46	.46	.70	.44	.44
23	---	1.86	.90	1.90	3.85	1.93	.59	.46	.46	.73	.44	.44
24	---	1.83	.89	3.10	3.75	1.86	.57	.46	.46	.69	.47	.44
25	---	1.80	.90	3.12	3.65	1.78	.58	.46	.46	.63	.74	.44
26	---	1.76	1.07	3.15	3.54	1.74	.57	.46	.46	.57	.62	.47
27	---	1.70	1.10	3.26	3.43	1.66	.55	.46	.46	.48	.68	.78
28	---	1.65	1.08	3.39	3.39	1.58	.61	.46	.46	.44	1.27	.75
29	---	1.63	1.12	3.49	---	1.50	.67	.46	.46	.44	.98	.71
30	---	1.58	1.13	3.55	---	1.43	.64	.46	.46	.44	.86	.80
31	---	---	1.11	3.64	---	1.37	---	.46	---	.44	.78	---
MEAN	---	---	1.13	2.02	4.18	2.30	.85	.51	.46	.56	.53	.53
MAX	---	---	1.53	3.64	4.59	3.36	1.38	.67	.46	.73	1.27	.80
MIN	---	---	.89	1.09	3.39	1.37	.55	.46	.46	.44	.44	.44

02314274 SUWANNEE RIVER AT SILL NEAR FARGO, GA

LOCATION.--Lat 30°48′14″, long 82°25′03″, in Okefenokee National Wildlife Refuge and Wilderness Area, Charlton County, Hydrologic Unit 03110201, at southern control structure on Okefenokee Swamp Sill, 12 mi northeast of Fargo.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1, 1998 to September 30, 1999.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records good, except for estimated daily discharges, which are fair.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1200	e595	200	135	473	408	176	52	7.8	16	73	77
2	e1520	e549	195	137	e500	392	176	51	7.6	17	69	72
3	e1720	e510	190	169	e525	383	170	51	7.5	18	68	67
4	e1800	e475	185	172	e560	373	164	50	6.3	20	65	63
5	e1760	e445	180	175	e585	360	157	49	6.2	21	62	59
6	e1720	e417	176	178	e610	347	150	48	6.3	23	59	55
7	e1680	e392	171	182	e630	336	142	48	6.1	26	57	53
8	e1680	e372	167	184	e635	322	135	47	6.0	29	56	52
9	e1720	e354	162	188	e635	311	125	47	5.9	32	56	50
10	e1760	e340	157	197	e630	304	117	46	6.0	35	55	49
11	e1800	e326	153	197	e620	293	110	44	6.0	38	54	47
12	e1840	e312	151	195	e610	283	104	43	5.8	43	53	45
13	e1840	e300	150	194	e600	272	97	42	5.6	45	51	44
14	e1800	e289	147	194	e590	277	91	41	5.5	47	50	43
15	e1760	e278	142	201	e580	283	86	40	5.5	47	57	42
16	e1720	e270	137	202	571	276	82	38	6.4	68	56	42
17	e1680	e262	134	203	559	269	79	35	9.9	76	55	42
18	e1640	e254	130	206	552	264	75	32	12	85	54	40
19	e1600	e246	126	208	539	258	71	27	13	101	52	38
20	e1520	e244	123	205	525	253	67	23	13	115	50	37
21	e1480	e240	120	203	510	250	64	19	13	123	49	37
22	e1400	239	118	201	498	245	60	16	13	126	52	37
23	e1310	235	116	224	482	237	56	15	12	128	52	37
24	e1250	229	114	348	467	229	53	13	12	124	53	37
25	e1160	226	114	361	451	221	53	12	12	119	71	36
26	e1050	222	123	374	434	217	53	11	12	114	75	36
27	e936	217	128	393	419	210	52	11	12	107	80	36
28	e848	212	129	416	414	201	53	10	13	100	98	37
29	e775	211	132	432	---	193	52	9.6	13	93	96	40
30	e710	206	136	441	---	184	52	9.1	15	85	90	46
31	e650	---	136	455	---	177	---	8.4	---	78	83	---
MEAN	1462	316	147	244	543	278	97.4	31.9	9.18	67.7	62.9	46.5
MAX	1840	595	200	455	635	408	176	52	15	128	98	77
MIN	650	206	114	135	414	177	52	8.4	5.5	16	49	36

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

MEAN	1462	316	147	244	543	278	97.4	31.9	9.18	67.7	62.9	46.5
MAX	1462	316	147	244	543	278	97.4	31.9	9.18	67.7	62.9	46.5
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	1462	316	147	244	543	278	97.4	31.9	9.18	67.7	62.9	46.5
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 1999 WATER YEAR	
ANNUAL MEAN	275	
HIGHEST DAILY MEAN	e1840	Oct 12
LOWEST DAILY MEAN	5.5	Jun 14
ANNUAL SEVEN-DAY MINIMUM	5.8	Jun 9
INSTANTANEOUS PEAK FLOW	e1840	Oct 12
INSTANTANEOUS LOW FLOW	5.3	Jun 4
10 PERCENT EXCEEDS	614	
50 PERCENT EXCEEDS	128	
90 PERCENT EXCEEDS	13	

e Estimated

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998 to September 1999.

DATE	TIME	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	GAGE HEIGHT (FEET) (00065)	COLOR (PLATINUM-COBALT UNITS) (00080)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)
FEB 1999											
10...	1745	19.0	764	113.77	320	70	3.3	3.7	3.9	<1	<.010
APR											
20...	1005	18.3	759	112.31	320	78	4.4	3.9	3.9	2	.010
JUN											
16...	1350	31.3	758	--	--	78	6.4	4.0	--	--	--
AUG											
04...	1212	28.8	760	112.49	480	98	1.4	3.9	3.8	<1	.020

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C) (00689)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)
FEB 1999										
10...	<.010	.85	<.020	.030	41	.30	.60	.40	3.0	<.10
APR										
20...	<.010	.92	<.020	<.020	--	--	.70	.50	3.4	<.10
JUN										
16...	--	--	--	--	44	2.6	--	--	--	--
AUG										
04...	<.010	1.5	<.020	.020	--	--	.70	.50	3.6	<.10

DATE	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BERYLLIUM, DIS-SOLVED (UG/L AS BE) (01010)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)
FEB 1999										
10...	5.3	.20	<.10	5.3	<1	<1	<.50	<.5	<1.0	<1
APR										
20...	6.6	<.20	<.10	4.1	<1	<1	<.50	<.5	<1.0	<1
JUN										
16...	--	--	--	--	--	--	--	--	--	--
AUG										
04...	5.6	.30	<.10	7.1	<1	<1	<.50	<.5	<1.0	<1

DATE	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR) (01032)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)
FEB 1999										
10...	<5	<1	<1.0	<1	320	<1.0	<1	<1.0	<1	5.0
APR										
20...	<5	<1	1.0	1	480	<1.0	<1	<1.0	<1	6.0
JUN										
16...	--	--	--	--	--	--	--	--	--	--
AUG										
04...	<5	7	<1.0	<1	880	<1.0	<1	<1.0	4	8.0

DATE	VANADIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	SELENIUM, TOTAL (UG/L AS SE) (01147)	TANNIN AND LIGNIN (MG/L) (32240)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)
FEB 1999										
10...	<1	4.8	<1	<1	--	96	.020	<.1	<.10	69
APR										
20...	<1	110	<1	<1	11	111	.020	<.1	<.10	77
JUN										
16...	--	--	--	--	9.8	--	--	--	--	--
AUG										
04...	<1	5.7	<1	<1	14	135	.020	<.1	<.10	89

023142741 NORTH FORK SUWANNEE RIVER AT SILL NEAR FARGO, GA

LOCATION.--Lat 30°48′58″, long 82°24′49″, in Okefenokee National Wildlife Refuge and Wilderness Area, Charlton County, Hydrologic Unit 03110201, at northern control structure on Okefenokee Swamp Sill, 12.5 mi northeast of Fargo.

DRAINAGE AREA.--Indeterminate.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1, 1998 to September 30, 1999.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records good, except for estimated daily discharges, which are fair.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e225	e112	26	21	86	75	35	23	2.0	11	28	28
2	e285	e103	26	21	94	73	35	23	1.9	13	28	27
3	e322	e96	26	25	99	71	35	23	1.8	13	27	27
4	e338	e89	25	25	106	69	34	23	2.5	14	27	27
5	e330	e83	25	25	110	67	33	22	3.0	15	27	26
6	e322	e77	25	25	112	64	32	22	3.1	16	27	26
7	e315	e73	25	25	113	62	31	22	3.0	19	27	26
8	e315	e68	24	25	114	60	30	22	3.4	23	27	26
9	e322	e64	24	26	114	58	29	22	3.3	24	27	26
10	e330	e60	24	26	113	56	28	21	3.4	25	27	26
11	e338	e57	23	26	112	55	28	20	3.7	25	26	26
12	e345	e54	23	26	112	53	27	20	3.3	26	26	25
13	e345	e51	23	26	110	51	27	19	3.1	27	26	25
14	e338	e48	23	26	108	52	26	18	3.1	27	26	25
15	e330	e44	22	27	106	53	26	17	3.1	28	27	25
16	e322	e41	21	27	104	52	26	16	3.5	29	26	24
17	e315	e39	21	27	101	51	25	15	7.3	29	26	24
18	e308	e38	20	28	100	50	25	14	9.1	29	26	24
19	e300	e36	20	28	98	49	25	13	9.4	30	26	24
20	e285	e35	19	28	96	48	25	11	9.5	31	26	24
21	e278	e34	18	27	94	48	24	9.0	9.3	32	26	24
22	e262	e33	18	27	91	47	24	7.5	9.0	32	26	24
23	e246	e32	18	32	88	46	24	6.5	8.6	32	26	24
24	e234	e31	18	57	86	44	23	5.6	8.3	32	26	24
25	e218	e30	18	59	83	43	24	5.0	8.0	31	28	24
26	e196	e30	19	61	80	42	23	4.4	8.0	31	28	24
27	e176	e29	20	65	77	41	23	4.0	8.4	30	28	25
28	e159	e28	20	70	77	39	23	3.2	8.8	30	29	26
29	e145	e27	21	73	---	38	23	2.9	9.3	29	28	27
30	e133	e27	21	74	---	37	23	2.6	10	29	28	27
31	e122	---	21	77	---	36	---	2.3	---	28	28	---
MEAN	274	52.3	21.8	36.6	99.4	52.6	27.2	14.2	5.67	25.5	26.9	25.3
MAX	345	112	26	77	114	75	35	23	10	32	29	28
MIN	122	27	18	21	77	36	23	2.3	1.8	11	26	24

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

MEAN	274	52.3	21.8	36.6	99.4	52.6	27.2	14.2	5.67	25.5	26.9	25.3
MAX	274	52.3	21.8	36.6	99.4	52.6	27.2	14.2	5.67	25.5	26.9	25.3
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	274	52.3	21.8	36.6	99.4	52.6	27.2	14.2	5.67	25.5	26.9	25.3
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 1999 WATER YEAR	
ANNUAL MEAN	55.1	
HIGHEST DAILY MEAN	e345	Oct 12
LOWEST DAILY MEAN	1.8	Jun 3
ANNUAL SEVEN-DAY MINIMUM	2.3	May 29
INSTANTANEOUS PEAK FLOW	e345	Oct 12
INSTANTANEOUS LOW FLOW	1.5	Jun 3
10 PERCENT EXCEEDS	112	
50 PERCENT EXCEEDS	27	
90 PERCENT EXCEEDS	9.2	

e Estimated

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1998 to September 1999.

DATE	TIME	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	GAGE HEIGHT (FEET) (00065)	COLOR (PLATINUM-COBALT UNITS) (00080)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (MG/L) (00530)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)
FEB 1999											
10...	1400	--	--	--	--	--	--	--	--	--	--
10...	1507	18.6	764	114.19	320	70	2.5	3.8	3.9	<1	<.010
APR											
20...	0927	17.8	759	112.67	320	80	3.5	3.9	3.9	3	.010
JUN											
16...	1315	29.8	758	--	--	74	4.4	4.0	--	--	--
AUG											
04...	0942	28.1	760	112.83	480	96	1.9	3.8	3.8	3	.020

DATE	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C) (00689)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)
FEB 1999										
10...	--	--	--	--	--	--	--	--	--	--
10...	<.010	.95	<.020	.050	42	.30	.60	.40	2.9	<.10
APR										
20...	<.010	.93	.020	<.020	--	--	.70	.50	3.5	.10
JUN										
16...	--	--	--	--	44	3.0	--	--	--	--
AUG										
04...	<.010	1.5	<.020	<.020	--	--	.70	.50	3.7	<.10

023142741 NORTH FORK SUWANNEE RIVER AT SILL NEAR FARGO, GA--Continued

DATE	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)
FEB 1999										
10...	--	--	--	--	--	--	--	--	--	--
10...	5.0	.30	<.10	5.9	<1	<1	<.50	<.5	<1.0	<1
APR										
20...	6.6	<.20	<.10	3.5	<1	<1	<.50	<.5	<1.0	<1
JUN										
16...	--	--	--	--	--	--	--	--	--	--
AUG										
04...	5.9	.20	<.10	7.9	<1	<1	<.50	<.5	<1.0	<1

DATE	CHROMIUM, HEXAVALENT, DIS. (UG/L AS CR) (01032)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COPPER, DISSOLVED (UG/L AS CU) (01040)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)
FEB 1999										
10...	--	--	--	--	--	--	--	--	--	--
10...	<5	<1	2.0	2	380	1.0	<1	2.0	2	6.0
APR										
20...	<5	2	1.5	2	530	<1.0	<1	<1.0	1	6.0
JUN										
16...	--	--	--	--	--	--	--	--	--	--
AUG										
04...	<5	<1	<1.0	<1	900	<1.0	<1	<1.0	<1	7.0

DATE	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SELENIUM, TOTAL (UG/L AS SE) (01147)	TANNIN AND LIGNIN (MG/L) (32240)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	PHOSPHORUS ORTHO TOTAL (MG/L AS P) (70507)	MERCURY DISSOLVED (UG/L AS HG) (71890)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)
FEB 1999										
10...	--	--	--	--	--	--	--	--	--	--
10...	<1	6.0	<1	<1	--	94	.020	<.1	<.10	70
APR										
20...	<1	110	<1	<1	11	108	.020	<.1	<.10	77
JUN										
16...	--	--	--	--	9.9	--	--	--	--	--
AUG										
04...	<1	13	<1	<1	14	135	.010	<.1	<.10	86

303902082315200 CYPRESS CREEK NEAR EDITH, GA

LOCATION.--Lat 30°39′02″, long 82°31′52″, Clinch County, Hydrologic Unit 03110201, reference point at downstream side of bridge on State Highway 94, 2.2 mi east of Edith, 3.0 mi south of Fargo, and 3.2 mi upstream from mouth.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--December 1998 to September 1999, gage height and discharge measurements only.

GAGE.--Nonrecording gage. Altitude of gage is 117.00 ft, from topographic map.

EXTREMES FOR PERIOD OF RECORD.--Maximum measured discharge, 12.4 ft^3/s, Dec. 2, 1998; maximum observed gage height, 107.52 ft, Dec. 2, 1998; minimum measured discharge, .002 ft^3/s, Aug. 24, 1999.

EXTREMES FOR CURRENT YEAR.-- Maximum measured discharge, 12.4 ft^3/s, Dec. 2; maximum observed gage height, 107.52 ft, Dec. 2; minimum measured discharge, .002 ft^3/s, Aug. 24.

DISCHARGE MEASUREMENTS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	STREAM STAGE	DISCHARGE IN FT^3/S
Dec. 2	1340	107.52	12.4
Apr. 28	1700	106.75	0.21
July 13	1415	107.31	10.4
Aug. 24	1315	106.57	0.002

02315000 SUWANNEE RIVER NEAR BENTON, FL

LOCATION.--Lat 30°30′26″, long 82°42′59″, in NE¼ sec. 9, T. 1 N., R. 16 E., Columbia County, Hydrologic Unit 03110201, near left bank on downstream side of bridge on State Highway 6, 3.7 mi northwest of Benton, 6.4 mi south of Florida-Georgia State Line, 13.7 mi east of Jasper, and 196 mi, upstream from mouth.

DRAINAGE AREA.--2,090 mi^2, approximately, includes part of watershed in Okefenokee Swamp which is indeterminate.

PERIOD OF RECORD.--October 1975 to current year. Miscellaneous discharge measurements for some periods July 1934 to September 1975. Records for December 1931 to June 1934, at site 2.0 mi upstream (at Turner Bridge) not equivalent owing to difference in drainage areas.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Oct. 1, 1975 to Oct. 14, 1986, nonrecording gage at same site and datum. Dec. 8, 1931 to June 30, 1934, nonrecording gage at site 2.0 mi upstream, datum unknown.

REMARKS.--No estimated daily discharges. Records good.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge measured, 27,700 ft^3/s Apr. 6, 1973, gage height, 102.80 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3010	931	265	191	743	612	231	80	21	46	122	123
2	3810	864	260	192	804	596	228	78	20	55	113	115
3	3850	808	251	211	862	578	227	78	20	51	109	106
4	3870	760	244	235	911	556	222	77	19	65	102	100
5	3980	717	239	249	955	531	214	77	19	77	99	96
6	4040	676	232	246	978	507	206	77	18	85	97	92
7	4010	631	229	244	991	485	197	80	17	84	95	90
8	3940	590	222	244	998	466	188	79	16	122	94	88
9	3830	555	217	247	999	443	178	76	16	153	96	86
10	3710	526	212	251	994	421	170	72	17	130	95	86
11	3580	501	207	257	987	405	160	72	16	144	91	85
12	3480	476	202	259	981	387	152	74	15	117	90	82
13	3390	453	200	257	970	372	144	71	15	108	89	80
14	3310	431	199	256	954	371	136	71	16	106	89	79
15	3230	413	196	255	934	388	129	68	18	103	97	78
16	3130	397	190	259	912	392	123	63	17	101	93	77
17	3020	384	186	261	888	385	119	60	19	121	93	76
18	2890	372	182	262	871	374	113	58	16	143	90	82
19	2760	360	177	262	856	363	109	54	17	165	88	87
20	2610	349	173	264	839	351	104	50	21	161	87	86
21	2450	341	169	267	812	340	99	45	24	166	84	80
22	2290	333	167	260	784	331	96	41	26	174	82	77
23	2130	323	165	276	754	321	91	35	26	181	83	73
24	1950	316	162	461	727	307	87	32	26	201	84	72
25	1770	309	161	681	701	297	84	29	26	195	93	71
26	1600	303	164	703	672	292	80	26	28	178	95	75
27	1440	297	168	712	641	281	79	25	32	170	103	96
28	1310	287	177	721	622	268	85	24	38	162	116	108
29	1190	278	183	724	---	257	83	24	43	151	130	94
30	1090	270	186	726	---	248	82	23	61	142	141	89
31	1000	---	191	726	---	237	---	22	---	131	133	---
MEAN	2828	475	199	360	862	392	141	56.2	22.8	129	99.1	87.6
MAX	4040	931	265	726	999	612	231	80	61	201	141	123
MIN	1000	270	161	191	622	237	79	22	15	46	82	71
IN.	1.56	.25	.11	.20	.43	.22	.08	.03	.01	.07	.05	.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1999, BY WATER YEAR (WY)

MEAN	833	547	1167	1818	3371	3864	2419	777	572	671	1009	728
MAX	3877	2824	9472	6679	10200	10750	12760	2979	3194	2966	5545	2738
(WY)	1995	1998	1977	1977	1998	1984	1984	1983	1976	1991	1991	1985
MIN	9.77	8.18	9.76	17.9	128	171	141	56.2	18.9	22.5	14.0	13.3
(WY)	1979	1979	1979	1979	1989	1989	1999	1999	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1976 - 1999	
ANNUAL MEAN	2844		471		1472	
HIGHEST ANNUAL MEAN					3297	1984
LOWEST ANNUAL MEAN					254	1989
HIGHEST DAILY MEAN	15400	Feb 26	4040	Oct 6	18200	Apr 6 1984
LOWEST DAILY MEAN	9.3	Jul 11	15	Jun 12	1.3	Oct 9 1990
ANNUAL SEVEN-DAY MINIMUM	12	Jul 6	16	Jun 8	3.3	Oct 3 1990
INSTANTANEOUS PEAK FLOW			4040	Oct 6	18300	Apr 6 1984
INSTANTANEOUS PEAK STAGE			88.35	Oct 6	99.90	Apr 6 1984
INSTANTANEOUS LOW FLOW			14	Jun 13	1.3	Oct 9 1990
ANNUAL RUNOFF (INCHES)	18.48		3.06		9.57	
10 PERCENT EXCEEDS	8840		983		3910	
50 PERCENT EXCEEDS	589		181		586	
90 PERCENT EXCEEDS	68		37		44	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85.33	78.61	75.86	75.47	77.77	77.27	75.69	74.71	74.18	74.45	75.10	75.12
2	87.67	78.32	75.84	75.47	78.03	77.22	75.67	74.69	74.16	74.53	75.05	75.06
3	87.79	78.08	75.79	75.58	78.27	77.15	75.67	74.69	74.15	74.50	75.03	75.00
4	87.86	77.87	75.76	75.71	78.47	77.07	75.64	74.68	74.14	74.60	74.97	74.96
5	88.18	77.67	75.73	75.78	78.64	76.98	75.60	74.68	74.14	74.69	74.94	74.91
6	88.33	77.49	75.70	75.77	78.73	76.90	75.55	74.68	74.13	74.78	74.92	74.87
7	88.27	77.34	75.68	75.76	78.78	76.81	75.50	74.71	74.12	74.77	74.90	74.84
8	88.05	77.20	75.64	75.76	78.81	76.74	75.45	74.70	74.10	75.11	74.89	74.82
9	87.74	77.07	75.61	75.77	78.81	76.65	75.39	74.68	74.09	75.30	74.91	74.79
10	87.37	76.96	75.59	75.79	78.80	76.56	75.34	74.65	74.10	75.15	74.90	74.80
11	87.01	76.87	75.56	75.82	78.77	76.49	75.28	74.65	74.09	75.24	74.85	74.79
12	86.70	76.78	75.53	75.83	78.74	76.42	75.23	74.67	74.07	75.07	74.85	74.75
13	86.45	76.69	75.52	75.82	78.70	76.36	75.18	74.65	74.06	75.02	74.83	74.73
14	86.21	76.60	75.51	75.82	78.64	76.35	75.13	74.64	74.09	75.01	74.83	74.71
15	85.96	76.53	75.49	75.81	78.56	76.42	75.08	74.63	74.12	74.98	74.92	74.69
16	85.68	76.46	75.46	75.83	78.47	76.44	75.04	74.59	74.10	74.97	74.88	74.68
17	85.36	76.41	75.44	75.84	78.37	76.41	75.01	74.57	74.14	75.10	74.87	74.68
18	85.00	76.36	75.41	75.85	78.30	76.37	74.97	74.55	74.09	75.24	74.84	74.75
19	84.60	76.30	75.38	75.85	78.24	76.32	74.94	74.52	74.10	75.36	74.82	74.80
20	84.17	76.25	75.36	75.86	78.17	76.27	74.90	74.49	74.18	75.34	74.80	74.80
21	83.70	76.22	75.34	75.87	78.06	76.22	74.87	74.45	74.23	75.37	74.77	74.72
22	83.22	76.19	75.33	75.84	77.94	76.18	74.84	74.41	74.25	75.41	74.75	74.68
23	82.71	76.14	75.31	75.91	77.82	76.13	74.80	74.35	74.25	75.45	74.75	74.66
24	82.16	76.11	75.29	76.71	77.70	76.07	74.77	74.32	74.25	75.55	74.77	74.65
25	81.58	76.07	75.29	77.51	77.59	76.02	74.74	74.28	74.24	75.52	74.88	74.65
26	81.04	76.05	75.31	77.60	77.48	76.00	74.71	74.26	74.28	75.43	74.90	74.67
27	80.54	76.02	75.33	77.64	77.37	75.94	74.70	74.24	74.32	75.39	74.98	74.91
28	80.08	75.97	75.38	77.68	77.31	75.88	74.75	74.23	74.38	75.34	75.07	75.02
29	79.66	75.93	75.42	77.69	---	75.82	74.74	74.21	74.42	75.28	75.16	74.89
30	79.27	75.89	75.44	77.70	---	75.78	74.72	74.20	74.57	75.23	75.22	74.83
31	78.92	---	75.47	77.70	---	75.72	---	74.19	---	75.17	75.18	---
TOTAL	2626.61	2302.45	2340.77	2363.04	2191.34	2368.96	2253.90	2309.97	2225.54	2328.35	2322.53	2244.23
MEAN	84.73	76.75	75.51	76.23	78.26	76.42	75.13	74.52	74.18	75.11	74.92	74.81
MAX	88.33	78.61	75.86	77.70	78.81	77.27	75.69	74.71	74.57	75.55	75.22	75.12
MIN	78.92	75.89	75.29	75.47	77.31	75.72	74.70	74.19	74.06	74.45	74.75	74.65

WTR YR 1999 TOTAL 27877.69 MEAN 76.38 MAX 88.33 MIN 74.06

02315500 SUWANNEE RIVER AT WHITE SPRINGS, FL

LOCATION.--Lat 30°19′32″, long 82°44′18″, in SW¼ sec. 8, T. 2 S., R. 16 E., Columbia County, Hydrologic Unit 03110201, on downstream side of bridge on U.S. Highway 41, 1.0 mi southeast of White Springs and 171 mi upstream from mouth.

DRAINAGE AREA.--2,430 mi^2 approximately, includes part of watershed in Okefenokee Swamp which is indeterminate.

PERIOD OF RECORD.--May 1906 to December 1908, February 1927 to current year.

REVISED RECORDS.--WSP 1504: 1906, 1908. WSP 1905: WDR FL-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to July 31, 1932, nonrecording gage at site 1.0 mi downstream at datum 48.54 ft. August 1, 1932 to October 10, 1979, water-stage recorder, at present site, at datum 48.54 ft. October 11, 1979 to December 1, 1983, non-recording gage at site 2.2 miles downstream at NGVD. December 2, 1983 to June 30, 1996, nonrecording gage, at present site and datum.

REMARKS.--No estimated daily discharges. Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6720	1020	309	216	812	640	266	95	18	79	130	135
2	8380	944	305	218	854	622	263	91	17	71	121	126
3	8030	874	299	244	913	608	259	89	17	70	121	118
4	7610	816	291	256	985	587	256	88	22	67	110	111
5	7580	763	284	275	1030	563	249	87	21	75	105	106
6	7000	713	277	278	1050	544	238	88	29	87	101	100
7	6320	669	270	277	1060	526	227	94	30	98	101	96
8	5740	635	263	277	1060	502	217	97	27	106	98	92
9	5270	604	256	281	1060	484	206	91	19	145	105	89
10	4850	576	249	288	1050	468	195	85	16	155	109	86
11	4490	552	243	288	1040	449	183	84	16	145	101	86
12	4190	531	237	292	1030	432	171	85	16	145	95	83
13	3960	509	235	293	1010	415	159	86	13	124	92	79
14	3770	488	232	291	984	416	150	86	14	119	89	76
15	3600	470	226	291	961	428	142	82	14	118	98	73
16	3440	453	220	289	938	432	136	78	16	114	99	71
17	3290	438	215	293	915	430	130	73	42	111	96	69
18	3130	425	208	308	898	421	124	71	50	128	95	82
19	2970	412	204	317	880	410	119	68	37	154	91	104
20	2800	400	200	312	863	397	115	65	26	165	87	112
21	2630	389	197	313	835	386	113	61	32	161	84	98
22	2460	380	194	309	801	374	109	56	36	167	87	88
23	2280	371	190	351	767	364	105	52	36	178	93	87
24	2100	365	186	736	738	355	101	46	33	185	93	86
25	1920	358	183	848	711	342	97	44	32	199	98	84
26	1750	351	186	873	684	340	94	37	33	189	107	90
27	1600	341	190	849	658	325	91	31	40	175	113	188
28	1460	331	196	840	650	311	103	27	47	167	122	443
29	1330	322	210	829	---	298	125	23	55	159	132	612
30	1210	314	216	818	---	286	100	21	76	149	144	494
31	1110	---	213	808	---	274	---	20	---	139	146	---
MEAN	3967	527	232	424	901	433	161	67.8	29.3	134	105	139
MAX	8380	1020	309	873	1060	640	266	97	76	199	146	612
MIN	1110	314	183	216	650	274	91	20	13	67	84	69
IN.	1.88	.24	.11	.20	.39	.21	.07	.03	.01	.06	.05	.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 1999, BY WATER YEAR (WY)

MEAN	1765	883	1068	1856	2820	3377	3115	1137	851	1254	1957	1903
MAX	13100	16450	9103	8401	12950	14200	23910	8288	6317	5274	10870	13310
(WY)	1929	1948	1977	1942	1998	1998	1973	1964	1973	1906	1945	1964
MIN	8.55	6.63	8.68	11.8	13.2	35.5	22.2	10.5	11.8	19.6	15.8	8.82
(WY)	1932	1932	1932	1932	1932	1932	1932	1932	1935	1955	1990	1990

02315500 SUWANNEE RIVER AT WHITE SPRINGS, FL--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1906 - 1999	
ANNUAL MEAN	3656		595		1833	
HIGHEST ANNUAL MEAN					6806	1948
LOWEST ANNUAL MEAN					155	1955
HIGHEST DAILY MEAN	19200	Feb 26	8380	Oct 2	38000	Apr 10 1973
LOWEST DAILY MEAN	13	Jul 12	13	Jun 13	2.8	Sep 26 1990
ANNUAL SEVEN-DAY MINIMUM	19	Jul 6	15	Jun 10	3.4	Sep 26 1990
INSTANTANEOUS PEAK FLOW			8480	Oct 2	38100	Apr 10 1973
INSTANTANEOUS PEAK STAGE			73.19	Oct 2	88.56	Apr 10 1973
INSTANTANEOUS LOW FLOW			12	Jun 13	2.8	Sep 26 1990
ANNUAL RUNOFF (INCHES)	20.43		3.33		10.25	
10 PERCENT EXCEEDS	11700		1040		5010	
50 PERCENT EXCEEDS	758		208		729	
90 PERCENT EXCEEDS	101		51		61	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69.48	54.82	51.98	51.52	54.06	53.40	51.77	50.69	49.94	50.54	51.01	51.05
2	72.99	54.54	51.96	51.53	54.22	53.33	51.76	50.66	49.92	50.46	50.94	50.97
3	72.27	54.29	51.94	51.66	54.43	53.28	51.74	50.64	49.92	50.45	50.93	50.91
4	71.39	54.08	51.89	51.72	54.69	53.19	51.72	50.63	49.99	50.42	50.84	50.85
5	71.32	53.88	51.86	51.82	54.84	53.09	51.69	50.62	49.97	50.50	50.78	50.79
6	70.11	53.69	51.83	51.83	54.91	53.02	51.63	50.63	50.07	50.62	50.75	50.74
7	68.64	53.52	51.79	51.83	54.94	52.94	51.58	50.68	50.08	50.72	50.75	50.70
8	67.36	53.38	51.76	51.83	54.96	52.84	51.53	50.71	50.04	50.79	50.72	50.66
9	66.27	53.26	51.73	51.85	54.95	52.77	51.46	50.66	49.95	51.11	50.79	50.63
10	65.31	53.15	51.69	51.88	54.92	52.70	51.41	50.60	49.91	51.17	50.82	50.61
11	64.45	53.05	51.66	51.88	54.87	52.62	51.34	50.59	49.90	51.11	50.75	50.61
12	63.74	52.96	51.63	51.90	54.83	52.54	51.27	50.59	49.90	51.11	50.69	50.57
13	63.17	52.87	51.62	51.91	54.76	52.47	51.20	50.61	49.86	50.96	50.66	50.54
14	62.71	52.78	51.60	51.90	54.68	52.47	51.14	50.61	49.86	50.92	50.64	50.51
15	62.28	52.71	51.57	51.89	54.60	52.53	51.09	50.57	49.87	50.90	50.72	50.49
16	61.87	52.63	51.54	51.89	54.52	52.54	51.05	50.53	49.90	50.88	50.73	50.46
17	61.47	52.57	51.51	51.90	54.44	52.53	51.02	50.49	50.17	50.85	50.70	50.44
18	61.06	52.51	51.48	51.98	54.38	52.49	50.96	50.46	50.24	50.99	50.70	50.57
19	60.64	52.45	51.46	52.02	54.31	52.45	50.92	50.44	50.13	51.17	50.65	50.78
20	60.18	52.40	51.44	52.00	54.25	52.39	50.88	50.40	50.03	51.24	50.62	50.86
21	59.72	52.35	51.42	52.00	54.15	52.34	50.86	50.37	50.09	51.21	50.59	50.72
22	59.24	52.31	51.40	51.98	54.02	52.29	50.82	50.31	50.12	51.25	50.61	50.63
23	58.74	52.27	51.38	52.17	53.89	52.24	50.79	50.26	50.12	51.31	50.67	50.61
24	58.23	52.24	51.36	53.77	53.79	52.20	50.75	50.20	50.10	51.35	50.67	50.61
25	57.71	52.21	51.34	54.20	53.68	52.14	50.71	50.19	50.09	51.43	50.72	50.59
26	57.19	52.18	51.36	54.29	53.58	52.13	50.68	50.14	50.10	51.38	50.80	50.64
27	56.71	52.13	51.38	54.20	53.47	52.06	50.65	50.08	50.15	51.30	50.86	51.34
28	56.27	52.09	51.41	54.16	53.44	51.99	50.77	50.04	50.22	51.25	50.94	52.57
29	55.85	52.05	51.49	54.13	---	51.93	50.96	50.00	50.30	51.20	51.02	53.30
30	55.47	52.01	51.52	54.08	---	51.87	50.75	49.97	50.51	51.14	51.10	52.82
31	55.13	---	51.50	54.05	---	51.81	---	49.96	---	51.07	51.12	---
TOTAL	1946.97	1587.38	1599.50	1625.77	1522.58	1628.59	1534.90	1563.33	1501.45	1580.80	1574.29	1527.57
MEAN	62.81	52.91	51.60	52.44	54.38	52.54	51.16	50.43	50.05	50.99	50.78	50.92
MAX	72.99	54.82	51.98	54.29	54.96	53.40	51.77	50.71	50.51	51.43	51.12	53.30
MIN	55.13	52.01	51.34	51.52	53.44	51.81	50.65	49.96	49.86	50.42	50.59	50.44

CAL YR 1998 TOTAL 21885.26 MEAN 59.96 MAX 84.66 MIN 50.06
WTR YR 1999 TOTAL 19193.13 MEAN 52.58 MAX 72.99 MIN 49.86

02319000 WITHLACOOCHEE RIVER NEAR PINETTA, FL

LOCATION.--Lat 30°35′43″, long 83°15′35″, in NW¼ sec. 7, T. 2 N., R. 11 E., Madison County, Hydrologic Unit 03110203, on right bank 30 ft downstream from bridge, 0.1 mi downstream from small tributary, 0.3 mi west of Bellville, 5.6 mi east of Pinetta, and 22 mi upstream from mouth.

DRAINAGE AREA.--2,120 mi^2, approximately.

PERIOD OF RECORD.--October 1931 to current year. Monthly discharge only for October and November 1931, published in WSP 1304.

REVISED RECORDS.--WSP 972: 1941-42. WSP 1905: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 47.21 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Oct. 11, 1931 to Dec. 3, 1941, nonrecording gage at same site and datum. Dec. 3, 1941 to Aug. 2, 1972, water-stage recorder at same site and datum. Aug. 2, 1972 to Apr. 22, 1986, nonrecording gage at same site and datum.

REMARKS.-- No estimated daily discharges. Records good above 390 ft^3/s.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1928 reached a stage of 36.75 ft from floodmarks, discharge, 53,600 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4180	695	320	472	2770	1290	602	194	137	213	507	95
2	7310	624	315	537	2630	1240	619	191	135	228	520	92
3	12600	584	316	655	2490	1220	603	185	128	222	448	89
4	14500	562	315	829	2340	1220	582	186	130	207	352	86
5	14900	546	308	914	2230	1240	572	187	130	228	271	88
6	14000	515	303	955	2200	1260	563	193	127	277	219	88
7	12300	483	295	946	2230	1270	559	203	129	381	180	91
8	10400	461	280	950	2270	1260	546	216	125	368	165	91
9	8950	438	271	960	2260	1230	528	244	123	355	175	91
10	7410	416	269	1000	2170	1180	502	234	134	342	186	93
11	5590	410	265	1040	2020	1120	467	223	134	337	289	91
12	4010	402	262	1050	1840	1060	436	210	130	345	208	85
13	3100	397	263	1040	1660	1010	401	212	128	415	171	83
14	2660	390	257	1010	1460	992	379	233	146	486	159	83
15	2380	381	246	1010	1330	1040	357	225	156	471	166	87
16	2190	372	241	1010	1220	1090	330	213	153	406	293	84
17	1990	364	237	989	1140	1110	315	213	170	347	230	78
18	1890	358	229	953	1090	1130	294	206	184	318	195	76
19	1750	366	227	897	1080	1150	280	196	185	319	175	85
20	1660	372	224	858	1120	1170	271	188	162	393	162	95
21	1630	376	223	822	1220	1160	259	199	148	331	144	99
22	1500	374	223	798	1330	1100	246	212	140	264	133	102
23	1410	369	220	825	1470	1030	232	237	133	229	135	108
24	1320	373	221	1300	1570	949	224	218	130	231	168	99
25	1210	373	221	1590	1580	871	219	206	143	262	178	90
26	1130	363	233	1660	1520	840	213	187	155	288	160	92
27	1060	350	258	1740	1440	808	212	172	213	272	149	145
28	1000	338	308	2000	1360	752	209	159	207	242	133	216
29	930	330	336	2400	---	698	206	151	195	225	120	328
30	848	326	381	2750	---	649	202	142	198	294	110	268
31	771	---	417	2840	---	610	---	135	---	410	100	---
MEAN	4728	424	274	1187	1751	1056	381	199	150	313	213	110
MAX	14900	695	417	2840	2770	1290	619	244	213	486	520	328
MIN	771	326	220	472	1080	610	202	135	123	207	100	76
IN.	2.57	.22	.15	.65	.86	.57	.20	.11	.08	.17	.12	.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1999, BY WATER YEAR (WY)

MEAN	736	595	1267	2187	3613	4149	3252	1357	984	1029	1155	782
MAX	8178	9450	11280	8134	14720	12530	17320	8154	6043	6003	6759	6625
(WY)	1995	1948	1965	1993	1986	1998	1948	1964	1973	1991	1991	1935
MIN	85.7	78.1	92.4	116	133	238	253	199	150	88.3	89.7	96.5
(WY)	1955	1955	1955	1934	1934	1955	1968	1999	1999	1955	1955	1954

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1932 - 1999	
ANNUAL MEAN	3157		899		1749	
HIGHEST ANNUAL MEAN					5364	1948
LOWEST ANNUAL MEAN					236	1955
HIGHEST DAILY MEAN	34400	Mar 15	14900	Oct 5	73600	Apr 5 1948
LOWEST DAILY MEAN	162	Aug 31	76	Sep 18	73	Aug 21 1955
ANNUAL SEVEN-DAY MINIMUM	183	Aug 27	82	Sep 12	77	Aug 17 1955
INSTANTANEOUS PEAK FLOW			15000	Oct 5	79400	Apr 5 1948
INSTANTANEOUS PEAK STAGE			26.29	Oct 5	38.64	Apr 5 1948
INSTANTANEOUS LOW FLOW			73	Sep 18	70	Aug 23 1955
ANNUAL RUNOFF (INCHES)	20.22		5.76		11.21	
10 PERCENT EXCEEDS	8630		1690		4670	
50 PERCENT EXCEEDS	897		337		626	
90 PERCENT EXCEEDS	221		130		150	

02319500 SUWANNEE RIVER AT ELLAVILLE, FL

LOCATION.--Lat 30°23′04″, long 83°10′19″, in NE¼ sec. 24, T. 1 S., R. 11 E., Suwannee County, Hydrologic Unit 03110205, on left bank at Ellaville, 100 ft upstream from Seaboard Air Line Railroad bridge, 200 ft downstream from Withlacoochee River, 900ft upstream from bridge on U.S. Highway 90, and 127 mi upstream from mouth.

DRAINAGE AREA.--6,970 mi^2, approximately, includes part of watershed in Okefenokee Swamp which is indeterminate.

PERIOD OF RECORD.--January 1927 to current year.

REVISED RECORDS.--WSP 1905: WDR FL-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 27.22 ft above National Geodetic Vertical Datum of 1929. Prior to June 20, 1932, nonrecording gage at same site and datum. Nov. 8, 1955 to Sept. 30, 1970, nonrecording gage 1.1 mi downstream from base gage at datum 2.67ft lower, used as supplementary gage when flow was less than 4,800 ft^3/s.

REMARKS.--Records good above 5,000 cfs, and fair below. Since Nov. 7, 1953, slight regulation at low water caused by diversions above control 0.7 mi downstream from gage by a steam-electric powerplant for cooling of condensers. Total diverted flow is returned to river below control. Records include flow of large spring on left bank about 200 ft downstream; spring flow may reverse during high stages.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8500	4800	2610	2200	5430	4070	2580	1520	1100	1310	1620	1140
2	12600	4600	2570	2270	5470	3980	2560	1500	1080	1360	1650	1130
3	15500	4420	2530	2350	5500	3900	2540	1470	1080	1370	1660	1120
4	17300	4260	2510	2440	5530	3820	2510	1460	1110	1340	1580	1120
5	18300	4100	2490	2450	5540	3780	2480	1440	1180	1300	1480	1100
6	18600	3960	2470	2510	5590	3760	2360	1440	1170	1310	1400	1100
7	18400	3810	2440	2560	5720	3710	2330	1390	1170	1430	1360	1100
8	17900	3700	2400	2610	5850	3650	2310	1350	1170	1480	1320	1090
9	17300	3600	2360	2760	5930	3590	2280	1350	1160	1450	1290	1080
10	16700	3510	2330	2770	5950	3500	2240	1360	1150	1430	1320	1080
11	15900	3420	2310	2690	5870	3410	2180	1330	1150	1460	1340	1070
12	14900	3340	2290	2740	5700	3320	2110	1310	1150	1470	1370	1060
13	13900	3270	2300	2820	5440	3230	2050	1330	1170	1510	1320	1060
14	13000	3210	2280	2860	5180	3210	2010	1350	1160	1560	1270	1050
15	12200	3160	2250	2860	5000	3190	1980	1310	1170	1600	1260	1050
16	11500	3100	2230	2860	4840	3210	1930	1300	1170	1590	1270	1050
17	10900	3050	2210	2860	4700	3240	1870	1290	1180	1540	1330	1050
18	10300	3000	2180	2860	e4570	3250	1820	1270	1270	1530	1300	1050
19	9780	2960	2170	2830	4440	3260	1780	1250	1340	1520	1270	1050
20	9280	2940	2150	2790	4340	3250	1750	1240	1330	1560	1240	1060
21	8790	2910	2140	2760	4300	3240	1720	1230	1220	1610	1200	1080
22	8300	2880	2120	2720	4230	3180	1690	1240	1150	1560	1170	1130
23	7800	2860	2100	2750	4250	3100	1660	1240	1140	1540	1150	1170
24	7340	2840	2090	2980	4330	3030	1630	1240	1140	1530	1140	1130
25	6900	2810	2070	3580	4380	2970	1610	1230	1130	1520	1160	1100
26	6480	2790	2070	3980	4370	2910	1590	1210	1140	1530	1180	1090
27	6090	2750	2070	4220	4280	2870	1580	1200	1140	1530	1180	1240
28	5780	2700	2100	4470	4190	2820	1570	1190	1210	1510	1160	1420
29	5500	2670	2140	4820	---	2750	1560	1180	1220	1500	1150	1720
30	5250	2640	2160	5160	---	2690	1560	1170	1270	1500	1150	1790
31	5020	---	2180	5350	---	2620	---	1140	---	1550	1150	---
MEAN	11480	3335	2268	3093	5033	3307	1995	1307	1174	1484	1305	1149
MAX	18600	4800	2610	5350	5950	4070	2580	1520	1340	1610	1660	1790
MIN	5020	2640	2070	2200	4190	2620	1560	1140	1080	1300	1140	1050
IN.	1.90	.53	.38	.51	.75	.55	.32	.22	.19	.25	.22	.18

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1999, BY WATER YEAR (WY)

MEAN	4986	3532	4261	6372	9512	12010	11300	6193	4248	4488	5775	5256
MAX	32940	35590	30600	21150	30720	36610	53180	25380	17800	14380	34990	30760
(WY)	1929	1948	1948	1977	1991	1998	1948	1928	1973	1991	1928	1928
MIN	1006	951	978	1014	1189	1240	1702	1245	1084	917	1010	1082
(WY)	1991	1991	1955	1956	1957	1955	1968	1932	1955	1955	1955	1990

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1927 - 1999	
ANNUAL MEAN	10770		3075		6521	
HIGHEST ANNUAL MEAN					19710	1948
LOWEST ANNUAL MEAN					1296	1955
HIGHEST DAILY MEAN	46900	Mar 18	18600	Oct 6	94700	Apr 8 1948
LOWEST DAILY MEAN	1930	Jul 11	1050	Sep 14	835	Nov 8 1990
ANNUAL SEVEN-DAY MINIMUM	1950	Jul 8	1050	Sep 13	862	Nov 3 1990
INSTANTANEOUS PEAK FLOW			18600	Oct 6	95300	Apr 7 1948
INSTANTANEOUS PEAK STAGE			18.64	Oct 6	40.88	Apr 7 1948
INSTANTANEOUS LOW FLOW			1050	Sep 14	835	Nov 8 1990
ANNUAL RUNOFF (INCHES)	20.98		5.99		12.71	
10 PERCENT EXCEEDS	27200		5530		14800	
50 PERCENT EXCEEDS	4290		2160		3920	
90 PERCENT EXCEEDS	2120		1150		1540	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.31	5.69	3.29	2.93	6.40	4.86	3.26	2.30	1.86	2.06	2.35	1.87
2	13.05	5.46	3.25	2.99	6.45	4.75	3.24	2.27	1.84	2.11	2.37	1.85
3	15.70	5.26	3.22	3.06	6.49	4.67	3.22	2.25	1.85	2.13	2.38	1.84
4	17.44	5.08	3.20	3.14	6.51	4.58	3.19	2.23	1.88	2.10	2.31	1.83
5	18.32	4.90	3.19	3.15	6.52	4.54	3.17	2.22	1.94	2.07	2.22	1.82
6	18.62	4.74	3.17	3.21	6.59	4.51	3.07	2.21	1.93	2.08	2.15	1.81
7	18.43	4.58	3.14	3.25	6.73	4.46	3.04	2.16	1.93	2.18	2.11	1.80
8	17.97	4.45	3.10	3.29	6.88	4.38	3.02	2.13	1.93	2.22	2.08	1.80
9	17.44	4.34	3.07	3.43	6.98	4.32	2.99	2.12	1.92	2.20	2.06	1.79
10	16.88	4.24	3.04	3.44	7.00	4.22	2.95	2.13	1.91	2.18	2.08	1.79
11	16.15	4.14	3.03	3.37	6.90	4.12	2.90	2.10	1.91	2.21	2.10	1.78
12	15.21	4.05	3.01	3.41	6.70	4.01	2.84	2.08	1.91	2.21	2.12	1.77
13	14.25	3.97	3.02	3.48	6.41	3.92	2.79	2.10	1.92	2.25	2.08	1.77
14	13.42	3.91	3.00	3.52	6.12	3.90	2.75	2.11	1.92	2.29	2.04	1.77
15	12.68	3.85	2.98	3.53	5.91	3.87	2.72	2.08	1.92	2.33	2.03	1.76
16	12.02	3.79	2.96	3.52	5.73	3.90	2.68	2.06	1.93	2.31	2.04	1.76
17	11.46	3.73	2.94	3.51	5.57	3.93	2.63	2.05	1.93	2.28	2.09	1.76
18	10.95	3.67	2.92	3.51	---	3.94	2.59	2.03	2.01	2.26	2.07	1.76
19	10.47	3.63	2.90	3.49	5.27	3.95	2.55	2.01	2.07	2.25	2.04	1.76
20	10.01	3.60	2.89	3.46	5.17	3.95	2.52	1.99	2.06	2.29	2.01	1.77
21	9.57	3.58	2.88	3.42	5.11	3.93	2.50	1.99	1.97	2.33	1.97	1.79
22	9.13	3.54	2.86	3.39	5.04	3.86	2.46	1.99	1.91	2.29	1.93	1.83
23	8.68	3.52	2.84	3.42	5.06	3.77	2.44	1.99	1.90	2.27	1.92	1.86
24	8.27	3.50	2.83	3.65	5.15	3.70	2.41	1.99	1.90	2.27	1.90	1.83
25	7.87	3.47	2.82	4.31	5.21	3.62	2.39	1.97	1.89	2.25	1.92	1.81
26	7.50	3.45	2.82	4.77	5.20	3.57	2.36	1.96	1.90	2.26	1.92	1.80
27	7.14	3.42	2.82	5.04	5.10	3.52	2.35	1.95	1.90	2.26	1.93	1.92
28	6.81	3.38	2.85	5.31	4.99	3.47	2.35	1.94	1.96	2.25	1.90	2.08
29	6.49	3.35	2.88	5.71	---	3.41	2.33	1.93	1.98	2.23	1.89	2.34
30	6.20	3.32	2.89	6.10	---	3.35	2.33	1.92	2.02	2.24	1.88	2.47
31	5.93	---	2.91	6.31	---	3.30	---	1.90	---	2.28	1.87	---
TOTAL	373.37	121.61	92.72	118.12	---	124.28	82.04	64.16	57.90	68.94	63.76	55.59
MEAN	12.04	4.05	2.99	3.81	---	4.01	2.73	2.07	1.93	2.22	2.06	1.85
MAX	18.62	5.69	3.29	6.31	---	4.86	3.26	2.30	2.07	2.33	2.38	2.47
MIN	5.93	3.32	2.82	2.93	---	3.30	2.33	1.90	1.84	2.06	1.87	1.76

CAL YR 1998 TOTAL 3963.52 MEAN 10.86 MAX 34.35 MIN 2.74

02319800 SUWANNEE RIVER AT DOWLING PARK, FL

LOCATION.--Lat 30°14′41″, long 83°14′41″, in NW¼ sec. 8, T. 3 S., R. 11 E., Lafayette County, Hydrologic Unit 03110205, at bridge on County Road 250 at Dowling Park, and 112 mi upstream from mouth.

DRAINAGE AREA.--7,190 mi^2.

PERIOD OF RECORD.--March 1950 to August 1954 and November 1975 to October 1977 (annual maximum discharge and gage-height), October 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 7, 1948, reached a stage of 61.46 ft, from floodmarks; discharge, 92,600 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5950	5310	2830	2280	5450	4340	2600	1590	1220	1250	1530	1130
2	9820	5130	2780	2330	5520	4240	2560	1570	1210	1250	1560	1130
3	12500	4930	2750	2390	5560	4170	2530	1560	1200	1260	1580	1120
4	14600	4750	2710	2440	5620	4070	2490	1540	1200	1250	1550	1080
5	15700	4560	2690	2580	5620	3990	2460	1530	1190	1250	1430	1080
6	16300	4460	2650	2670	5690	3950	2430	1520	e1190	1260	1360	1090
7	16500	4340	2630	2740	5780	3910	2400	1530	1190	1310	1310	1080
8	16300	4210	2600	2760	5880	3870	2370	1510	1190	1360	1270	1060
9	15900	4100	2550	2790	6000	3810	2340	1500	1170	1400	1260	1060
10	15400	4000	2530	2830	6040	3730	2300	1490	1160	1410	1260	1050
11	14800	3900	2470	2860	6000	3620	2240	1460	1190	1440	1280	1030
12	14100	3790	2450	2920	5930	3520	2180	1440	1170	1460	1290	1020
13	13200	3720	2430	2920	5730	3420	2120	1440	1160	1480	1280	1010
14	12400	3650	2430	2920	5520	3380	2060	1440	1170	1500	1260	1010
15	11700	3570	2410	2920	5320	3330	2040	1430	1160	1530	1240	1020
16	11100	3510	2380	2920	5140	3340	1990	1410	1160	1540	1220	1030
17	10500	3440	2350	2910	5010	3360	1940	1400	1160	1530	1240	1020
18	9970	3370	2320	2900	4890	3370	1900	1380	1160	1500	1270	1060
19	9560	3320	2300	2870	4780	3370	1850	1370	1160	1510	1250	1080
20	9170	3260	2290	2860	4670	3390	1820	1360	1160	1520	1230	1100
21	8680	3230	2270	2810	4590	3350	1780	1350	1160	1550	1220	1110
22	8330	3190	2250	2800	4510	3320	1770	e1340	1150	1540	1200	1120
23	7890	3140	2230	2830	4510	3230	1750	e1330	1130	1520	1170	1150
24	7510	3110	2210	3020	4510	3140	1710	e1320	1130	1490	1160	1140
25	7150	3070	2200	3400	4510	3060	1680	e1300	1130	1490	1150	1120
26	6840	3030	2190	3790	4490	3000	1650	e1290	1150	1470	1180	1150
27	6480	2990	2190	4090	4450	2920	1630	e1280	1150	1490	1160	1250
28	6210	2940	2190	4380	4400	2860	1620	e1270	1160	1470	1130	1330
29	5990	2910	2230	4690	---	2790	1610	e1260	1190	1460	1110	1560
30	5730	2870	2240	5040	---	2730	1590	e1240	1220	1460	1140	1770
31	5510	---	2250	5370	---	2660	---	e1230	---	1480	1140	---
MEAN	10700	3727	2419	3130	5219	3459	2047	1409	1171	1433	1272	1132
MAX	16500	5310	2830	5370	6040	4340	2600	1590	1220	1550	1580	1770
MIN	5510	2870	2190	2280	4400	2660	1590	1230	1130	1250	1110	1010
CFSM	1.49	.52	.34	.44	.73	.48	.28	.20	.16	.20	.18	.16

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1999, BY WATER YEAR (WY)

MEAN	6303	5857	6307	8994	12740	17920	8137	4304	2793	2545	3085	2269
MAX	10700	10650	13190	18280	22750	38110	17010	6430	4165	3995	5699	3447
(WY)	1999	1998	1998	1998	1998	1998	1998	1998	1997	1997	1997	1998
MIN	1912	3193	2419	3130	5219	3459	2047	1409	1171	1433	1272	1132
(WY)	1998	1997	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1997 - 1999	
ANNUAL MEAN	10810		3088		6744	
HIGHEST ANNUAL MEAN					11550	1998
LOWEST ANNUAL MEAN					3088	1999
HIGHEST DAILY MEAN	53100	Mar 20	16500	Oct 7	53100	Mar 20 1998
LOWEST DAILY MEAN	2120	Jul 12	1010	Sep 13	1010	Sep 13 1999
ANNUAL SEVEN-DAY MINIMUM	2150	Jul 8	1020	Sep 11	1020	Sep 11 1999
INSTANTANEOUS PEAK FLOW			16500	Oct 7	53500	Mar 20 1998
INSTANTANEOUS PEAK STAGE			38.58	Oct 7	54.07	Mar 20 1998
INSTANTANEOUS LOW FLOW			1010	Sep 13	1010	Sep 13 1999
ANNUAL RUNOFF (CFSM)	1.50		.43		.94	
10 PERCENT EXCEEDS	26100		5730		16500	
50 PERCENT EXCEEDS	4460		2250		3810	
90 PERCENT EXCEEDS	2230		1150		1400	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.75	27.51	24.17	23.40	27.47	26.13	23.86	22.35	21.75	21.79	22.25	21.74
2	33.23	27.28	24.11	23.47	27.55	26.01	23.80	22.32	21.73	21.79	22.30	21.73
3	35.45	27.02	24.06	23.55	27.60	25.93	23.76	22.30	21.72	21.81	22.33	21.72
4	37.10	26.79	24.01	23.63	27.66	25.80	23.70	22.28	21.71	21.80	22.29	21.64
5	37.92	26.54	23.98	23.83	27.67	25.70	23.65	22.26	21.70	21.80	22.16	21.65
6	38.46	26.40	23.93	23.95	27.75	25.65	23.61	22.24	---	21.81	22.08	21.66
7	38.58	26.23	23.90	24.05	27.85	25.60	23.57	22.25	21.69	21.90	22.03	21.64
8	38.40	26.07	23.85	24.07	27.96	25.55	23.52	22.23	21.70	21.98	21.97	21.62
9	38.05	25.92	23.79	24.12	28.10	25.47	23.48	22.21	21.66	22.04	21.95	21.61
10	37.60	25.78	23.75	24.17	28.15	25.37	23.42	22.20	21.65	22.07	21.95	21.59
11	37.09	25.64	23.67	24.22	28.10	25.23	23.34	22.15	21.69	22.11	21.98	21.56
12	36.49	25.49	23.64	24.29	28.02	25.10	23.25	22.12	21.67	22.14	22.00	21.54
13	35.67	25.38	23.62	24.30	27.79	24.96	23.16	22.11	21.65	22.17	21.98	21.53
14	34.95	25.28	23.61	24.30	27.55	24.91	23.08	22.12	21.66	22.21	21.95	21.53
15	34.28	25.18	23.58	24.30	27.32	24.85	23.04	22.09	21.65	22.26	21.92	21.54
16	33.66	25.09	23.54	24.29	27.10	24.86	22.97	22.07	21.65	22.27	21.89	21.55
17	33.06	24.99	23.50	24.28	26.95	24.88	22.90	22.05	21.65	22.25	21.92	21.54
18	32.58	24.90	23.45	24.27	26.80	24.90	22.83	22.02	21.65	22.21	21.97	21.61
19	32.18	24.83	23.43	24.23	26.67	24.90	22.76	22.00	21.65	22.22	21.93	21.65
20	31.78	24.76	23.41	24.22	26.54	24.92	22.71	21.98	21.65	22.24	21.91	21.68
21	31.29	24.71	23.38	24.15	26.44	24.87	22.65	21.97	21.65	22.29	21.89	21.70
22	30.94	24.66	23.35	24.13	26.35	24.83	22.63	---	21.62	22.28	21.85	21.72
23	30.48	24.60	23.33	24.17	26.34	24.72	22.60	---	21.60	22.24	21.81	21.77
24	30.08	24.55	23.30	24.43	26.35	24.60	22.54	---	21.60	22.20	21.79	21.75
25	29.70	24.50	23.28	24.94	26.34	24.48	22.49	---	21.60	22.20	21.77	21.72
26	29.37	24.45	23.27	25.45	26.32	24.40	22.45	---	21.62	22.16	21.82	21.77
27	28.98	24.39	23.26	25.83	26.27	24.30	22.42	---	21.63	22.19	21.78	21.93
28	28.65	24.33	23.26	26.18	26.21	24.21	22.40	---	21.65	22.16	21.74	22.05
29	28.38	24.28	23.33	26.56	---	24.12	22.39	---	21.70	22.15	21.70	22.31
30	28.05	24.23	23.34	26.98	---	24.03	22.36	---	21.75	22.14	21.75	22.64
31	27.78	---	23.36	27.37	---	23.94	---	---	---	22.18	21.75	---
MEAN	33.19	25.39	23.60	24.55	27.19	25.01	23.04	---	---	22.10	21.95	21.72
MAX	38.58	27.51	24.17	27.37	28.15	26.13	23.86	---	---	22.29	22.33	22.64
MIN	27.78	24.23	23.26	23.40	26.21	23.94	22.36	---	---	21.79	21.70	21.53

CAL YR 1998 MEAN 31.76 MAX 53.98 MIN 23.26

02320000 SUWANNEE RIVER AT LURAVILLE, FL

LOCATION.--Lat 30°05′59″, long 83°10′18″, in NE¼ sec. 36, T. 4 S., R. 11 E., Suwannee County, Hydrologic Unit 03110205, at bridge on State Highway 51, 1.6 mi south of Luraville, 3.0 mi north of Mayo, and 97 mi upstream from mouth.

DRAINAGE AREA.--7,330 mi^2.

PERIOD OF RECORD.--February 1927 to December 1937, March 1950 to October 1972 and October 1977 to September 1981 (annual maximum discharge and gage-height). October 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Vertical Datum of 1929 (Florida Department of Transportation Benchmark).

REMARKS.--Records good, except for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6270	e5850	3210	2660	5200	4340	2950	1810	1410	e1500	1800	1420
2	9620	5570	3160	2700	5260	4270	2920	1770	1400	e1520	1850	1400
3	12900	e5350	3130	2760	5310	4210	2890	1740	1400	e1530	1920	1390
4	15400	e5150	3090	2790	5360	4130	2860	1720	1410	e1520	1850	1380
5	16700	e4950	3060	2900	5380	4080	2830	1700	1440	1500	1770	1360
6	17400	4740	3040	2980	5420	4050	2810	1680	1440	e1510	1690	1350
7	17700	4610	3010	3030	5500	4020	2770	1700	1420	e1550	1640	1340
8	17700	4490	2970	e3050	5600	3980	2740	1700	1410	e1600	1620	1340
9	17500	4380	2940	e3100	5690	3920	2700	1680	1410	e1630	1610	1330
10	17200	4270	2900	e3150	5760	3860	2680	1670	1420	e1650	1580	1330
11	16800	4180	2880	3020	5760	3780	2640	1680	1440	e1670	1600	1310
12	16200	4090	2860	e3050	5680	3700	2600	1650	1400	1690	1620	1300
13	15500	4010	2840	e3100	5540	3630	2530	1620	1410	e1720	1600	1290
14	14700	3940	2820	e3150	5370	3600	2460	1660	1400	e1740	1580	1290
15	13700	3870	2800	3020	5200	3540	2390	1630	1400	e1760	1570	1280
16	12900	3810	2770	e3050	5060	3540	2370	1610	1400	e1770	1560	1270
17	12100	3740	2750	e3150	4930	3560	2290	1600	1410	e1760	1590	1270
18	11400	3680	2740	3170	4820	3570	2220	1580	1410	e1730	1590	1310
19	10800	3630	2720	e3180	4710	3570	2160	1550	1400	1740	1580	1310
20	10200	3580	2700	3190	4610	3570	2110	1540	1410	e1780	1550	1330
21	9720	3550	2690	e3100	4540	3560	2080	1520	1410	e1820	1520	1360
22	9200	3520	2670	e3050	4500	3520	2040	e1520	1390	1830	1500	1370
23	8690	3480	2650	e3150	4490	3460	2000	e1510	1380	1790	1480	1380
24	8220	3450	2630	e3250	4520	3390	1960	1510	1370	e1770	1460	1380
25	7790	3420	2610	3350	4540	3330	1940	1500	1360	e1750	1460	1360
26	e7450	3390	2600	e3900	4540	3280	1910	1480	1380	1730	1480	1360
27	7110	3350	2590	e4200	4490	3220	1870	1470	1390	1780	1470	1490
28	e6850	3310	2600	4590	4440	3170	1860	1460	1420	1760	1470	1540
29	e6600	3270	2630	4750	---	3110	1850	1460	1450	1730	1450	1680
30	e6350	3240	2640	4960	---	3060	1820	1430	1470	1730	1440	1960
31	e6100	---	2640	5120	---	3000	---	1420	---	1740	1430	---
TOTAL	366770	121870	87340	103620	142220	113020	71250	49570	42260	52300	49330	41480
MEAN	11830	4062	2817	3343	5079	3646	2375	1599	1409	1687	1591	1383
MAX	17700	5850	3210	5120	5760	4340	2950	1810	1470	1830	1920	1960
MIN	6100	3240	2590	2660	4440	3000	1820	1420	1360	1500	1430	1270
AC-FT	727500	241700	173200	205500	282100	224200	141300	98320	83820	103700	97850	82280
CFSM	1.63	.56	.39	.46	.70	.50	.33	.22	.19	.23	.22	.19
IN.	1.87	.62	.45	.53	.73	.58	.36	.25	.22	.27	.25	.21

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1999, BY WATER YEAR (WY)

MEAN	8395	4935	4474	5876	8858	11240	10420	6855	4011	4130	6848	6994
MAX	31460	12180	13710	18570	22980	34680	24050	24060	8453	11430	32590	28650
(WY)	1929	1929	1998	1998	1998	1998	1930	1928	1928	1928	1928	1928
MIN	1800	1600	1526	1630	1565	2612	2248	1599	1409	1687	1591	1383
(WY)	1932	1932	1932	1935	1934	1934	1934	1999	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1927 - 1999	
ANNUAL TOTAL	4062120		1241030			
ANNUAL MEAN	11130		3400		7128	
HIGHEST ANNUAL MEAN					12570	1929
LOWEST ANNUAL MEAN					2709	1934
HIGHEST DAILY MEAN	43200	Mar 20	17700	Oct 7	66000	Aug 24 1928
LOWEST DAILY MEAN	2590	Dec 27	1270	Sep 16	1270	Sep 16 1999
ANNUAL SEVEN-DAY MINIMUM	2610	Dec 24	1290	Sep 11	1290	Sep 11 1999
INSTANTANEOUS PEAK FLOW			17800	Oct 8	90000	Apr 8 1948
INSTANTANEOUS PEAK STAGE			32.32	Oct 8	53.50	Apr 8 1948
INSTANTANEOUS LOW FLOW			1270	Sep 15	1270	Sep 15 1999
ANNUAL RUNOFF (AC-FT)	8057000		2462000		5164000	
ANNUAL RUNOFF (CFSM)	1.53		.47		.98	
ANNUAL RUNOFF (INCHES)	20.76		6.34		13.30	
10 PERCENT EXCEEDS	28200		5630		15900	
50 PERCENT EXCEEDS	4950		2660		4330	
90 PERCENT EXCEEDS	2780		1400		1740	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.66	---	19.82	19.07	22.32	21.32	19.48	18.17	17.67	---	18.16	17.68
2	26.41	22.73	19.76	19.12	22.39	21.23	19.43	18.13	17.65	---	18.22	17.66
3	28.72	---	19.71	19.21	22.45	21.15	19.39	18.10	17.65	---	18.29	17.64
4	30.38	---	19.67	19.26	22.50	21.05	19.35	18.07	17.67	---	18.22	17.62
5	31.41	---	19.63	19.40	22.53	20.99	19.31	18.06	17.71	17.80	18.14	17.59
6	32.00	21.80	19.60	19.51	22.57	20.95	19.27	18.03	17.71	---	18.04	17.58
7	32.27	21.65	19.56	19.58	22.65	20.91	19.23	18.05	17.68	---	17.98	17.57
8	32.26	21.50	19.50	---	22.77	20.86	19.18	18.06	17.67	---	17.96	17.57
9	32.09	21.37	19.46	---	22.86	20.78	19.13	18.03	17.67	---	17.94	17.56
10	31.84	21.23	19.41	---	22.92	20.71	19.10	18.02	17.68	---	17.91	17.55
11	31.50	21.12	19.37	19.57	22.93	20.60	19.03	18.03	17.71	---	17.94	17.52
12	31.00	21.00	19.35	---	22.85	20.49	18.97	17.99	17.65	18.04	17.96	17.50
13	30.40	20.90	19.32	---	22.69	20.40	18.89	17.96	17.66	---	17.94	17.49
14	29.80	20.80	19.30	---	22.51	20.35	18.82	18.00	17.66	---	17.91	17.49
15	29.22	20.72	19.26	---	22.33	20.27	18.76	17.97	17.66	---	17.89	17.48
16	28.67	20.63	19.23	---	22.17	20.27	18.73	17.95	17.66	---	17.87	17.47
17	28.17	20.55	19.20	---	22.03	20.30	18.66	17.92	17.66	---	17.92	17.47
18	27.73	20.46	19.17	19.77	21.90	20.31	18.59	17.90	17.66	---	17.91	17.52
19	27.30	20.39	19.15	---	21.76	20.31	18.54	17.86	17.66	18.10	17.90	17.52
20	26.89	20.33	19.13	19.80	21.65	20.31	18.49	17.84	17.67	---	17.86	17.54
21	26.50	20.28	19.10	---	21.56	20.29	18.46	17.83	17.67	---	17.82	17.59
22	26.11	20.24	19.08	---	21.51	20.24	18.42	---	17.65	18.20	17.80	17.60
23	25.71	20.18	19.05	---	21.50	20.16	18.38	---	17.62	18.15	17.77	17.62
24	25.34	20.14	19.02	---	21.54	20.06	18.34	17.81	17.61	---	17.73	17.62
25	24.98	20.10	19.00	20.00	21.57	19.97	18.31	17.80	17.60	---	17.73	17.60
26	---	20.06	18.98	---	21.57	19.91	18.28	17.76	17.62	18.09	17.76	17.60
27	24.40	20.00	18.97	---	21.51	19.83	18.24	17.75	17.63	18.15	17.75	17.77
28	---	19.95	18.98	21.62	21.44	19.76	18.23	17.74	17.68	18.12	17.75	17.84
29	---	19.90	19.02	21.81	---	19.69	18.22	17.73	17.72	18.09	17.72	18.03
30	---	19.86	19.03	22.05	---	19.62	18.19	17.70	17.75	18.09	17.70	18.33
31	---	---	19.04	22.23	---	19.54	---	17.69	---	18.10	17.70	---
TOTAL	---	---	597.87	---	620.98	632.63	563.42	---	529.96	---	555.19	528.62
MEAN	---	---	19.29	---	22.18	20.41	18.78	---	17.67	---	17.91	17.62
MAX	---	---	19.82	---	22.93	21.32	19.48	---	17.75	---	18.29	18.33
MIN	---	---	18.97	---	21.44	19.54	18.19	---	17.60	---	17.70	17.47

02320500 SUWANNEE RIVER AT BRANFORD, FL

LOCATION.--Lat 29°57′20″, long 82°55′40″, in NE¼ sec. 20, T. 6 S., R. 14 E., Suwannee County, Hydrologic Unit 03110205, near left bank on upstream side of bridge on U.S. Highway 27 at Branford, 10.2 mi upstream from Santa Fe River and 75 mi upstream from mouth.

DRAINAGE AREA.--7,880 mi^2, includes part of watershed in Okefenokee Swamp which is indeterminate.

PERIOD OF RECORD.--July 1931 to current year.

REVISED RECORDS.--WSP 1905: WDR FL-75-1: Drainage area. WDR FL-96-4:1995.

GAGE.--Water-stage recorder. Datum of gage is 4.81 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges, records good.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1928 reached a stage of 32.0 ft, from floodmark; discharge, 65,000 ft^3/s computed on basis of measured crest flow at Ellaville (station 02319500).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6320	7190	4170	3450	5290	4880	3430	2470	2060	2080	2270	2040
2	8400	6920	4130	3480	5390	4780	3390	2450	2050	2090	2300	2030
3	11100	6690	4090	3550	5430	4690	3340	2440	2050	2100	2320	2020
4	13600	6480	4050	3540	5570	4670	3310	2420	2070	2120	2280	2000
5	15500	6250	4020	3570	5590	4580	3270	2410	2050	2120	2240	2000
6	16900	6020	3990	3630	5610	4530	3240	2410	2050	2110	2200	2010
7	17900	5820	3950	3680	5660	4500	3210	2400	2030	2140	2180	2010
8	18300	5680	3920	3720	5730	4440	3190	2390	2020	2170	2170	2010
9	18500	5560	3870	3750	5810	4410	3160	2360	2010	2180	2190	1980
10	18400	5460	3830	3760	5890	4380	3120	2340	2010	2160	2160	1980
11	18100	5370	3790	3760	5940	4310	3080	2340	2050	2170	2150	1960
12	17700	5260	3760	3790	5950	4200	3040	2330	2030	2190	2170	1940
13	17000	5160	3760	3810	5900	4150	2970	2310	2020	2210	2160	1920
14	16300	5080	3740	3820	5760	4120	2930	2320	2020	2230	2150	1910
15	15500	5010	3690	3820	5650	4080	2920	2310	2010	2260	2160	1900
16	14700	4930	3660	3810	5530	4040	2910	2280	2010	2310	2140	1900
17	14000	4860	3630	3810	5430	4010	2860	2260	2030	2290	2140	1900
18	13400	4780	3610	3820	5380	3990	2800	2240	2030	2270	2140	1930
19	12800	4710	3600	3810	5270	3980	2750	2230	2000	2260	2140	1970
20	12200	4650	3580	3780	5170	3980	2720	2210	2000	2250	2140	1960
21	11700	4590	3560	3760	5070	3980	2700	2190	2000	2270	2120	1990
22	11200	4540	3540	3730	5000	3950	2670	2170	2010	2280	2110	1980
23	10600	4490	3510	3770	4950	3900	2640	2170	1990	2290	2100	1980
24	10100	4460	3490	3840	4950	3830	2610	2160	1980	2270	2090	1980
25	9680	4420	3460	3880	4960	3770	2590	2160	1970	2270	2080	1990
26	9250	4380	3450	4140	4970	3720	2570	2140	1980	2270	2090	1990
27	8850	4330	3430	4390	4930	3660	2560	2120	2000	2270	2090	2070
28	8470	4280	3430	4580	4930	3600	2550	2110	2010	2270	2080	2140
29	8120	4240	3450	4750	---	3560	2530	2110	2040	2260	2070	2170
30	7790	4210	3470	4950	---	3510	2490	2090	2070	2250	2060	2270
31	7480	---	3450	5130	---	3460	---	2070	---	2250	2050	---
MEAN	12900	5194	3712	3906	5418	4118	2918	2271	2022	2215	2153	1998
MAX	18500	7190	4170	5130	5950	4880	3430	2470	2070	2310	2320	2270
MIN	6320	4210	3430	3450	4930	3460	2490	2070	1970	2080	2050	1900
MED	12800	4970	3660	3790	5430	4040	2920	2280	2020	2250	2140	1980
IN.	1.89	.74	.54	.57	.72	.60	.41	.33	.29	.32	.32	.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1999, BY WATER YEAR (WY)

MEAN	5497	4425	4806	6539	9383	12030	11800	7435	5406	5260	6136	6002
MAX	21020	29380	28130	21830	28370	36930	49040	24020	18120	13510	19810	21340
(WY)	1965	1948	1948	1948	1991	1998	1948	1973	1973	1991	1945	1964
MIN	1778	1666	1602	1623	1699	1905	2366	1937	1752	1610	1678	1769
(WY)	1991	1991	1991	1956	1957	1955	1955	1932	1955	1955	1955	1990

02320500 SUWANNEE RIVER AT BRANFORD, FL--Continued

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1931 - 1999	
ANNUAL MEAN	12020		4069		7054	
HIGHEST ANNUAL MEAN					19260	1948
LOWEST ANNUAL MEAN					1950	1955
HIGHEST DAILY MEAN	46500	Mar 22	18500	Oct 9	82800	Apr 11 1948
LOWEST DAILY MEAN	3430	Dec 27	1900	Sep 15	1530	Jul 1 1955
ANNUAL SEVEN-DAY MINIMUM	3450	Dec 25	1910	Sep 12	1550	Jan 8 1956
INSTANTANEOUS PEAK FLOW			18500	Oct 9	83900	Apr 11 1948
INSTANTANEOUS PEAK STAGE			18.86	Oct 9	34.07	Apr 11 1948
INSTANTANEOUS LOW FLOW			1880	Sep 15	1530	Jul 1 1955
ANNUAL RUNOFF (INCHES)	20.71		7.01		12.16	
10 PERCENT EXCEEDS	30200		6110		14600	
50 PERCENT EXCEEDS	6320		3430		4980	
90 PERCENT EXCEEDS	3780		2010		2350	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.33	11.18	7.38	6.13	9.10	8.53	6.29	4.57	3.78	3.82	4.24	3.73
2	12.23	10.93	7.31	6.18	9.24	8.39	6.22	4.54	3.77	3.84	4.30	3.71
3	14.34	10.70	7.24	6.31	9.30	8.26	6.15	4.52	3.76	3.87	4.34	3.68
4	16.02	10.50	7.18	6.28	9.50	8.22	6.09	4.49	3.79	3.91	4.25	3.65
5	17.21	10.27	7.13	6.33	9.52	8.08	6.03	4.46	3.76	3.91	4.17	3.65
6	18.01	10.04	7.07	6.44	9.56	8.02	5.97	4.46	3.76	3.90	4.10	3.66
7	18.55	9.83	7.02	6.54	9.62	7.97	5.93	4.44	3.70	3.96	4.05	3.67
8	18.77	9.64	6.96	6.61	9.71	7.89	5.88	4.43	3.68	4.03	4.02	3.65
9	18.85	9.48	6.88	6.66	9.82	7.83	5.83	4.38	3.67	4.05	4.07	3.60
10	18.80	9.35	6.80	6.69	9.90	7.80	5.76	4.34	3.68	4.01	4.00	3.59
11	18.66	9.21	6.72	6.68	9.95	7.68	5.70	4.34	3.75	4.03	3.99	3.55
12	18.41	9.06	6.68	6.72	9.97	7.52	5.62	4.31	3.70	4.07	4.01	3.50
13	18.04	8.91	6.68	6.77	9.91	7.44	5.50	4.29	3.70	4.11	4.00	3.46
14	17.63	8.79	6.64	6.79	9.76	7.40	5.44	4.31	3.68	4.15	3.98	3.43
15	17.18	8.69	6.56	6.79	9.60	7.34	5.41	4.28	3.67	4.21	4.00	3.40
16	16.73	8.58	6.49	6.77	9.45	7.27	5.39	4.23	3.66	4.33	3.94	3.40
17	16.29	8.46	6.46	6.76	9.31	7.23	5.30	4.18	3.71	4.28	3.94	3.40
18	15.89	8.34	6.42	6.78	9.23	7.20	5.19	4.15	3.70	4.24	3.96	3.49
19	15.50	8.24	6.39	6.76	9.08	7.19	5.10	4.13	3.63	4.22	3.96	3.56
20	15.12	8.14	6.37	6.71	8.95	7.18	5.05	4.10	3.63	4.21	3.96	3.55
21	14.76	8.06	6.33	6.68	8.79	7.18	5.00	4.06	3.64	4.23	3.92	3.61
22	14.39	7.97	6.29	6.63	8.70	7.15	4.95	4.02	3.66	4.27	3.89	3.59
23	14.00	7.90	6.24	6.69	8.63	7.06	4.89	4.01	3.62	4.28	3.87	3.59
24	13.62	7.84	6.19	6.83	8.63	6.96	4.84	4.01	3.59	4.25	3.84	3.60
25	13.29	7.78	6.14	6.89	8.64	6.86	4.79	3.99	3.58	4.24	3.82	3.61
26	12.94	7.71	6.11	7.33	8.65	6.77	4.75	3.96	3.59	4.24	3.84	3.62
27	12.62	7.64	6.09	7.73	8.61	6.67	4.73	3.91	3.63	4.23	3.84	3.79
28	12.30	7.55	6.08	8.03	8.61	6.58	4.72	3.89	3.66	4.24	3.82	3.96
29	12.01	7.49	6.13	8.30	---	6.51	4.68	3.88	3.74	4.22	3.80	4.03
30	11.72	7.44	6.15	8.60	---	6.43	4.62	3.84	3.80	4.20	3.78	4.24
31	11.44	---	6.12	8.87	---	6.35	---	3.80	---	4.20	3.76	---
TOTAL	475.65	265.72	204.25	214.28	259.74	228.96	161.82	130.32	110.69	127.75	123.46	108.97
MEAN	15.34	8.86	6.59	6.91	9.28	7.39	5.39	4.20	3.69	4.12	3.98	3.63
MAX	18.85	11.18	7.38	8.87	9.97	8.53	6.29	4.57	3.80	4.33	4.34	4.24
MIN	10.33	7.44	6.08	6.13	8.61	6.35	4.62	3.80	3.58	3.82	3.76	3.40

CAL YR 1998 TOTAL 5045.04 MEAN 13.82 MAX 29.19 MIN 6.08
WTR YR 1999 TOTAL 2411.61 MEAN 6.61 MAX 18.85 MIN 3.40

02321000 NEW RIVER NEAR LAKE BUTLER, FL

LOCATION.--Lat 29°59′53″, long 82°16′27″, in SW¼ sec. 2, T. 6. S., R. 20 E., Union County, Hydrologic unit 03110206, near right bank on downstream side of bridge on State Highway 100, 4.4 miles southeast of Lake Butler.

DRAINAGE AREA.--191 mi^2.

PERIOD OF RECORD.--January 1950 to September 1971, June 1973 to May 1977, periodic discharge measurements. October 1990 to September 1991, October 1992 to current year.

REVISED RECORDS.--WRD FLA. 1968 Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 83.8 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2600	22	11	7.3	85	19	5.7	3.8	.32	2.8	.17	.53
2	2470	21	10	7.3	75	19	5.6	3.2	.27	2.2	.16	.39
3	2030	19	10	15	70	18	5.5	2.8	.24	2.2	.15	.26
4	2450	23	9.7	16	109	16	5.2	2.4	.25	2.3	.16	.21
5	2030	26	9.4	14	186	14	4.8	2.1	.33	2.4	.21	.18
6	1350	25	9.2	12	222	13	4.6	2.1	.30	1.8	.85	.16
7	1010	22	9.0	11	204	12	4.2	2.0	.23	1.5	1.6	.16
8	752	20	8.6	10	173	12	4.0	1.9	.20	1.3	1.3	.16
9	564	19	8.4	10	133	11	3.8	1.8	.19	1.1	1.8	.16
10	425	18	8.3	12	104	11	3.6	1.6	.73	1.0	1.6	.17
11	311	17	8.3	12	84	9.9	3.3	1.4	9.1	.84	1.3	.17
12	219	16	8.2	11	70	9.4	3.1	1.3	5.4	.71	1.1	.17
13	186	16	8.3	11	60	8.8	2.9	1.3	1.9	.56	.89	.17
14	161	15	8.3	10	50	15	2.7	1.5	1.3	.36	1.5	.17
15	140	15	8.2	10	42	22	2.6	1.4	1.0	.25	2.5	.17
16	120	14	8.0	9.9	37	21	2.6	1.2	.93	.29	1.3	.20
17	104	14	7.7	9.6	33	18	3.0	1.1	1.1	.26	1.3	.18
18	93	13	7.5	9.6	30	16	3.6	.93	1.2	.27	1.1	.26
19	83	13	7.3	9.9	28	14	3.3	.90	1.3	.24	.80	.75
20	73	13	7.3	10	25	12	2.9	.96	1.1	.20	.67	.83
21	64	12	7.3	11	23	12	2.6	.99	.85	.18	.63	1.5
22	58	12	7.3	11	21	11	2.4	.92	.74	.29	.59	1.6
23	52	12	7.2	14	19	9.9	2.2	.86	.63	2.3	1.5	1.5
24	45	12	7.1	98	18	9.0	2.1	.81	.52	2.1	2.2	1.2
25	41	12	6.9	210	17	8.4	2.1	.83	.45	2.1	2.1	.98
26	37	12	7.3	215	16	7.8	2.1	.91	.45	1.2	4.8	.91
27	34	12	7.8	181	15	7.3	2.0	.84	.77	.79	3.0	1.2
28	31	12	7.9	161	16	6.9	2.6	.63	1.3	.53	2.7	2.4
29	29	11	8.0	140	---	6.4	5.8	.52	2.1	.29	1.4	2.9
30	26	11	8.2	120	---	6.0	5.2	.45	3.2	.19	.97	2.2
31	24	---	7.7	101	---	5.8	---	.39	---	.20	.71	---
MEAN	568	16.0	8.24	47.7	70.2	12.3	3.54	1.41	1.28	1.06	1.32	.73
MAX	2600	26	11	215	222	22	5.8	3.8	9.1	2.8	4.8	2.9
MIN	24	11	6.9	7.3	15	5.8	2.0	.39	.19	.18	.15	.16
IN.	3.43	.09	.05	.29	.38	.07	.02	.01	.01	.01	.01	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1999, BY WATER YEAR (WY)

MEAN	258	47.5	117	137	284	272	142	107	83.3	154	261	253
MAX	1461	459	781	607	1836	1491	1014	801	556	519	772	1845
(WY)	1993	1970	1954	1970	1998	1959	1991	1959	1957	1950	1970	1964
MIN	1.53	1.23	2.01	5.64	4.28	7.82	2.52	1.16	.52	1.06	1.32	.73
(WY)	1991	1991	1991	1957	1950	1950	1956	1955	1998	1999	1999	1999

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1950 - 1999	
ANNUAL MEAN	310		61.5		177	
HIGHEST ANNUAL MEAN					457	1970
LOWEST ANNUAL MEAN					9.66	1962
HIGHEST DAILY MEAN	8000	Feb 17	2600	Oct 1	10400	Sep 13 1964
LOWEST DAILY MEAN	.12	Jun 21	.15	Aug 3	.12	Jun 21 1998
ANNUAL SEVEN-DAY MINIMUM	.12	Jun 18	.16	Sep 6	.12	Jun 18 1998
INSTANTANEOUS PEAK FLOW			2840	Oct 1	11400	Sep 12 1964
INSTANTANEOUS PEAK STAGE			9.82	Oct 1	15.33	Sep 12 1964
INSTANTANEOUS LOW FLOW			.13	Jul 21	.09	Jun 17 1998
ANNUAL RUNOFF (INCHES)	22.04		4.37		12.56	
10 PERCENT EXCEEDS	646		78		449	
50 PERCENT EXCEEDS	64		5.8		32	
90 PERCENT EXCEEDS	1.2		.29		3.5	

02321500 SANTA FE RIVER AT WORTHINGTON SPRINGS, FL

LOCATION.--Lat 29°55′18″, long 82°25′35″, in SE¼ sec. 32, T. 6 S., R. 19 E., Alachua County, Hydrologic Unit 03110206, near center of span on downstream side of bridge on State Highway 121, 0.5 mi south of Worthington Springs, 0.8 mi downstream from New River, and 51 mi upstream from mouth.

DRAINAGE AREA.--575 mi^2.

PERIOD OF RECORD.--October 1931 to current year. Published as "near Worthington" prior to October 1965. Monthly discharge only for October 1931, published in WSP 1304.

REVISED RECORDS.--WSP 2105: WDR FL-76-4: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 42.74 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Jan. 16, 1939, nonrecording gage at site 0.2 mi downstream at present datum; Jan. 16, 1939 to July 23, 1953, nonrecording gage at present site and datum.

REMARKS.--Records good. Records do not include diversions during periods of high stages from Santa Fe Lake to Lochloosa Creek in St. Johns River Basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1700	116	42	26	189	81	22	17	2.0	47	3.5	17
2	3120	108	41	25	176	74	21	14	1.8	51	3.1	12
3	3660	101	40	41	160	67	21	11	1.6	41	3.6	9.4
4	3380	103	39	58	271	62	19	9.5	1.5	38	3.3	7.1
5	3310	103	39	54	327	57	18	8.3	1.9	50	3.3	5.4
6	3240	100	38	48	304	53	17	7.8	6.8	52	3.9	4.2
7	2760	94	36	42	321	51	15	7.2	8.1	56	9.2	3.4
8	2290	88	35	e35	338	49	14	7.4	6.6	62	15	3.3
9	1950	83	34	e40	326	47	14	6.8	4.9	54	17	3.9
10	1670	78	33	e45	293	45	12	6.1	4.4	39	23	4.0
11	1430	74	32	e50	256	41	11	5.5	30	29	23	4.6
12	1230	70	32	e45	216	38	11	5.9	44	23	25	4.7
13	1060	68	32	e40	187	36	9.7	5.9	42	19	27	4.4
14	890	66	33	38	160	54	8.9	5.0	34	15	37	3.8
15	741	64	32	36	139	103	8.7	5.3	22	12	85	3.5
16	620	62	31	34	123	101	8.3	5.5	17	16	87	3.0
17	542	60	30	33	112	83	9.5	5.2	16	16	50	2.7
18	478	58	29	31	105	70	11	4.4	18	20	33	13
19	406	56	28	31	98	62	11	4.0	24	14	24	20
20	353	56	27	31	91	55	10	3.9	22	11	21	22
21	317	55	25	31	84	51	9.4	3.8	17	8.3	18	40
22	286	53	25	30	78	47	8.7	e3.6	13	6.4	16	47
23	255	52	24	34	73	43	8.0	e3.5	10	7.3	21	41
24	229	51	23	154	68	39	7.3	e3.4	8.3	18	31	31
25	207	50	22	252	64	35	6.8	3.2	7.0	19	45	25
26	187	50	23	256	61	33	6.6	3.0	6.3	13	41	21
27	170	48	25	276	58	31	6.4	2.6	7.7	11	31	38
28	157	46	27	291	66	28	7.9	2.4	14	8.2	25	76
29	146	45	28	267	---	27	14	2.3	21	6.1	33	134
30	135	43	29	238	---	25	19	2.2	35	4.8	27	136
31	125	---	28	211	---	23	---	2.1	---	4.3	22	---
MEAN	1195	70.0	31.0	91.1	169	52.0	12.2	5.74	14.9	24.9	26.0	24.7
MAX	3660	116	42	291	338	103	22	17	44	62	87	136
MIN	125	43	22	25	58	23	6.4	2.1	1.5	4.3	3.1	2.7
IN.	2.40	.14	.06	.18	.31	.10	.02	.01	.03	.05	.05	.05

e Estimated

02321500 SANTA FE RIVER AT WORTHINGTON SPRINGS, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1999, BY WATER YEAR (WY)

MEAN	540	193	258	376	624	663	443	186	263	333	620	716
MAX	3043	1788	1801	1607	4161	3303	1927	1716	3646	1459	2137	4033
(WY)	1993	1948	1954	1970	1998	1959	1973	1959	1934	1946	1978	1964
MIN	4.00	2.98	4.00	5.12	5.44	23.4	6.41	2.13	3.58	9.05	9.86	10.3
(WY)	1932	1932	1932	1932	1932	1935	1935	1932	1935	1981	1954	1990

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1932 - 1999	
ANNUAL MEAN	786		144		434	
HIGHEST ANNUAL MEAN					1163	1948
LOWEST ANNUAL MEAN					54.8	1956
HIGHEST DAILY MEAN	11900	Feb 18	3660	Oct 3	19000	Sep 13 1964
LOWEST DAILY MEAN	2.9	Jun 24	1.5	Jun 4	.60	Jun 24 1955
ANNUAL SEVEN-DAY MINIMUM	3.3	Jun 18	1.9	May 30	1.3	Jun 20 1955
INSTANTANEOUS PEAK FLOW			3710	Oct 3	20000	Sep 13 1964
INSTANTANEOUS PEAK STAGE			18.88	Oct 3	28.40	Sep 13 1964
INSTANTANEOUS LOW FLOW			1.5	Jun 4	.50	Jun 24 1955
ANNUAL RUNOFF (INCHES)	18.55		3.40		10.25	
10 PERCENT EXCEEDS	2140		244		1130	
50 PERCENT EXCEEDS	157		32		144	
90 PERCENT EXCEEDS	15		4.4		18	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.27	9.73	8.41	8.10	10.66	9.19	8.01	7.86	7.20	8.63	7.31	7.77
2	18.22	9.61	8.39	8.07	10.51	9.06	7.99	7.77	7.18	8.72	7.28	7.65
3	18.82	9.51	8.38	8.40	10.32	8.93	7.97	7.69	7.15	8.50	7.31	7.56
4	18.53	9.55	8.37	8.74	11.47	8.83	7.94	7.63	7.14	8.43	7.30	7.48
5	18.46	9.55	8.36	8.65	11.97	8.73	7.90	7.58	7.18	8.71	7.29	7.40
6	18.38	9.49	8.34	8.53	11.77	8.65	7.86	7.55	7.46	8.74	7.33	7.35
7	17.81	9.41	8.32	8.42	11.92	8.60	7.83	7.53	7.51	8.84	7.53	7.30
8	17.20	9.31	8.29	---	12.06	8.55	7.80	7.54	7.46	8.95	7.74	7.29
9	16.70	9.22	8.27	---	11.96	8.50	7.77	7.51	7.38	8.78	7.80	7.33
10	16.23	9.14	8.25	---	11.68	8.47	7.73	7.48	7.35	8.43	7.97	7.33
11	15.79	9.06	8.24	---	11.34	8.41	7.69	7.45	8.18	8.18	7.98	7.36
12	15.38	8.99	8.23	---	10.94	8.35	7.67	7.47	8.57	8.00	8.06	7.37
13	14.98	8.94	8.23	---	10.63	8.31	7.64	7.46	8.53	7.85	8.11	7.35
14	14.56	8.90	8.24	8.35	10.32	8.66	7.60	7.42	8.31	7.71	8.40	7.32
15	14.13	8.86	8.23	8.31	10.05	9.54	7.59	7.43	7.96	7.64	9.30	7.31
16	13.72	8.82	8.21	8.27	9.84	9.51	7.58	7.45	7.79	7.75	9.38	7.28
17	13.36	8.78	8.18	8.25	9.68	9.23	7.63	7.43	7.74	7.76	8.70	7.25
18	13.01	8.74	8.16	8.22	9.57	8.99	7.67	7.39	7.83	7.88	8.29	7.59
19	12.58	8.72	8.15	8.21	9.47	8.82	7.70	7.37	8.01	7.71	8.03	7.87
20	12.18	8.70	8.13	8.21	9.35	8.69	7.66	7.36	7.93	7.61	7.90	7.95
21	11.88	8.68	8.08	8.20	9.23	8.60	7.62	7.35	7.77	7.52	7.81	8.46
22	11.62	8.64	8.07	8.19	9.13	8.51	7.59	---	7.66	7.45	7.76	8.63
23	11.34	8.61	8.05	8.27	9.03	8.43	7.57	---	7.58	7.48	7.92	8.49
24	11.08	8.60	8.04	10.18	8.95	8.36	7.54	---	7.52	7.82	8.23	8.24
25	10.85	8.59	8.01	11.30	8.88	8.30	7.51	7.31	7.47	7.84	8.58	8.04
26	10.64	8.56	8.02	11.34	8.81	8.25	7.50	7.29	7.44	7.68	8.50	7.92
27	10.45	8.53	8.09	11.53	8.76	8.20	7.50	7.27	7.49	7.60	8.22	8.41
28	10.29	8.49	8.13	11.66	8.90	8.16	7.56	7.25	7.70	7.52	8.06	9.21
29	10.14	8.46	8.14	11.44	---	8.12	7.77	7.24	7.90	7.43	8.27	10.07
30	10.00	8.44	8.17	11.17	---	8.07	7.94	7.23	8.33	7.38	8.12	10.11
31	9.86	---	8.15	10.90	---	8.04	---	7.22	---	7.35	7.93	---
TOTAL	434.46	268.63	254.33	---	287.20	267.06	231.33	---	230.72	247.89	248.41	236.69
MEAN	14.01	8.95	8.20	---	10.26	8.61	7.71	---	7.69	8.00	8.01	7.89
MAX	18.82	9.73	8.41	---	12.06	9.54	8.01	---	8.57	8.95	9.38	10.11
MIN	9.86	8.44	8.01	---	8.76	8.04	7.50	---	7.14	7.35	7.28	7.25

CAL YR 1998 TOTAL 4294.64 MEAN 11.77 MAX 23.40 MIN 7.77

02321975 SANTA FE RIVER AT US HWY 441 NEAR HIGH SPRINGS, FL

LOCATION.--Lat 29°51′09″, long 82°36′31″, in NW¼ sec. 27, T. 7 S., R. 17 E., Columbia County, Hydrologic Unit 03110206, at highway bridge on U.S. 441, 1.9 mi northwest of the intersection of U.S. 441 and U.S. 27, and 28.1 mi upstream from mouth.

DRAINAGE AREA.--859 mi^2.

PERIOD OF RECORD.--October 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark).

REMARKS.--No estimated daily discharges. Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1180	816	618	521	617	490	374	259	203	198	192	208
2	1330	800	616	534	615	489	364	259	202	205	188	208
3	1830	788	613	520	611	491	357	258	199	208	188	208
4	2290	781	608	505	611	472	353	256	202	207	186	204
5	2580	770	604	513	624	470	350	254	200	208	185	202
6	2720	746	600	521	647	474	339	251	196	216	182	200
7	2830	735	595	523	656	466	335	250	196	218	176	199
8	2810	734	590	527	657	458	338	246	199	220	178	198
9	2660	729	586	532	656	466	338	246	198	221	183	197
10	2450	722	583	509	660	458	328	243	201	222	180	194
11	2240	711	581	503	652	446	319	242	203	219	183	191
12	2060	704	582	512	645	443	317	241	201	216	184	192
13	1900	703	588	511	625	441	313	241	207	212	187	195
14	1770	701	572	510	612	456	311	238	214	203	195	200
15	1650	696	565	509	605	439	307	231	211	202	194	204
16	1540	690	564	500	599	441	293	229	208	203	199	190
17	1450	682	563	499	590	449	292	229	208	201	214	190
18	1370	671	551	497	580	450	282	227	202	200	221	200
19	1300	669	552	492	563	445	280	225	203	193	217	200
20	1240	667	548	496	544	440	280	223	203	191	218	208
21	1180	658	548	496	534	435	278	220	205	189	220	214
22	1120	652	544	495	520	419	275	221	205	195	221	209
23	1060	653	537	507	519	415	272	219	204	194	220	213
24	1020	655	535	515	516	415	274	220	203	192	217	217
25	986	649	531	531	507	410	269	215	199	195	216	215
26	951	642	530	570	503	404	270	214	197	198	220	215
27	918	635	528	597	496	393	264	213	195	198	221	219
28	898	631	539	615	506	390	268	211	198	193	220	221
29	876	628	545	620	---	382	265	208	197	198	216	236
30	852	623	521	619	---	378	263	205	200	198	212	254
31	833	---	518	613	---	379	---	206	---	195	208	---
MEAN	1609	698	566	529	588	439	306	232	202	203	201	207
MAX	2830	816	618	620	660	491	374	259	214	222	221	254
MIN	833	623	518	492	496	378	263	205	195	189	176	190
IN.	2.16	.91	.76	.71	.71	.59	.40	.31	.26	.27	.27	.27

02321975 SANTA FE RIVER AT US HWY 441 NEAR HIGH SPRINGS, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1999, BY WATER YEAR (WY)

MEAN	1348	521	528	691	1217	1129	736	518	422	497	592	489
MAX	3505	1006	934	1075	4110	3531	1226	1172	852	745	877	828
(WY)	1993	1993	1998	1998	1998	1998	1993	1997	1997	1996	1997	1995
MIN	146	299	228	352	232	439	306	232	202	203	201	207
(WY)	1994	1998	1994	1996	1996	1999	1999	1999	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1993 - 1999	
ANNUAL MEAN	1335		482		722	
HIGHEST ANNUAL MEAN					1219	1998
LOWEST ANNUAL MEAN					470	1994
HIGHEST DAILY MEAN	9150	Feb 25	2830	Oct 7	9150	Feb 25 1998
LOWEST DAILY MEAN	518	Dec 31	176	Aug 7	99	Oct 29 1993
ANNUAL SEVEN-DAY MINIMUM	530	Dec 25	181	Aug 6	113	Oct 23 1993
INSTANTANEOUS PEAK FLOW			2850	Oct 7	9250	Feb 25 1998
INSTANTANEOUS PEAK STAGE			37.16	Oct 7	45.23	Oct 6 1992
INSTANTANEOUS LOW FLOW			163	Aug 13	99	Oct 29 1993
ANNUAL RUNOFF (INCHES)	21.10		7.62		11.42	
10 PERCENT EXCEEDS	2770		756		1250	
50 PERCENT EXCEEDS	734		374		523	
90 PERCENT EXCEEDS	614		198		223	

02322500 SANTA FE RIVER NEAR FORT WHITE, FL

LOCATION.--Lat 29°50′55″, long 82°42′55", in SE¼ sec. 28, T. 7 S., R. 16 E., Gilchrist County, Hydrologic Unit 03110206, on left bank 2.1 mi upstream from bridge on State Highway 47, 5.1 mi south of Fort White, and 18 mi upstream from mouth.

DRAINAGE AREA.--1,017 mi^2.

PERIOD OF RECORD.--October 1927 to January 1930, June 1932 to current year.

REVISED RECORDS.--WDR FL-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 20.86 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to June 3, 1932, nonrecording gage at several sites within 200 ft of present site at various datums. Oct. 1, 1947 to Feb. 10, 1949, auxiliary nonrecording gage and since Feb. 11, 1949, auxiliary water-stage recorder at bridge on U.S. Highway 129, 16 mi downstream from base gage at datum 3.5 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1970	1680	1070	909	1040	1000	959	929	781	781	725	834
2	2090	1640	1070	920	1050	1000	959	926	775	794	723	823
3	2410	1600	1060	934	1070	1010	957	912	767	789	738	814
4	2860	1580	1050	915	1090	995	952	909	771	797	731	808
5	3260	1540	1040	912	1070	989	951	909	774	787	730	803
6	3460	1490	1040	913	1090	989	950	906	782	790	726	796
7	3460	1450	1040	921	1110	989	950	909	767	807	724	787
8	3410	1430	1030	921	1120	981	954	900	762	816	732	777
9	3370	1410	1030	923	1120	982	958	892	760	849	763	776
10	3360	1390	1020	919	1140	985	959	885	774	845	755	771
11	3330	1370	1020	901	1140	976	950	883	796	827	804	759
12	3210	1350	1020	887	1140	972	944	882	782	811	810	755
13	3070	1320	1020	887	1120	968	944	875	776	798	789	747
14	2950	1300	1020	887	1110	998	946	881	776	785	786	745
15	2830	1280	1010	887	1110	984	947	866	780	802	797	736
16	2720	1250	1000	887	1100	974	950	857	775	853	794	730
17	2630	1230	993	887	1100	981	958	851	803	808	809	725
18	2550	1210	981	887	1090	989	950	848	798	804	823	747
19	2450	1190	968	881	1080	989	946	845	770	810	823	759
20	2350	1170	958	878	1050	989	952	854	764	801	832	787
21	2270	1160	942	878	1040	989	949	848	758	792	840	828
22	2180	1150	938	878	1020	983	942	832	755	784	852	797
23	2080	1150	932	917	1010	975	937	835	755	781	866	790
24	2010	1140	929	960	1010	972	927	831	748	768	859	795
25	1940	1130	929	929	1010	972	934	823	751	762	852	802
26	1900	1120	929	943	1010	972	928	814	751	755	853	802
27	1890	1110	925	977	1000	967	922	808	751	752	851	871
28	1860	1090	926	1010	1020	960	943	809	771	746	853	884
29	1810	1090	929	1030	---	959	943	801	774	743	844	870
30	1760	1080	919	1040	---	958	937	797	807	742	840	907
31	1720	---	910	1040	---	955	---	787	---	734	833	---
MEAN	2554	1303	989	924	1074	981	947	861	772	791	799	794
MAX	3460	1680	1070	1040	1140	1010	959	929	807	853	866	907
MIN	1720	1080	910	878	1000	955	922	787	748	734	723	725
IN.	2.90	1.43	1.12	1.05	1.10	1.11	1.04	.98	.85	.90	.91	.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1999, BY WATER YEAR (WY)

MEAN	1818	1410	1300	1424	1627	1842	1749	1429	1336	1408	1702	1945
MAX	4357	3840	2778	3415	4810	5345	4668	3409	4063	2728	3545	6344
(WY)	1993	1948	1965	1942	1998	1948	1948	1959	1959	1972	1928	1964
MIN	730	691	641	678	691	670	671	636	679	773	799	756
(WY)	1956	1991	1991	1956	1956	1957	1956	1957	1956	1990	1999	1955

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1928 - 1999	
ANNUAL MEAN	2222		1067		1581	
HIGHEST ANNUAL MEAN					3112	1948
LOWEST ANNUAL MEAN					724	1956
HIGHEST DAILY MEAN	10400	Feb 26	3460	Oct 6	16900	Sep 16 1964
LOWEST DAILY MEAN	910	Dec 31	723	Aug 2	608	Jan 7 1991
ANNUAL SEVEN-DAY MINIMUM	924	Dec 25	728	Aug 1	611	Jan 4 1991
INSTANTANEOUS PEAK FLOW			3490	Oct 6	17000	Sep 16 1964
INSTANTANEOUS PEAK STAGE			4.48	Oct 7	15.34	Sep 16 1964
INSTANTANEOUS LOW FLOW			716	Aug 1	608	Jan 7 1991
ANNUAL RUNOFF (INCHES)	29.66		14.24		21.12	
10 PERCENT EXCEEDS	4070		1510		2600	
50 PERCENT EXCEEDS	1600		929		1300	
90 PERCENT EXCEEDS	1130		766		880	

02323500 SUWANNEE RIVER NEAR WILCOX, FL

LOCATION.--Lat 29°35′22″, long 82°56′12″, in NW¼ sec.29, T. 10 S., R. 14 E., Levy County, Hydrologic Unit 03110205, on left bank about 400 ft downstream from Fort Fannin Bridge on U.S. Highway 19, 2.0 mi southwest of Wilcox and 33 mi upstream from mouth.

DRAINAGE AREA.--9,640 mi^2, approximately, includes part of watershed in Okefenokee Swamp which is indeterminate.

PERIOD OF RECORD.--October 1930 to September 1931, October 1941 to current year. Monthly discharge only for some periods, published in WSP 1304.

REVISED RECORDS.--WSP 1905: WDR FL-75-1: Drainage area. WDR FL-97-4: 1996.

GAGE.--Water-stage recorder. Datum of gage is 0.53 ft below National Geodetic Vertical Datum of 1929. Prior to July 4, 1931, nonrecording gage at site 400 ft upstream at present datum. July 4 to Sept. 30, 1931, and Mar. 26 to May 14, 1942, water-stage recorder, and May 15, 1942 to Jan. 24, 1951, nonrecording gage at present site and datum. Since Feb. 1, 1951, auxiliary water-stage recorder about 9.0 mi downstream from base gage. Datum of auxiliary gage is 2.99 ft below National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records poor. Flow generally affected by tide when discharge is less than 17,500 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8920	11200	7240	6010	8300	9150	5840	4290	3560	3480	3500	3590
2	9920	10700	7070	5650	8520	8680	5920	4110	3520	3570	3540	3660
3	11000	10200	6910	6530	8810	8290	5660	4000	3560	3540	3560	3610
4	12700	10300	6890	6320	9200	8880	5550	3990	3630	3490	3600	3590
5	14300	11000	6870	5970	9320	8220	5530	3960	3800	3500	3430	3620
6	15700	10400	6790	5930	9290	8200	5480	4100	3500	3520	3460	3700
7	17200	10000	6720	6120	9330	8290	5370	4030	3570	3440	3580	3690
8	18500	9790	6800	6260	9500	7830	5390	4040	3540	3430	3530	3630
9	19400	9490	6740	6470	9730	7460	5180	3950	3570	3560	3520	3590
10	20200	9260	6690	6620	9900	8100	5320	3940	3530	3490	3540	3650
11	20700	9240	6520	6040	9840	7950	5140	3980	3510	3500	3570	3590
12	20800	9330	6280	6190	9850	7610	5210	3980	3500	3510	3670	3560
13	20700	8900	6420	6390	10100	7160	4910	4030	3560	3490	3580	3570
14	20300	8600	6800	6450	9680	7020	4730	3890	3490	3510	3490	3780
15	19600	8550	6320	6700	9690	7870	4570	4030	3530	3490	3570	3260
16	19100	8340	6290	6490	9360	7230	5220	3820	3470	3530	3600	3370
17	18600	8340	6340	6440	9040	6950	4780	3850	3470	3520	3610	3510
18	17600	8180	6230	6480	8990	6910	4730	3770	3630	3520	3490	3340
19	16700	8060	6140	6510	9090	6910	4490	3800	3530	3550	3520	3300
20	16200	7930	6310	6430	9440	6860	4420	3810	3500	3600	3530	3460
21	15600	7850	6190	6320	9110	6730	4460	3740	3570	3640	3570	3740
22	15400	7850	6130	6170	9090	7050	4280	3760	3640	3600	3560	3610
23	15700	7620	6130	6450	8710	6760	4420	3740	3510	3610	3570	3540
24	15100	7640	6010	7180	9070	6730	4350	3720	3530	3430	3620	3470
25	14400	7550	6130	6580	8940	6450	4350	3810	3550	3480	3670	3510
26	13800	7580	6010	6710	8960	6610	4190	3730	3480	3510	3710	3560
27	13400	7420	5990	7060	8900	6420	4260	3690	3390	3500	3730	3690
28	12800	7320	5830	7370	8590	6090	4310	3680	3480	3500	3720	3790
29	12400	7210	5890	7710	---	6070	4300	3670	3450	3500	3710	3770
30	12000	7180	6370	8000	---	5960	4270	3650	3520	3520	3720	3860
31	11600	---	5980	8270	---	5790	---	3590	---	3470	3770	---
MEAN	15820	8768	6420	6575	9227	7298	4888	3876	3536	3516	3588	3587
MAX	20800	11200	7240	8270	10100	9150	5920	4290	3800	3640	3770	3860
MIN	8920	7180	5830	5650	8300	5790	4190	3590	3390	3430	3430	3260
IN.	1.89	1.02	.77	.79	1.00	.87	.57	.46	.41	.42	.43	.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1999, BY WATER YEAR (WY)

MEAN	8803	7701	8072	10150	12870	15720	15860	11200	8534	8290	9165	9201
MAX	25810	33030	32630	27320	27450	40960	57260	28690	21690	17550	22190	27910
(WY)	1965	1948	1948	1948	1998	1998	1948	1973	1959	1973	1991	1964
MIN	3703	3718	3575	3610	3602	3796	4631	3876	3536	3516	3588	3587
(WY)	1982	1956	1956	1956	1957	1957	1956	1999	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1931 - 1999	
ANNUAL MEAN	15610		6415		10450	
HIGHEST ANNUAL MEAN					24560	1948
LOWEST ANNUAL MEAN					4291	1955
HIGHEST DAILY MEAN	47600	Mar 26	20800	Oct 12	84700	Apr 14 1948
LOWEST DAILY MEAN	5390	Sep 2	3260	Sep 15	2960	Oct 25 1981
ANNUAL SEVEN-DAY MINIMUM	5590	Aug 28	3430	Sep 15	3350	Oct 21 1981
INSTANTANEOUS PEAK FLOW			20800	Oct 12	84700	Apr 14 1948
INSTANTANEOUS PEAK STAGE			9.57	Oct 12	22.32	Apr 14 1948
INSTANTANEOUS LOW FLOW			3260	Sep 15	2960	Oct 25 1981
ANNUAL RUNOFF (INCHES)	21.98		9.04		14.73	
10 PERCENT EXCEEDS	36800		10000		18600	
50 PERCENT EXCEEDS	10000		5790		8300	
90 PERCENT EXCEEDS	5880		3510		4740	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.02	6.09	4.04	3.47	4.67	4.61	3.95	2.72	2.92	2.97	3.08	3.02
2	5.82	6.04	3.93	3.79	4.97	4.54	3.70	2.79	2.93	2.81	3.04	2.94
3	6.27	6.08	4.03	4.06	4.92	4.71	3.55	3.00	2.88	2.74	2.97	2.88
4	6.96	6.03	4.11	3.34	4.96	4.20	3.49	3.19	2.74	2.75	2.83	3.02
5	7.61	5.59	4.08	2.95	4.76	4.12	3.44	3.45	2.64	2.78	2.95	3.24
6	8.15	5.20	4.02	3.01	4.69	4.25	3.35	3.53	2.58	2.76	3.14	3.49
7	8.63	5.16	4.06	3.35	4.79	4.08	3.31	3.31	2.59	2.84	3.37	3.40
8	9.02	5.10	3.95	3.49	4.87	3.73	3.27	3.19	2.65	2.97	3.26	3.25
9	9.29	5.11	3.70	3.64	4.84	4.16	3.41	2.96	2.78	3.12	3.32	3.31
10	9.46	5.08	3.48	3.34	4.81	4.24	3.51	3.02	2.86	3.03	3.41	3.23
11	9.54	5.06	3.34	2.99	4.82	3.87	3.44	3.11	2.94	3.08	3.43	3.21
12	9.56	4.74	3.41	3.20	4.96	3.73	3.32	3.17	2.99	3.16	3.19	2.98
13	9.52	4.59	3.90	3.64	4.72	3.84	3.10	3.36	3.01	3.21	3.02	2.81
14	9.43	4.72	3.54	3.83	4.43	4.59	3.42	3.53	3.13	3.14	3.15	2.55
15	9.30	4.77	3.15	3.98	4.61	4.25	4.17	3.22	3.05	3.09	3.23	2.29
16	9.12	4.73	3.21	3.65	4.84	3.65	3.87	3.06	3.06	3.05	3.17	2.79
17	8.87	4.71	3.44	3.85	5.07	3.87	3.37	3.01	3.14	2.96	2.84	2.70
18	8.66	4.56	3.35	4.02	5.25	4.01	2.95	3.06	2.82	2.95	2.91	2.86
19	8.49	4.47	3.73	3.89	5.07	4.10	2.96	3.17	2.51	2.83	2.95	3.42
20	8.30	4.48	3.73	3.82	4.70	4.07	3.03	3.09	2.56	2.69	3.02	3.66
21	8.09	4.41	3.77	3.85	4.50	4.12	3.02	2.87	2.63	2.63	2.95	3.53
22	7.86	4.09	3.75	3.92	4.18	3.86	3.10	2.85	2.57	2.63	2.98	2.92
23	7.51	4.16	3.58	4.17	4.20	3.72	2.97	2.84	2.57	2.73	3.10	2.92
24	7.22	4.14	3.59	4.05	4.32	3.63	2.87	2.99	2.75	2.95	3.16	3.13
25	7.03	4.12	3.44	3.33	4.35	3.63	2.94	3.00	2.80	3.08	3.24	3.41
26	6.88	4.01	3.22	3.42	4.45	3.65	2.97	2.92	2.84	3.01	3.22	3.46
27	6.73	3.86	3.11	3.75	4.53	3.41	3.50	2.89	2.99	3.03	3.24	3.53
28	6.59	3.82	3.24	4.12	4.81	3.37	3.55	2.89	3.01	3.08	3.21	3.43
29	6.48	3.89	3.79	4.36	---	3.56	3.43	2.88	3.08	3.18	3.24	3.48
30	6.35	4.08	3.62	4.49	---	3.63	3.02	2.80	3.10	3.15	3.29	3.34
31	6.22	---	3.42	4.49	---	3.69	---	2.88	---	3.15	3.06	---
MEAN	7.90	4.76	3.64	3.72	4.72	3.96	3.33	3.06	2.84	2.95	3.13	3.14
MAX	9.56	6.09	4.11	4.49	5.25	4.71	4.17	3.53	3.14	3.21	3.43	3.66
MIN	5.82	3.82	3.11	2.95	4.18	3.37	2.87	2.72	2.51	2.63	2.83	2.29

CAL YR 1998 MEAN 7.59 MAX 17.35 MIN 3.11
WTR YR 1999 MEAN 3.93 MAX 9.56 MIN 2.29

STEINHATCHEE RIVER BASIN

02324000 STEINHATCHEE RIVER NEAR CROSS CITY, FL

LOCATION.--Lat 29°47′11″, long 83°19′18″, in NE¼ sec. 16, T. 8 S., R. 10 E., Taylor County, Hydrologic Unit 03110102, on right bank 0.7 mi downstream from Atlantic Coast Line Railroad bridge, 0.7 mi south of Clara, 13 mi upstream from mouth, and 16 mi northwest of Cross City.

DRAINAGE AREA.--350 mi^2, approximately. See REMARKS.

PERIOD OF RECORD.--February 1950 to current year.

REVISED RECORDS.--WSP 1234: 1950. WSP 1724: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7.84 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Below about 500 ft^3/s, all flow enters sinkhole 0.5 mi downstream from gage. Above about 4,000 ft^3/s, discharge measurements are made along U.S. Highways 19, 98, and Alternate 27, measurements include all flow from about 3 mi northwest to 5 mi southwest of main channel, drainage area is increased by about 30 mi^2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2460	94	32	21	142	114	42	9.7	6.8	390	16	47
2	2880	86	31	21	136	108	40	9.5	6.8	484	14	40
3	2860	82	30	30	140	105	38	9.3	7.8	474	24	33
4	2580	81	28	34	351	103	36	8.8	7.7	413	48	27
5	2280	78	27	33	356	95	33	8.6	8.4	304	40	22
6	1950	72	27	31	336	88	31	8.5	8.5	229	31	19
7	1620	69	26	31	288	84	28	9.1	7.7	212	36	17
8	1380	66	25	30	252	78	26	9.5	7.6	176	62	29
9	1190	64	24	31	226	75	24	9.1	8.0	174	113	26
10	1030	61	23	45	205	73	22	8.3	8.1	225	188	22
11	870	56	22	44	187	70	20	7.6	8.8	189	276	20
12	745	54	21	43	171	66	19	7.5	11	162	296	18
13	632	53	22	42	162	63	18	7.2	10	143	251	16
14	542	53	24	40	147	65	16	7.1	9.4	120	201	14
15	474	51	24	38	135	71	16	6.9	8.2	105	199	12
16	417	50	23	37	126	70	15	7.6	8.4	112	211	12
17	366	47	22	36	119	68	16	7.6	9.6	88	200	10
18	323	46	20	37	127	66	17	7.5	11	91	174	13
19	295	45	19	46	126	62	16	7.4	13	120	145	25
20	268	44	18	45	117	60	15	7.2	12	97	131	30
21	245	42	18	43	109	57	14	7.4	12	74	157	34
22	224	42	18	41	103	55	13	7.2	15	60	134	33
23	197	41	17	70	96	52	12	7.4	19	52	111	31
24	178	42	16	272	93	51	12	7.2	19	47	93	29
25	164	41	16	279	91	49	11	7.1	17	41	82	26
26	151	40	16	254	86	49	11	7.0	17	35	86	23
27	139	38	19	219	82	47	11	6.9	26	30	90	35
28	128	37	20	196	94	45	10	7.3	35	25	87	61
29	118	35	21	176	---	44	10	7.2	48	21	77	74
30	108	33	23	160	---	44	10	6.8	193	18	66	95
31	101	---	23	148	---	43	---	6.8	---	19	56	---
MEAN	868	54.8	22.4	83.0	164	68.4	20.1	7.82	19.3	153	119	29.8
MAX	2880	94	32	279	356	114	42	9.7	193	484	296	95
MIN	101	33	16	21	82	43	10	6.8	6.8	18	14	10
IN.	2.86	.17	.07	.27	.49	.23	.06	.03	.06	.50	.39	.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1999, BY WATER YEAR (WY)

MEAN	295	127	195	340	486	504	346	127	120	312	504	486
MAX	1436	1291	998	1186	2266	2022	1443	972	925	1305	2496	3820
(WY)	1958	1952	1954	1998	1998	1991	1982	1978	1957	1964	1970	1964
MIN	16.0	11.1	7.53	14.2	13.0	31.0	15.9	7.82	3.75	4.20	4.75	29.5
(WY)	1956	1956	1956	1956	1957	1950	1956	1999	1981	1998	1998	1956

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1950 - 1999	
ANNUAL MEAN	557		135		321	
HIGHEST ANNUAL MEAN					901	1964
LOWEST ANNUAL MEAN					35.4	1956
HIGHEST DAILY MEAN	4810	Feb 25	2880	Oct 2	16400	Sep 14 1964
LOWEST DAILY MEAN	3.4	Jul 18	6.8	May 30	2.6	Jul 3 1981
ANNUAL SEVEN-DAY MINIMUM	3.6	Jul 14	6.9	May 27	2.8	Jul 2 1981
INSTANTANEOUS PEAK FLOW			2960	Oct 2	17600	Sep 13 1964
INSTANTANEOUS PEAK STAGE			14.77	Oct 2	18.90	Sep 13 1964
INSTANTANEOUS LOW FLOW			6.8	May 14	2.5	Jul 18 1981
ANNUAL RUNOFF (INCHES)	21.62		5.24		12.46	
10 PERCENT EXCEEDS	1700		247		862	
50 PERCENT EXCEEDS	66		42		120	
90 PERCENT EXCEEDS	4.1		8.7		16	

FENHOLLOWAY RIVER BASIN
02324400 FENHOLLOWAY RIVER NEAR FOLEY, FL

LOCATION.--Lat 30°05′53″, long 83°28′19″, in NE¼ sec. 36, T. 4 S., R. 8 E., Taylor County, Hydrologic Unit 03110102, near left bank at downstream side of bridge on U.S. Highway 27, 1.8 mi upstream from small tributary, 4 mi northeast of Foley, and 32 mi upstream from mouth.

DRAINAGE AREA.--60 mi^2 approximately.

PERIOD OF RECORD.--February to August 1955 (discharge measurements only); September 1955 to current year.

REVISED RECORDS.--WSP 1905: Drainage area: WDR FL-92-4: 1991.

GAGE.--Water-stage recorder. Datum of gage is 53.59 ft above National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark).

REMARKS.--Records good, except for estimated daily discharges, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	453	25	7.9	6.0	13	8.5	3.9	.85	.50	e5.5	3.9	3.2
2	460	23	7.6	5.4	13	8.5	3.8	.80	.49	e5.0	3.3	2.7
3	410	21	7.3	6.4	12	8.7	3.6	.77	.50	e4.7	2.8	2.3
4	360	20	6.9	6.7	13	9.3	3.3	.75	.49	e4.5	2.5	2.0
5	310	19	6.7	6.4	13	9.0	3.0	.73	.65	e4.2	2.1	1.7
6	271	18	6.6	6.3	13	8.3	2.8	.76	.71	e5.0	1.8	1.6
7	237	17	6.3	6.1	13	7.8	2.6	.90	.57	e10	1.7	1.5
8	212	16	6.0	5.9	12	7.2	2.3	1.1	.57	e30	2.7	1.4
9	193	15	5.9	6.1	13	6.7	2.2	.96	.52	e50	11	1.7
10	176	14	5.7	7.7	12	6.4	2.0	.89	.54	e60	13	2.6
11	159	13	5.5	7.6	12	5.9	1.7	1.0	.61	e50	12	2.1
12	146	13	5.4	7.4	11	5.5	1.5	1.1	1.1	e40	12	1.8
13	135	12	5.3	7.1	11	5.2	1.4	1.1	1.8	e36	11	1.6
14	125	12	5.2	6.7	11	7.4	1.4	.97	1.8	31	11	1.5
15	116	12	5.0	6.9	10	12	1.3	.88	1.5	25	12	1.4
16	107	11	4.9	6.7	10	12	1.2	.83	1.4	23	11	1.3
17	99	11	4.8	6.3	9.8	11	1.2	.79	1.4	20	10	1.3
18	92	11	4.6	6.2	10	11	1.2	.75	1.4	17	8.7	1.3
19	85	11	4.4	6.8	10	10	1.0	.75	1.4	15	7.2	1.5
20	78	11	4.5	6.5	9.9	9.7	1.1	.66	1.3	13	6.3	2.1
21	72	10	4.4	6.2	9.5	9.0	1.1	.55	1.4	12	5.8	1.9
22	66	10	4.4	6.0	8.9	8.2	1.1	.54	1.3	11	4.9	1.9
23	59	10	4.5	7.8	8.3	7.4	.99	.53	1.2	11	4.2	1.7
24	54	10	4.5	18	8.0	6.7	1.0	.52	e2.0	9.7	3.6	1.6
25	48	10	4.4	16	7.5	6.1	.96	.53	e1.9	8.6	10	1.5
26	44	9.9	4.6	15	7.1	6.2	.95	.52	e1.8	7.6	13	1.6
27	40	9.6	5.2	14	6.7	5.9	.89	.52	e1.7	6.4	10	23
28	36	9.1	5.2	14	7.1	5.3	.86	.52	e3.0	5.4	8.2	36
29	33	8.7	5.6	13	---	5.0	.89	.52	e4.0	4.5	6.4	27
30	30	8.3	6.6	13	---	4.5	.85	.51	e6.0	3.9	5.1	24
31	27	---	6.2	13	---	4.2	---	.49	---	4.4	4.0	---
MEAN	153	13.4	5.55	8.62	10.5	7.70	1.74	.74	1.45	17.2	7.14	5.23
MAX	460	25	7.9	18	13	12	3.9	1.1	6.0	60	13	36
MIN	27	8.3	4.4	5.4	6.7	4.2	.85	.49	.49	3.9	1.7	1.3
IN.	2.93	.25	.11	.17	.18	.15	.03	.01	.03	.33	.14	.10

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1999, BY WATER YEAR (WY)

MEAN	39.2	13.4	26.6	48.0	75.4	89.4	72.3	26.1	31.8	48.7	81.0	59.9
MAX	389	81.5	185	179	259	377	413	147	478	194	580	560
(WY)	1958	1977	1977	1987	1998	1991	1973	1964	1957	1964	1970	1964
MIN	.53	.70	.88	.95	.92	1.22	.79	.56	.70	.75	.50	.64
(WY)	1994	1969	1996	1996	1996	1989	1989	1989	1993	1993	1993	1993

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1956 - 1999	
ANNUAL MEAN	85.2		19.6		50.9	
HIGHEST ANNUAL MEAN					154	1964
LOWEST ANNUAL MEAN					4.42	1968
HIGHEST DAILY MEAN	545	Feb 23	460	Oct 2	2710	Sep 12 1964
LOWEST DAILY MEAN	1.0	Jul 8	.49	May 31	.35	Aug 25 1993
ANNUAL SEVEN-DAY MINIMUM	1.1	Jul 2	.50	May 29	.41	Aug 20 1993
INSTANTANEOUS PEAK FLOW			479	Oct 1	3210	Sep 12 1964
INSTANTANEOUS PEAK STAGE			11.28	Oct 1	15.21	Sep 12 1964
INSTANTANEOUS LOW FLOW			.48	May 31	.32	Aug 25 1993
ANNUAL RUNOFF (INCHES)	19.28		4.42		11.52	
10 PERCENT EXCEEDS	283		30		140	
50 PERCENT EXCEEDS	33		6.3		16	
90 PERCENT EXCEEDS	1.3		.89		1.4	

FENHOLLOWAY RIVER BASIN
02325000 FENHOLLOWAY RIVER NEAR PERRY, FL

LOCATION.--Lat 30°04′16", long 83°39′45″, in SE¼ sec .6, T. 5 S., R. 7 E., Taylor County, Hydrologic Unit 03110102, near right bank on downstream side of old bridge at State Highway 356, 1.0 mi southwest of the community of Hampton Springs, 5.5 mi southwest of Perry and 14 mi upstream from mouth.

DRAINAGE AREA.--160 mi^2, approximately.

PERIOD OF RECORD.--August 1946 to June 1952 (discharge measurements only); August 1952 to October 1954 (gage heights and discharge measurements only); November 1964 to July 1977 (crest-stage and periodic discharge measurements only); August 1977 to September 1984. May 1986 to current year.

REVISED RECORDS.--WSP 1905: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. August 13, 1946 to October 1954, non-recording gage at same site at datum 5.00 ft higher. November 1964 to July 1977, crest-stage gage at same site and datum.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Natural flow of stream affected by large ground-water withdrawals by cellulose plant about 10 mi upstream. Flow affected by backwater from Spring Creek at times.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	497	159	137	122	139	124	113	e93	e100	171	121	116
2	591	157	137	122	138	119	111	e92	e95	172	124	114
3	606	154	133	128	134	121	112	e91	e100	160	117	115
4	578	154	137	125	137	119	112	e95	e105	156	118	115
5	550	153	136	124	142	118	111	e100	e110	153	115	114
6	525	147	135	123	138	119	110	e105	e115	151	115	114
7	495	149	135	124	138	120	110	e110	e112	147	119	112
8	442	148	136	124	137	119	110	e105	e110	155	129	111
9	397	149	134	125	134	116	105	e102	e105	173	154	112
10	366	146	133	132	134	118	104	e100	e110	191	148	117
11	361	147	132	128	134	114	103	e98	e120	197	140	114
12	363	147	125	127	132	113	102	e97	e135	190	139	110
13	361	146	133	125	130	115	102	e95	e130	177	137	106
14	344	146	133	122	125	124	102	e105	e125	172	151	102
15	330	147	129	126	123	125	101	e95	e120	166	152	104
16	323	148	131	125	123	121	99	e97	112	171	147	103
17	307	148	130	124	122	118	102	e100	114	170	140	98
18	295	146	127	126	126	119	103	e98	139	171	137	100
19	282	147	126	128	122	118	98	e100	125	189	136	101
20	266	146	127	123	121	118	97	e102	123	172	134	111
21	251	145	127	124	122	116	99	e105	127	157	134	108
22	241	145	129	120	120	116	97	e110	125	148	135	101
23	226	144	127	131	121	116	95	e105	123	146	130	91
24	214	144	126	149	121	116	96	e108	127	150	127	99
25	205	143	126	154	120	116	96	e105	144	138	130	99
26	196	142	127	149	122	119	95	e104	131	137	126	97
27	188	140	127	148	123	116	91	e103	136	131	125	117
28	180	138	126	145	125	114	e85	e102	136	127	124	132
29	174	138	129	142	---	113	e95	e115	140	122	123	120
30	167	137	130	141	---	113	e94	e110	167	120	121	117
31	164	---	124	139	---	111	---	e105	---	123	119	---
MEAN	338	147	130	130	129	118	102	102	122	158	131	109
MAX	606	159	137	154	142	125	113	115	167	197	154	132
MIN	164	137	124	120	120	111	85	91	95	120	115	91

e Estimated

02325000 FENHOLLOWAY RIVER NEAR PERRY, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1999, BY WATER YEAR (WY)

MEAN	178	144	154	195	248	286	264	162	144	193	235	181
MAX	451	266	369	476	495	699	652	316	317	475	492	310
(WY)	1995	1981	1987	1987	1987	1991	1983	1983	1983	1984	1991	1988
MIN	75.7	86.7	84.7	83.0	82.5	112	102	93.0	99.2	94.8	82.8	94.2
(WY)	1991	1991	1991	1996	1996	1989	1999	1989	1990	1993	1993	1993

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1977 - 1999	
ANNUAL MEAN	251		143		199	
HIGHEST ANNUAL MEAN					317	1983
LOWEST ANNUAL MEAN					125	1989
HIGHEST DAILY MEAN	717	Feb 24	606	Oct 3	1130	Jul 31 1982
LOWEST DAILY MEAN	100	Jul 9	85	Apr 28	35	Oct 8 1990
ANNUAL SEVEN-DAY MINIMUM	103	Jul 3	92	Apr 27	48	Oct 4 1990
INSTANTANEOUS PEAK FLOW			613	Oct 2	1360	Sep 18 1964
INSTANTANEOUS PEAK STAGE			19.82	Oct 4	24.39	Sep 13 1964
INSTANTANEOUS LOW FLOW			85	Apr 28	35	Oct 8 1990
10 PERCENT EXCEEDS	529		172		357	
50 PERCENT EXCEEDS	174		125		152	
90 PERCENT EXCEEDS	124		101		104	

02326000 ECONFINA RIVER NEAR PERRY, FL

LOCATION.--Lat 30°10′14″, long 83°49′26″, in NE¼ sec. 4, T. 4 S., R. 5 E., Taylor County, Hydrologic Unit 03110102, on downstream side of concrete bridge, 3.0 mi downstream from Natural Well Branch, 14 mi upstream from mouth, and 14.7 mi northwest of Perry.

DRAINAGE AREA.--198 mi^2.

PERIOD OF RECORD.--February 1950 to current year.

REVISED RECORDS.--WSP 1905: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 14.35 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	391	107	38	27	93	46	32	20	20	157	40	32
2	483	101	37	27	92	47	31	19	20	162	37	30
3	568	96	36	27	91	49	30	19	19	141	35	29
4	630	92	35	28	91	52	29	19	19	116	36	28
5	656	88	34	28	90	53	29	19	19	98	36	26
6	656	82	34	28	87	53	28	19	20	89	34	25
7	641	76	33	28	84	51	27	22	21	88	33	25
8	617	72	32	28	81	49	27	23	21	86	32	24
9	592	69	32	28	78	48	26	23	21	82	32	24
10	561	65	31	30	74	53	25	24	21	79	31	24
11	523	63	31	31	71	54	25	23	20	73	31	24
12	486	62	30	33	68	52	24	23	26	71	36	23
13	452	60	30	32	64	50	23	22	28	70	35	22
14	415	58	30	32	61	51	22	22	32	75	35	22
15	379	56	29	32	58	57	22	22	31	70	47	21
16	344	55	29	35	55	59	22	21	26	76	67	21
17	311	53	28	36	52	58	22	21	24	74	58	20
18	285	52	27	35	52	55	21	21	24	82	51	21
19	265	50	27	36	53	52	21	20	21	106	47	23
20	245	49	27	38	52	50	21	20	20	102	44	25
21	227	47	26	39	52	48	21	20	23	90	42	27
22	210	46	26	38	50	47	21	19	24	78	40	27
23	194	46	26	40	47	45	20	19	25	68	38	26
24	179	45	26	63	46	e43	20	20	27	63	36	25
25	166	44	25	77	44	e42	20	19	43	60	36	25
26	155	44	26	90	43	e40	20	19	65	73	36	24
27	145	43	26	95	42	e38	20	19	60	74	36	26
28	136	41	26	96	42	e36	20	20	54	64	37	36
29	128	40	27	96	---	35	20	20	54	55	38	46
30	120	39	27	95	---	34	20	22	105	49	36	50
31	113	---	27	94	---	32	---	20	---	44	34	---
MEAN	364	61.4	29.6	46.5	64.8	47.7	23.6	20.6	31.1	84.4	38.9	26.7
MAX	656	107	38	96	93	59	32	24	105	162	67	50
MIN	113	39	25	27	42	32	20	19	19	44	31	20
IN.	2.12	.35	.17	.27	.34	.28	.13	.12	.18	.49	.23	.15

e Estimated

02326000 ECONFINA RIVER NEAR PERRY, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1999, BY WATER YEAR (WY)

MEAN	119	65.9	100	143	226	255	223	88.5	89.3	113	175	144
MAX	816	305	771	624	813	828	1176	379	432	381	756	1266
(WY)	1995	1998	1977	1987	1986	1991	1973	1964	1957	1958	1991	1957
MIN	6.26	8.18	6.22	9.47	7.50	9.97	13.2	7.73	4.80	4.49	8.31	9.12
(WY)	1994	1969	1991	1957	1957	1957	1955	1955	1955	1955	1993	1993

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1951 - 1999	
ANNUAL MEAN	220		70.3		145	
HIGHEST ANNUAL MEAN					317	1991
LOWEST ANNUAL MEAN					18.1	1955
HIGHEST DAILY MEAN	1240	Feb 24	656	Oct 5	2480	Sep 18 1957
LOWEST DAILY MEAN	18	Jul 6	19	May 2	2.4	Jul 8 1955
ANNUAL SEVEN-DAY MINIMUM	19	Jul 5	19	Apr 30	2.6	Jul 3 1955
INSTANTANEOUS PEAK FLOW			659	Oct 5	2540	Sep 17 1957
INSTANTANEOUS PEAK STAGE			10.09	Oct 5	12.78	Sep 17 1957
INSTANTANEOUS LOW FLOW			18	Jun 5	2.3	Jul 8 1955
ANNUAL RUNOFF (INCHES)	15.12		4.82		9.93	
10 PERCENT EXCEEDS	708		106		377	
50 PERCENT EXCEEDS	90		36		64	
90 PERCENT EXCEEDS	24		21		18	

304308083555200 WARD CREEK BL MITCHELL POND NEAR METCALF, GA

LOCATION.--Lat 30°43′08″, long 83°55′52″, in Thomas County, Hydrologic Unit 03120001, on downstream side of bridge on dirt road, and 3.6 mi east of Metcalf.

DRAINAGE AREA.--15.1 mi^2.

PERIOD OF RECORD.--October 1998 to September 1999.

GAGE.--Water-stage recorder.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e100	e1.1	e.00	e.10	24	5.0	.07	e.00	e.00	e8.3	.23	.00
2	e75	e1.1	e.00	e.10	21	4.3	.06	e.00	e.00	e7.6	.04	.00
3	e50	e1.0	e.00	e.10	19	5.0	.05	e.00	e.13	e5.1	.00	.00
4	e36	e1.0	e.00	e.10	17	4.5	.05	e.00	e.11	e11	.00	.00
5	e26	e.90	e.00	.10	14	4.0	.05	e.00	e.00	e13	.00	.00
6	e18	e.85	e.00	.12	11	4.0	.06	e.00	e1.6	19	.00	.00
7	e15	e.80	e.00	.13	9.2	3.9	.05	e1.1	e2.5	13	.00	.00
8	e12	e.75	e.00	.13	7.9	3.5	.05	e3.5	e2.0	16	.00	.00
9	e9.8	e.70	e.00	.24	6.8	4.2	.05	e4.9	e1.5	22	.00	.00
10	e8.3	e.65	e.00	.19	6.0	4.3	.04	e2.4	e1.0	22	.03	.00
11	e7.3	e.60	e.00	.15	5.4	3.8	.03	e3.1	e.72	21	.11	.00
12	e6.7	e.55	e.00	.15	4.9	3.5	.03	e2.4	e5.3	14	.08	.00
13	e5.9	e.50	e.00	.15	4.6	3.2	.03	e3.9	e5.5	9.6	.01	.00
14	e5.3	e.45	e.00	.13	4.3	6.0	.04	e4.6	e5.2	6.7	1.5	.00
15	e4.8	e.40	e.00	.14	4.2	5.0	.03	e4.0	e5.8	4.9	3.7	.00
16	e4.2	e.35	e.00	.10	4.3	4.2	.03	e2.4	e6.6	6.3	2.4	.00
17	e3.7	e.30	e.00	.10	4.4	3.7	.03	e1.8	e6.9	12	2.3	.00
18	e3.4	e.25	e.00	.15	6.1	2.0	.03	e1.4	e6.5	23	3.9	.00
19	e3.3	e.20	e.00	.15	5.3	1.1	.02	e1.2	e5.9	25	6.8	.02
20	e3.1	e.15	e.00	.15	5.1	.73	.02	e.80	e5.3	16	4.8	.00
21	e2.8	e.10	e.00	.19	5.2	.54	.03	e.50	e5.0	11	4.7	.00
22	e2.7	e.05	e.00	.22	5.1	.37	e.01	e.30	e4.4	8.9	3.3	.00
23	e2.3	e.00	e.00	4.9	5.1	.29	e.00	e.10	e3.8	7.1	2.6	.00
24	e2.2	e.00	e.00	9.0	5.3	.22	e.00	e.00	e4.8	5.7	1.9	.01
25	e2.0	e.00	e.00	6.8	5.2	.23	e.00	e.00	e4.0	4.6	1.4	.10
26	e1.9	e.00	e.00	5.7	5.1	.32	e.00	e.00	e3.0	3.7	.85	.13
27	e1.9	e.00	e.00	5.5	5.0	.21	e.00	e.00	e1.9	2.5	.52	.23
28	e1.6	e.00	e.00	7.5	5.9	.09	e.00	e.00	e2.4	1.6	.28	.15
29	e1.4	e.00	e.00	17	---	.06	e.00	e.17	e5.3	1.0	.09	.11
30	e1.2	e.00	e.00	23	---	.05	e.00	e.15	e7.5	.71	.01	.18
31	e1.2	---	e.00	24	---	.05	---	e.08	---	.45	.00	---
MEAN	13.5	.43	.000	3.44	8.09	2.53	.029	1.25	3.49	10.4	1.34	.031
MAX	100	1.1	.00	24	24	6.0	.07	4.9	7.5	25	6.8	.23
MIN	1.2	.00	.00	.10	4.2	.05	.00	.00	.00	.45	.00	.00

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

MEAN	13.5	.43	.000	3.44	8.09	2.53	.029	1.25	3.49	10.4	1.34	.031
MAX	13.5	.43	.000	3.44	8.09	2.53	.029	1.25	3.49	10.4	1.34	.031
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	13.5	.43	.000	3.44	8.09	2.53	.029	1.25	3.49	10.4	1.34	.031
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 1999 WATER YEAR	
ANNUAL MEAN	3.71	
HIGHEST DAILY MEAN	e 100	Oct 1
LOWEST DAILY MEAN	e .00	Nov 23
ANNUAL SEVEN-DAY MINIMUM	e .00	Nov 23
10 PERCENT EXCEEDS	8.5	
50 PERCENT EXCEEDS	.54	
90 PERCENT EXCEEDS	.00	

e Estimated

ST. MARKS RIVER BASIN
02326900 ST. MARKS RIVER NEAR NEWPORT, FL

LOCATION.--Lat 30°16′00″, long 84°09′00″, in SE¼ sec. 32, T. 2 S., R. 2 E., Wakulla County, Hydrologic Unit 03120001, on left bank 0.9 mi downstream from Rhodes Springs, 6 mi north of Newport, 11 mi upstream from Wakulla River, and 14 mi upstream from mouth.

DRAINAGE AREA.--535 mi^2 including 240 mi^2 of Lake Miccosukee, which contributes at high stages to the St. Marks River.

PERIOD OF RECORD.--October 1956 to September 1976. October 1976 to September 1977 (gage heights only); October 1977 to September 1990; October 1990 to September 1991 (gage heights and peak discharge only); October 1991to September 1994; July 1996 to current year.

REVISED RECORDS.--WSP 1905: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3.53 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharge. Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1710	599	450	389	395	383	403	440	482	589	577	471
2	2080	594	444	390	396	383	413	441	482	610	571	461
3	1960	588	440	393	396	389	413	441	479	614	562	449
4	1700	576	437	391	399	389	413	442	480	599	553	443
5	1550	571	436	389	398	389	412	444	483	584	547	438
6	1400	566	434	386	395	389	411	444	481	575	539	433
7	1260	559	430	385	395	387	409	463	484	576	535	427
8	1160	552	426	383	389	382	409	466	487	576	532	424
9	1120	546	423	391	389	386	411	463	488	574	527	421
10	1060	541	420	395	388	388	412	462	490	576	525	418
11	1010	537	417	392	386	386	415	460	496	582	523	413
12	972	534	412	391	385	383	416	459	507	580	516	407
13	937	527	418	389	383	381	417	461	523	619	510	401
14	908	522	417	389	379	400	420	460	531	628	512	392
15	876	516	413	387	377	403	427	458	529	636	533	387
16	845	513	409	384	377	400	423	459	527	663	550	386
17	818	510	404	383	379	399	424	457	525	705	558	386
18	798	504	401	384	387	396	425	457	528	730	564	385
19	782	498	399	383	389	392	426	460	535	751	557	391
20	761	492	398	377	389	390	429	458	536	755	545	396
21	743	487	395	377	388	389	431	458	536	728	542	399
22	721	483	393	375	384	386	433	460	535	682	532	395
23	703	479	393	387	382	385	433	459	536	653	555	395
24	690	478	392	406	383	384	434	459	541	652	532	397
25	674	478	390	405	382	385	433	460	541	639	528	395
26	660	473	396	406	380	387	432	467	542	633	526	397
27	649	468	395	411	378	388	435	473	545	629	519	403
28	638	463	395	408	382	387	436	473	552	617	513	402
29	625	458	401	400	---	387	439	481	557	606	504	402
30	615	454	400	396	---	389	440	488	573	598	495	397
31	607	---	394	393	---	392	---	483	---	588	482	---
MEAN	1001	519	412	391	387	389	422	460	518	631	534	410
MAX	2080	599	450	411	399	403	440	488	573	755	577	471
MIN	607	454	390	375	377	381	403	440	479	574	482	385
IN.	2.16	1.08	.89	.84	.75	.84	.88	.99	1.08	1.36	1.15	.86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1999, BY WATER YEAR (WY)

MEAN	656	552	587	641	753	895	862	682	688	728	774	740
MAX	1375	976	1470	1360	1680	2520	2760	1474	1465	1440	2220	1563
(WY)	1958	1960	1965	1987	1986	1991	1973	1965	1965	1994	1994	1957
MIN	351	339	358	345	335	338	378	371	355	360	370	336
(WY)	1969	1969	1991	1957	1957	1957	1968	1968	1968	1968	1968	1968

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1957 - 1999	
ANNUAL MEAN	766		508		714	
HIGHEST ANNUAL MEAN					1148	1994
LOWEST ANNUAL MEAN					403	1968
HIGHEST DAILY MEAN	2220	Mar 10	2080	Oct 2	4700	Apr 6 1973
LOWEST DAILY MEAN	390	Dec 25	375	Jan 22	315	Oct 4 1968
ANNUAL SEVEN-DAY MINIMUM	393	Dec 21	380	Jan 16	328	Mar 12 1957
INSTANTANEOUS PEAK FLOW			2140	Oct 2	4750	Apr 7 1973
INSTANTANEOUS PEAK STAGE			8.05	Oct 2	11.81	Apr 7 1973
INSTANTANEOUS LOW FLOW			374	Jan 22	310	Apr 25 1964
ANNUAL RUNOFF (INCHES)	19.43		12.88		18.14	
10 PERCENT EXCEEDS	1320		643		1090	
50 PERCENT EXCEEDS	649		444		635	
90 PERCENT EXCEEDS	476		386		408	

023271033 LOST CREEK AT ARRAN, FL

LOCATION.--Lat 30°11′17″, long 84°24′30″ in SE¼ sec. 26, T. 3 S., R. 2 W., Wakulla County, Hydrologic Unit 03120001, on downstream side of bridge on State Highway 368, and 0.5 mi east of Arran.

DRAINAGE AREA.--70.4 mi^2.

PERIOD OF RECORD.--October 1928 to May 1981, miscellaneous discharge measurements only; October 1998 to September 1999.

GAGE.--Water-stage recorder.

REMARKS.--Records good, except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2000	e3.0	e2.0	e4.5	73	25	e10	2.3	2.9	e40	87	30
2	e1700	e5.0	e2.0	e4.0	68	22	e11	2.3	e3.5	e35	67	16
3	e1200	7.0	e1.8	e16	64	24	e10	2.3	e4.5	e30	51	9.7
4	e800	e5.0	e1.8	e17	64	30	e9.0	2.3	e5.0	e28	44	6.8
5	e650	e3.5	e1.8	e15	63	37	e8.0	2.3	e4.0	e25	43	6.2
6	e500	e3.0	e1.8	14	61	36	e7.0	2.3	e3.5	e20	24	6.0
7	e350	e2.5	e1.8	13	57	32	e6.0	2.6	e3.0	e35	14	6.2
8	e250	e2.0	e1.8	12	52	28	e5.0	7.8	e2.5	e45	11	6.0
9	e200	e2.0	e2.0	14	48	32	e4.5	7.2	e2.5	e50	11	6.0
10	e180	e2.0	e2.0	27	44	55	e4.0	5.5	e2.0	e75	11	12
11	e150	e2.5	e2.0	32	41	59	e3.5	8.8	e2.0	e95	10	53
12	e120	e2.5	e2.0	39	36	54	e3.0	9.1	e5.0	90	8.6	61
13	e100	e2.5	e2.5	35	30	48	e2.5	7.6	e6.0	92	7.7	54
14	e80	e2.5	e3.0	31	25	75	e2.5	5.8	e6.0	127	7.3	42
15	e65	e2.0	e2.5	27	21	143	e2.5	4.9	e6.5	182	30	22
16	e50	e2.5	e2.5	23	17	168	e2.3	5.0	e7.0	199	65	11
17	e40	e2.5	e2.5	19	16	156	e2.1	4.3	e8.0	169	63	6.7
18	e30	e2.5	e2.0	17	31	135	e2.0	3.5	e9.0	182	56	6.3
19	e25	e2.5	e2.0	18	42	110	e2.0	3.5	e8.0	180	57	6.2
20	e20	e2.5	e2.0	18	42	89	e2.0	3.4	e7.0	220	85	7.7
21	e18	e2.0	e2.0	20	41	74	e2.0	3.2	e6.0	189	99	10
22	e14	e2.0	e2.0	17	36	65	e2.0	3.3	e5.0	132	77	11
23	e12	e2.0	e2.0	36	30	e40	e2.0	3.3	e7.5	96	70	7.9
24	e9.0	e2.5	e2.0	129	28	e35	e2.0	3.1	e25	75	66	6.8
25	e7.5	e2.0	e2.5	166	27	e30	e2.0	3.1	e20	63	59	6.6
26	e6.5	e2.0	e3.0	178	23	e25	e2.3	3.1	e20	80	92	6.5
27	e5.5	e2.0	e3.5	165	20	e20	e2.1	3.2	e25	78	168	75
28	e4.5	e2.0	e3.5	142	20	e17	e2.1	3.1	e35	77	127	604
29	e4.0	e2.0	e4.5	114	---	e15	e3.5	3.0	e50	90	84	771
30	e3.5	e2.0	e7.0	93	---	e13	e4.4	e3.0	e45	123	62	478
31	e3.0	---	e5.5	80	---	e10	---	e2.9	---	112	46	---
MEAN	277	2.67	2.56	49.5	40.0	54.9	4.11	4.10	11.2	97.9	54.9	78.4
MAX	2000	7.0	7.0	178	73	168	11	9.1	50	220	168	771
MIN	3.0	2.0	1.8	4.0	16	10	2.0	2.3	2.0	20	7.3	6.0

e Estimated

023271033 LOST CREEK AT ARRAN, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

MEAN	277	2.67	2.56	49.5	40.0	54.9	4.11	4.10	11.2	97.9	54.9	78.4
MAX	277	2.67	2.56	49.5	40.0	54.9	4.11	4.10	11.2	97.9	54.9	78.4
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	277	2.67	2.56	49.5	40.0	54.9	4.11	4.10	11.2	97.9	54.9	78.4
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 1999 WATER YEAR		
ANNUAL MEAN	57.0		
HIGHEST DAILY MEAN	e2000	Oct	1
LOWEST DAILY MEAN	e1.8	Dec	3
ANNUAL SEVEN-DAY MINIMUM	1.8	Dec	2
INSTANTANEOUS PEAK FLOW	e2000	Oct	1
INSTANTANEOUS LOW FLOW	e1.8	Dec	3
10 PERCENT EXCEEDS	116		
50 PERCENT EXCEEDS	12		
90 PERCENT EXCEEDS	2.0		

e Estimated

OCHLOCKONEE RIVER BASIN

02327100 SOPCHOPPY RIVER NEAR SOPCHOPPY, FL

(Hydrologic bench-mark station)

LOCATION.--Lat 30°07′45″, long 84°29′40″ in NW¼ sec. 24, T. 4 S., R. 3 W., Wakulla County, Hydrologic Unit 03120003, Apalachicola National Forest, near left bank on downstream side of bridge on U.S. Forest Road 343, 4.7 mi north of Sopchoppy, 5.2 mi upstream from Duval Branch, and 24 mi upstream from mouth.

DRAINAGE AREA.--102 mi^2.

PERIOD OF RECORD.--Water years 1961-64 (annual maximum); June 1964 to current year.

REVISED RECORDS.--WSP 1905, WRD FL-76-4: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Jan. 27, 1961 to June 3, 1964, nonrecording gage and crest-stage gage at same site at datum 9.63 ft higher.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3930	6.1	3.8	8.7	144	30	20	34	16	80	87	56
2	3420	5.5	3.7	8.2	131	28	22	34	16	75	127	42
3	2500	6.1	3.6	20	118	30	21	29	12	66	122	31
4	1670	5.5	3.5	22	117	39	19	23	9.7	56	124	23
5	1330	5.1	3.5	17	114	37	17	20	8.2	49	139	16
6	988	4.8	3.5	14	101	33	15	18	7.1	42	125	12
7	700	4.6	3.5	13	88	34	13	41	6.3	69	101	8.9
8	564	4.4	3.5	12	76	32	11	101	5.5	93	120	6.9
9	462	4.3	3.8	15	66	39	9.4	87	4.8	95	216	8.1
10	372	4.2	3.9	32	58	90	8.2	76	4.5	152	189	28
11	300	4.6	3.7	32	50	98	7.2	65	4.7	248	186	72
12	243	4.9	3.7	29	44	91	6.4	56	10	243	186	88
13	198	4.7	5.6	27	38	80	5.7	67	11	231	161	74
14	160	4.6	6.4	25	32	160	5.3	62	11	304	144	57
15	130	4.5	5.5	24	27	282	5.0	58	13	328	136	43
16	104	4.8	5.1	22	23	311	4.7	50	14	284	180	31
17	82	5.3	4.6	20	21	289	4.5	40	17	232	171	22
18	65	5.4	4.2	19	35	248	4.3	30	19	380	136	15
19	52	5.1	4.0	20	45	207	4.2	22	17	409	106	12
20	43	4.9	3.8	19	42	168	4.2	16	14	464	153	11
21	35	4.6	3.7	18	38	133	4.0	12	12	471	181	12
22	28	4.4	3.9	18	34	112	3.9	9.3	10	392	140	11
23	23	4.4	4.0	71	29	92	4.0	7.6	15	314	106	11
24	18	4.7	4.3	354	e27	75	4.0	6.5	57	312	95	9.8
25	15	4.6	5.2	349	e26	61	4.2	5.6	51	308	105	8.0
26	13	4.5	6.0	345	e25	50	4.7	5.0	51	311	120	6.8
27	11	4.4	6.9	312	e25	41	4.4	4.9	54	307	137	337
28	9.5	4.1	7.7	267	24	34	4.5	7.3	74	250	148	1180
29	8.4	3.9	9.0	226	---	28	7.1	9.8	99	195	122	985
30	7.3	3.9	14	188	---	23	36	10	95	151	98	720
31	6.6	---	11	158	---	20	---	10	---	114	74	---
MEAN	564	4.76	5.12	87.3	57.1	96.6	9.46	32.8	24.6	227	137	131
MAX	3930	6.1	14	354	144	311	36	101	99	471	216	1180
MIN	6.6	3.9	3.5	8.2	21	20	3.9	4.9	4.5	42	74	6.8
MED	104	4.6	4.0	22	40	61	5.5	23	14	243	136	22
IN.	6.38	.05	.06	.99	.58	1.09	.10	.37	.27	2.56	1.54	1.44

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1999, BY WATER YEAR (WY)

MEAN	119	60.7	153	263	303	304	180	66.5	138	247	301	203
MAX	783	470	843	849	753	957	1065	424	520	763	1005	863
(WY)	1995	1986	1965	1991	1986	1991	1973	1991	1982	1975	1994	1998
MIN	1.86	1.58	2.87	11.1	22.4	31.2	8.81	1.70	1.37	3.06	6.14	4.76
(WY)	1994	1991	1992	1985	1989	1985	1966	1992	1998	1977	1990	1990

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1964 - 1999	
ANNUAL MEAN	262		116		193	
HIGHEST ANNUAL MEAN					334	1991
LOWEST ANNUAL MEAN					43.4	1968
HIGHEST DAILY MEAN	3930	Oct 1	3930	Oct 1	5100	Jul 31 1975
LOWEST DAILY MEAN	1.1	Jun 24	3.5	Dec 4	.70	Oct 23 1997
ANNUAL SEVEN-DAY MINIMUM	1.1	Jun 27	3.5	Dec 2	.92	Sep 18 1997
INSTANTANEOUS PEAK FLOW			4000	Oct 1	5260	Jul 31 1975
INSTANTANEOUS PEAK STAGE			31.73	Oct 1	34.47	Jul 31 1975
INSTANTANEOUS LOW FLOW			3.5	Dec 3	.70	Oct 23 1997
ANNUAL RUNOFF (INCHES)	34.89		15.44		25.76	
10 PERCENT EXCEEDS	624		257		521	
50 PERCENT EXCEEDS	35		27		64	
90 PERCENT EXCEEDS	1.6		4.4		3.2	

OCHLOCKONEE RIVER BASIN
02328522 OCHLOCKONEE RIVER NEAR CONCORD, FL

LOCATION.--Lat 30°40′08″, long 84°18′19″, in SW¼ sec. 11, T. 3 N., R. 1 W., Gadsden County, Hydrologic Unit 03120003, near center of stream on downstream side of bridge on State Highway 12, and 3.7 mi east of Concord.

DRAINAGE AREA.--7.2 mi^2.

PERIOD OF RECORD.--November 1920 to October 1990 (miscellaneous discharge measurements), October 1998 to September 1999.

GAGE.--Water-stage recorder.

REMARKS.--Records fair, except for estimated daily discharges, which are poor

EXTREMES FOR PERIOD OF RECORD.--Maximum gage-height, 39.69 ft, from floodmarks, Oct. 2, 1998, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e8000	e240	e225	e420	e1300	e710	e310	81	63	435	677	109
2	e12000	e235	e220	e430	e1200	e670	e310	78	59	1030	560	100
3	e11000	e230	e215	e470	e1100	e680	e320	75	50	1470	417	92
4	e8000	e230	e210	e500	e1000	e690	e330	71	44	1490	316	86
5	e6000	e225	e205	e550	e980	e730	e330	67	41	1300	255	81
6	e5000	e220	e200	e560	e960	e750	e320	64	39	1050	215	75
7	e4000	e210	e195	e540	e940	e740	e290	65	39	1010	186	74
8	e3000	e200	e190	e535	e900	e760	e260	77	50	1360	182	73
9	e2500	e190	e185	e530	e860	e770	e240	125	60	1800	167	67
10	e2000	e180	e180	e510	e820	e730	e220	117	58	1630	151	74
11	e1500	e185	e175	e500	e800	e700	e200	106	55	1210	141	106
12	e1300	e180	e170	e520	e750	e670	e190	103	54	861	136	151
13	e1100	e180	e168	e525	e690	e750	e180	95	53	699	158	109
14	e900	e185	e166	e530	e630	e800	e170	85	63	676	184	90
15	e800	e180	e164	e525	e570	e820	e160	77	70	731	203	81
16	e700	e200	e162	e520	e530	e920	147	70	96	862	238	72
17	e600	e230	e160	e510	e510	e950	137	65	116	1170	305	65
18	e550	e270	e158	e490	e500	e950	127	62	142	1310	354	59
19	e475	e300	e156	e470	e600	e920	117	58	147	1250	329	57
20	e450	e290	e154	e450	e800	e880	107	55	125	1130	268	61
21	e425	e280	e152	e480	e880	e800	101	51	105	1070	222	65
22	e400	e270	e150	e600	e900	e700	98	49	87	1170	188	79
23	e380	e265	e145	e750	e950	e600	94	47	75	1360	163	94
24	e370	e260	e160	e900	e980	e550	88	45	70	1460	148	85
25	e360	e255	e180	e1000	e940	e500	84	44	94	1360	137	74
26	e340	e250	e200	e1100	e880	e450	81	44	121	1130	125	67
27	e320	e245	e230	e1250	e820	e410	79	44	104	875	135	63
28	e300	e240	e250	e1350	e770	e390	84	41	102	696	142	65
29	e280	e235	e300	e1400	---	e360	85	41	161	632	132	68
30	e260	e230	e350	e1450	---	e330	82	46	209	674	126	71
31	e250	---	e400	e1400	---	e320	---	54	---	709	118	---
MEAN	2373	230	199	702	841	677	178	67.8	85.1	1084	228	80.4
MAX	12000	300	400	1450	1300	950	330	125	209	1800	677	151
MIN	250	180	145	420	500	320	79	41	39	435	118	57
CFSM	2.37	.23	.20	.70	.84	.68	.18	.07	.08	1.08	.23	.08
IN.	2.73	.26	.23	.81	.87	.78	.20	.08	.09	1.25	.26	.09

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

MEAN	2373	230	199	702	841	677	178	67.8	85.1	1084	228	80.4
MAX	2373	230	199	702	841	677	178	67.8	85.1	1084	228	80.4
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	2373	230	199	702	841	677	178	67.8	85.1	1084	228	80.4
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 1999 WATER YEAR		
ANNUAL MEAN	565		
HIGHEST DAILY MEAN	e12000	Oct	2
LOWEST DAILY MEAN	39	Jun	6
ANNUAL SEVEN-DAY MINIMUM	44	May	24
INSTANTANEOUS PEAK FLOW	e12000	Oct	2
INSTANTANEOUS PEAK STAGE	36.69	Oct	2
INSTANTANEOUS LOW FLOW	36	Jun	6
ANNUAL RUNOFF (CFSM)	.56		
ANNUAL RUNOFF (INCHES)	7.65		
10 PERCENT EXCEEDS	1100		
50 PERCENT EXCEEDS	245		
90 PERCENT EXCEEDS	65		

e Estimated

OCHLOCKONEE RIVER BASIN
02329000 OCHLOCKONEE RIVER NEAR HAVANA, FL

LOCATION.--Lat 30°33′14″, long 84°23′03″, in SE¼ sec. 24, T. 2 N., R. 2 W., Leon County, Hydrologic Unit 03120003, near left bank on downstream side of downstream bridge on divided U.S. Highway 27, 0.8 mi upstream from Seaboard Air Line Railroad bridge, 4.0 mi downstream from Mill Creek, 5.0 mi southeast of Havana, and 94 mi upstream from mouth.

DRAINAGE AREA.--1,140 mi^2, approximately. At site used prior to January 1929, 1,220 mi^2, approximately.

PERIOD OF RECORD.--June 1926 to current year. June 1926 to December 1929 (published as "at Ochlockonee"). Records published for both sites December 1928 to December 1929.

REVISED RECORDS.--WSP 822: 1929 (M). WSP 1504: 1928. WSP 1905: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 59.36 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1930, nonrecording gage at site about 10 mi downstream at datum 9.36 ft lower. Dec. 12, 1928, to Nov. 17, 1963, nonrecording gage at site 100 ft upstream at present datum. Nov. 18, 1963 to Nov. 15, 1976, nonrecording gage at same site and datum.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4310	345	273	487	1480	833	419	106	59	231	631	133
2	9290	332	263	488	1370	772	412	103	66	382	605	125
3	12300	325	256	526	1270	781	412	99	65	693	522	117
4	10900	325	249	540	1200	788	419	96	59	956	421	110
5	8310	324	244	603	1140	791	424	93	54	e1080	342	104
6	6330	321	239	661	1100	830	423	90	49	1040	289	98
7	5070	311	233	668	1070	849	413	98	47	982	251	92
8	4210	301	228	652	1040	844	390	100	45	923	226	89
9	3530	292	225	635	1000	858	363	101	49	1070	217	89
10	2930	284	221	615	961	870	336	134	59	1320	198	95
11	2410	278	218	581	914	831	311	135	61	1350	185	101
12	2050	274	214	585	852	806	286	126	57	1130	172	116
13	1740	269	213	601	786	767	262	122	56	926	164	145
14	1450	274	211	616	725	849	241	114	56	787	184	121
15	1250	278	206	625	672	901	223	104	62	692	208	105
16	1090	282	206	615	628	921	204	97	68	744	231	96
17	968	299	206	588	598	1010	190	90	86	836	251	89
18	870	314	202	564	604	1050	176	85	108	975	294	82
19	786	332	198	548	632	1050	164	81	129	1120	323	79
20	715	339	196	534	742	1020	153	75	139	1090	307	79
21	660	336	192	540	902	974	144	72	128	1000	267	81
22	613	330	191	533	985	895	135	68	110	944	230	80
23	571	324	191	595	1040	791	128	65	94	979	204	87
24	534	318	192	817	1080	703	121	62	82	1080	185	96
25	498	309	206	891	1100	639	115	59	76	1170	186	93
26	467	306	246	1040	1060	602	109	57	89	1140	185	85
27	440	306	282	1210	991	552	106	61	115	995	169	81
28	418	300	355	1350	920	513	117	57	117	813	162	79
29	397	293	439	1450	---	486	114	58	111	661	160	78
30	378	283	472	1540	---	458	111	56	165	604	152	78
31	360	---	482	1560	---	433	---	55	---	616	142	---
MEAN	2769	307	250	750	959	789	247	87.7	82.0	914	260	96.8
MAX	12300	345	482	1560	1480	1050	424	135	165	1350	631	145
MIN	360	269	191	487	598	433	106	55	45	231	142	78
IN.	2.80	.30	.25	.76	.88	.80	.24	.09	.08	.92	.26	.09

e Estimated

02329000 OCHLOCKONEE RIVER NEAR HAVANA, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1999, BY WATER YEAR (WY)

MEAN	523	398	747	1333	2014	2299	1911	825	637	726	821	578
MAX	6892	3594	6057	4332	9355	7718	9368	4282	3867	3345	6098	4279
(WY)	1995	1948	1965	1993	1986	1984	1948	1964	1973	1991	1928	1935
MIN	22.0	26.5	37.0	65.5	116	167	173	60.6	63.7	54.3	52.8	26.8
(WY)	1955	1934	1934	1934	1957	1955	1927	1927	1998	1977	1990	1954

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1926 - 1999	
ANNUAL MEAN	1465		628		1063	
HIGHEST ANNUAL MEAN					2854	1948
LOWEST ANNUAL MEAN					209	1968
HIGHEST DAILY MEAN	17800	Mar 12	12300	Oct 3	53100	Apr 4 1948
LOWEST DAILY MEAN	26	Jul 12	45	Jun 8	17	Oct 23 1954
ANNUAL SEVEN-DAY MINIMUM	33	Jul 6	52	Jun 4	17	Oct 22 1954
INSTANTANEOUS PEAK FLOW			12600	Oct 3	55900	Apr 4 1948
INSTANTANEOUS PEAK STAGE			28.85	Oct 3	35.08	Apr 4 1948
INSTANTANEOUS LOW FLOW			45	Jun 8	17	Oct 23 1954
ANNUAL RUNOFF (INCHES)	17.45		7.48		12.66	
10 PERCENT EXCEEDS	3770		1080		2600	
50 PERCENT EXCEEDS	393		318		461	
90 PERCENT EXCEEDS	73		81		86	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.97	14.44	13.83	15.18	20.12	17.00	14.67	12.06	11.48	13.32	16.09	12.38
2	27.66	14.34	13.75	15.18	19.69	16.72	14.62	12.02	11.58	14.49	15.95	12.29
3	28.77	14.28	13.68	15.41	19.24	16.76	14.62	11.97	11.57	16.42	15.45	12.20
4	28.28	14.27	13.62	15.50	18.91	16.79	14.67	11.94	11.48	17.84	14.78	12.12
5	27.27	14.26	13.58	15.85	18.62	16.81	14.70	11.90	11.41	---	14.22	12.06
6	26.32	14.24	13.52	16.16	18.42	16.99	14.70	11.88	11.33	18.30	13.81	11.99
7	25.58	14.16	13.47	16.20	18.30	17.08	14.63	11.97	11.30	17.99	13.49	11.92
8	24.98	14.08	13.42	16.11	18.14	17.06	14.47	11.99	11.26	17.65	13.28	11.88
9	24.39	14.00	13.38	16.02	17.92	17.12	14.28	11.99	11.32	18.45	13.19	11.89
10	23.62	13.93	13.35	15.91	17.66	17.17	14.08	12.35	11.47	19.57	13.02	11.95
11	22.77	13.88	13.32	15.73	17.39	16.99	13.90	12.36	11.51	19.70	12.89	12.02
12	21.86	13.84	13.29	15.75	17.09	16.88	13.71	12.27	11.44	18.74	12.77	12.19
13	20.99	13.80	13.28	15.84	16.79	16.70	13.52	12.22	11.43	17.67	12.69	12.50
14	20.20	13.84	13.25	15.92	16.49	17.07	13.34	12.14	11.43	16.94	12.89	12.25
15	19.50	13.88	13.20	15.97	16.21	17.31	13.19	12.03	11.51	16.44	13.12	12.07
16	18.86	13.91	13.20	15.91	15.98	17.43	13.02	11.95	11.60	16.72	13.32	11.97
17	18.29	14.05	13.20	15.77	15.82	17.94	12.89	11.87	11.85	17.18	13.50	11.88
18	17.80	14.18	13.16	15.63	15.85	18.18	12.76	11.81	12.10	17.95	13.84	11.80
19	17.35	14.33	13.12	15.54	16.00	18.18	12.64	11.76	12.34	18.68	14.07	11.75
20	16.95	14.39	13.10	15.46	16.57	18.03	12.55	11.69	12.44	18.55	13.95	11.76
21	16.62	14.36	13.06	15.50	17.34	17.74	12.46	11.66	12.32	18.09	13.63	11.78
22	16.34	14.32	13.05	15.46	17.80	17.29	12.37	11.61	12.13	17.78	13.32	11.77
23	16.07	14.27	13.05	15.79	18.12	16.79	12.29	11.56	11.94	17.97	13.08	11.85
24	15.82	14.21	13.06	16.93	18.36	16.34	12.22	11.52	11.79	18.52	12.90	11.97
25	15.58	14.14	13.18	17.28	18.42	16.00	12.15	11.47	11.72	18.90	12.91	11.93
26	15.36	14.12	13.52	18.09	18.23	15.79	12.09	11.44	11.88	18.77	12.90	11.84
27	15.17	14.12	13.80	18.98	17.84	15.50	12.05	11.51	12.18	18.06	12.74	11.78
28	15.01	14.07	14.33	19.58	17.42	15.27	12.17	11.45	12.20	17.07	12.68	11.75
29	14.85	14.00	14.89	20.01	---	15.10	12.14	11.46	12.14	16.27	12.65	11.74
30	14.71	13.92	15.09	20.33	---	14.92	12.11	11.43	12.70	15.94	12.57	11.74
31	14.56	---	15.15	20.37	---	14.76	---	11.42	---	16.01	12.47	---
MEAN	20.21	14.12	13.55	16.56	17.67	16.76	13.30	11.83	11.76	---	13.49	11.97
MAX	28.77	14.44	15.15	20.37	20.12	18.18	14.70	12.36	12.70	---	16.09	12.50
MIN	14.56	13.80	13.05	15.18	15.82	14.76	12.05	11.42	11.26	---	12.47	11.74

02329600 LITTLE RIVER NEAR MIDWAY, FL

LOCATION.--Lat 30°30′44″, long 84°31′25″, in SW¼ sec. 3, T. 1 N., R. 3 W., Gadsden County, Hydrologic Unit 03120003, at bridge on State Highway 268, 0.5 mi upstream from Monroe Creek, 3.2 mi above mouth, and 3.7 mi west of Midway.

DRAINAGE AREA.--305 mi^2.

PERIOD OF RECORD.--Annual maximums, water years 1965-85. October 1985 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 22, 1985, nonrecording and crest-stage gages at same site and datum.

REMARKS.--Records good, except those below 200 ft^3/s, which are fair. Maximum discharge, 13,700 ft^3/s, Oct. 1, stage falling; peak occurred Sept. 30, 1998, discharge 14,900 ft^3/s, gage height, 80.68 ft; maximum independent peak discharge, 1,180 ft^3/s, Jan. 24, gage height, 72.40 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8730	216	202	233	283	258	186	64	68	261	99	76
2	4020	219	204	e282	383	260	221	63	60	309	100	74
3	2530	192	203	e341	353	270	225	62	55	306	103	69
4	1620	213	207	410	314	319	222	61	49	228	102	66
5	929	212	207	355	276	286	212	69	48	148	107	65
6	567	189	211	276	259	249	179	66	43	107	121	60
7	450	171	211	244	247	245	149	126	e41	298	130	56
8	397	176	211	235	235	244	134	153	e40	514	148	53
9	390	184	214	242	228	262	130	96	41	548	130	56
10	344	199	222	283	228	329	119	79	46	418	125	154
11	293	215	220	277	227	311	109	72	62	228	157	119
12	273	216	216	254	220	265	92	90	64	210	122	83
13	264	208	219	235	214	229	79	102	69	386	97	70
14	248	211	219	230	212	441	81	96	82	636	92	71
15	239	211	213	233	193	753	91	91	119	411	e103	64
16	235	216	204	234	169	662	80	88	132	261	159	56
17	229	235	195	230	193	464	80	84	135	299	219	50
18	220	244	204	235	286	309	78	80	157	392	218	46
19	218	235	213	253	474	277	76	74	130	591	191	43
20	221	223	216	261	519	256	79	69	105	305	146	51
21	213	214	216	268	389	242	79	65	95	219	120	90
22	208	209	218	249	268	233	82	62	93	187	100	94
23	174	209	218	380	237	223	80	60	92	165	83	87
24	136	220	215	1050	228	211	78	57	90	151	87	78
25	137	230	212	1130	225	187	78	53	95	174	407	74
26	144	228	266	1100	220	230	78	49	101	124	316	72
27	146	218	345	688	207	223	80	57	109	132	243	82
28	159	212	329	348	227	203	108	64	177	140	144	121
29	154	205	278	287	---	173	99	60	231	123	99	129
30	168	199	253	266	---	151	81	132	231	97	83	121
31	202	---	238	254	---	160	---	68	---	93	80	---
MEAN	783	211	226	367	268	288	116	77.8	95.3	273	143	77.7
MAX	8730	244	345	1130	519	753	225	153	231	636	407	154
MIN	136	171	195	230	169	151	76	49	40	93	80	43
IN.	2.96	.77	.85	1.39	.92	1.09	.42	.29	.35	1.03	.54	.28

e Estimated

02329600 LITTLE RIVER NEAR MIDWAY, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1999, BY WATER YEAR (WY)

MEAN	397	353	377	699	808	821	366	247	328	319	365	290
MAX	2542	1497	876	1694	2139	1791	756	1136	875	1003	1617	1249
(WY)	1995	1998	1986	1991	1986	1991	1994	1991	1989	1994	1994	1994
MIN	24.0	90.9	93.8	96.0	155	247	116	77.8	52.3	60.1	66.0	49.3
(WY)	1991	1989	1989	1989	1989	1989	1999	1999	1998	1990	1990	1990

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1986 - 1999	
ANNUAL MEAN	556		245		446	
HIGHEST ANNUAL MEAN					709	1991
LOWEST ANNUAL MEAN					228	1989
HIGHEST DAILY MEAN	11200	Mar 9	8730	Oct 1	30300	Oct 3 1994
LOWEST DAILY MEAN	31	Jun 18	40	Jun 8	13	Oct 17 1990
ANNUAL SEVEN-DAY MINIMUM	33	Jun 16	44	Jun 4	14	Oct 12 1990
INSTANTANEOUS PEAK FLOW			13700	Oct 1	49200	Sep 22 1969
INSTANTANEOUS PEAK STAGE			80.34	Oct 1	86.25	Sep 22 1969
INSTANTANEOUS LOW FLOW			35	Jun 10	13	Oct 16 1990
ANNUAL RUNOFF (INCHES)	24.76		10.90		19.87	
10 PERCENT EXCEEDS	1140		344		964	
50 PERCENT EXCEEDS	263		204		221	
90 PERCENT EXCEEDS	54		66		74	

02330000 OCHLOCKONEE RIVER NEAR BLOXHAM, FL

LOCATION.--Lat 30°23′10″, long 84°38′59″, in NE¼ sec. 20, T. 1 S., R. 4 W., Leon County, Hydrologic Unit 03120003, on left bank 900 ft upstream from bridge on State Highway 20, 1,200 ft downstream from C.H. Corn Hydroelectric Dam, 1.5 mi southwest of Bloxham, and 65 mi upstream from mouth.

DRAINAGE AREA.--1,700 mi^2, approximately.

PERIOD OF RECORD.--June 1926 to current year. Low-flow records not equivalent prior to October 1, 1954, due to undetermined amount of seepage inflow.

REVISED RECORDS.--WSP 1002: 1940-42. WSP 1704: 1958-59. WSP 1905, WRD FL-76-4: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 24.69 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 9, 1930, nonrecording gage at site 700 ft upstream at datum 5.00 ft higher. Apr. 9, 1930 to Jan. 19, 1939, water-stage recorder at present site at datum 5.00ft higher. Jan. 20, 1939 to Sept. 30, 1954, water-stage recorder at site 2,000 ft upstream at datum 5.00 ft higher. Oct. 1, 1954 to Sept. 30, 1985, water-stage recorder at site 2,000 ft upstream at present datum. Oct. 1, 1985 to Aug. 27, 1997, at site 2,000 ft downstream at present datum.

REMARKS.--No estimated daily discharges. Records fair, except those below 150 ft^3/s, which are poor. Maximum discharge, 17,900 ft^3/s, Oct. 1, stage falling; peak occurred Sept. 30, 1998, discharge, 19,900 ft^3/s, gage height, 22.00 ft; maximum independent peak discharge, 3,380 ft^3/s, Jan. 25, gage height, 12.47 ft. Flow regulated since 1929 by C.H. Corn Hydroelectric Dam (formerly Jackson Bluff Dam) above station and storage in Lake Talquin (02329900). Since October 1981, the publication of adjusted values for storage has been discontinued since the difference between adjusted and the unadjusted values have been minimal. Maximum discharge, 89,400 ft^3/s, Sept. 23, 1969, gage height, 29.2 ft, from floodmark; minimum discharge, since October 1954, 1.0 ft^3/s, Nov. 1, 1957, caused by closure of breaks in earth embankment of C.H. Corn Hydroelectric Dam (indeterminate prior to October 1954).

EXTREMES OUTSIDE THE PERIOD OF RECORD.--Maximum stage since 1834, 32.64 ft, Sept. 30, 1957, from flood marks established by local resident, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16800	290	450	535	2150	1290	497	292	151	860	470	167
2	10600	823	451	1050	2050	1170	494	171	166	828	506	168
3	10100	959	453	1540	2230	936	494	173	167	950	456	166
4	9030	309	453	1320	2260	1240	504	152	167	1210	403	158
5	7470	546	453	1100	2070	1370	624	167	168	1440	186	155
6	6870	734	453	820	1060	1370	635	158	171	1460	190	169
7	6490	487	453	863	1540	1220	604	715	168	1510	188	173
8	5670	466	373	944	1660	1190	495	961	165	1620	320	172
9	5020	464	251	1220	1500	1250	438	439	166	2370	976	172
10	4520	398	407	1580	1180	1360	411	330	167	2560	635	165
11	3860	369	347	1250	1250	1410	423	179	160	2270	441	156
12	3140	869	450	1100	1320	1450	440	177	158	1930	430	155
13	2890	764	734	893	1050	1400	305	175	159	2050	268	156
14	2580	475	776	617	743	1520	212	171	163	2410	177	159
15	2050	468	513	681	1090	2700	211	169	175	2280	187	168
16	1750	560	462	885	885	2080	207	177	176	1570	192	165
17	1700	536	235	935	780	1300	205	180	171	1290	286	160
18	1690	608	185	942	1510	1410	198	184	169	1660	455	161
19	1350	749	222	940	1360	1620	155	185	217	1910	518	158
20	1250	612	361	936	1340	1590	157	185	198	2550	523	156
21	1200	567	493	937	1340	1280	157	185	195	1680	522	169
22	701	528	509	956	1330	1240	154	184	186	769	492	156
23	1080	519	685	1800	1330	1230	153	180	161	902	436	157
24	1130	583	550	3120	1340	1200	151	160	186	1170	168	159
25	601	683	510	2940	1370	939	150	153	191	1950	162	160
26	540	687	528	2140	1600	542	163	151	192	1980	374	161
27	536	555	914	2090	1440	733	171	151	189	1250	570	167
28	554	455	951	2230	1380	791	185	159	192	1150	557	165
29	608	450	964	2120	---	730	346	177	450	996	436	163
30	327	450	680	2100	---	603	460	153	979	903	169	163
31	284	---	543	2220	---	507	---	152	---	496	160	---
TOTAL	112391	16963	15809	42804	40158	38671	9799	7145	6323	47974	11853	4879
MEAN	3626	565	510	1381	1434	1247	327	230	211	1548	382	163
MAX	16800	959	964	3120	2260	2700	635	961	979	2560	976	173
MIN	284	290	185	535	743	507	150	151	151	496	160	155

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1999, BY WATER YEAR (WY)

MEAN	1029	790	1352	2075	2903	3343	2832	1370	1180	1308	1479	1273
MAX	10550	4943	8913	5671	12290	9313	13240	4880	4942	4007	6835	7890
(WY)	1995	1948	1965	1993	1986	1984	1948	1964	1973	1991	1928	1969
MIN	50.0	52.5	82.6	222	243	296	327	172	102	115	194	120
(WY)	1955	1955	1959	1935	1957	1955	1999	1927	1955	1952	1990	1958

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1926 - 1999	
ANNUAL TOTAL	759265		354769			
ANNUAL MEAN	2080		972		1713	
HIGHEST ANNUAL MEAN					4516	1948
LOWEST ANNUAL MEAN					315	1955
HIGHEST DAILY MEAN	18100	Mar 13	16800	Oct 1	73200	Sep 23 1969
LOWEST DAILY MEAN	121	May 28	150	Apr 25	1.2	Nov 1 1957
ANNUAL SEVEN-DAY MINIMUM	148	May 28	154	Apr 19	2.6	Sep 26 1958
INSTANTANEOUS PEAK FLOW			17900	Oct 1	89400	Sep 25 1969
INSTANTANEOUS PEAK STAGE			22.03	Oct 1	29.20	Sep 23 1969
INSTANTANEOUS LOW FLOW			133	Aug 24	1.0	Nov 1 1957
10 PERCENT EXCEEDS	5040		2050		4190	
50 PERCENT EXCEEDS	722		535		1020	
90 PERCENT EXCEEDS	159		161		158	

02330100 TELOGIA CREEK NEAR BRISTOL, FL

LOCATION.--Lat 30°25′35″, long 84°55′40″, in NW¼ sec. 3, T. 1 S., R. 7 W., Liberty County, Hydrologic Unit 03120003, near left bank at downstream side of bridge on State Highway 20, 600 ft upstream from White Branch, 3.0 mi east of Bristol, and 33 mi upstream from mouth.

DRAINAGE AREA.--126 mi^2.

PERIOD OF RECORD.--March 1950 to September 1971, October 1974 to September 1979, October 1980 to current year.

REVISED RECORDS.--WSP 1504: 1950-51, 1953 (M), 1955-56.

GAGE.--Water-stage recorder. Datum of gage is 99.50 ft above National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark).

REMARKS.--No estimated daily discharges. Records good. Maximum discharge, 5,240 ft^3/s, Oct. 1, stage falling; peak occurred Sept. 30, 1998, discharge, 5,980 ft^3/s, gage height, 10.31 ft; maximum independent peak discharge, 1,090 ft^3/s, Jan. 25, gage height, 6.91 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3300	105	100	108	134	130	91	52	64	261	71	55
2	1190	105	100	107	160	122	107	50	52	292	64	51
3	675	105	99	172	175	115	100	48	48	160	72	49
4	439	106	98	237	158	135	89	45	44	94	92	47
5	458	107	99	186	148	127	81	45	42	84	67	45
6	410	106	98	128	132	111	77	44	39	75	58	45
7	287	105	98	114	117	130	72	84	37	216	59	45
8	260	105	98	108	110	126	69	100	37	306	60	52
9	267	106	99	115	107	122	66	94	38	365	120	51
10	315	105	98	149	105	188	64	68	60	231	148	51
11	219	107	100	158	103	213	61	60	68	177	136	52
12	178	110	96	130	101	137	59	78	61	174	119	49
13	166	110	97	113	99	110	57	72	119	385	89	45
14	156	107	104	106	96	166	55	65	79	864	73	43
15	149	107	109	104	93	320	53	60	75	844	123	42
16	143	119	101	103	92	358	52	53	93	392	160	40
17	138	138	95	99	92	165	52	48	85	198	125	39
18	134	137	92	121	129	125	51	45	63	168	103	39
19	134	123	91	153	190	111	50	43	53	147	132	41
20	133	114	90	140	202	102	50	41	46	174	98	48
21	129	110	90	117	137	96	50	40	42	140	100	73
22	126	108	94	108	113	91	48	48	47	107	76	114
23	121	109	113	261	103	88	47	47	72	91	68	89
24	118	126	120	664	98	84	46	40	65	84	71	68
25	115	140	107	947	98	81	46	38	93	83	94	58
26	113	137	138	422	97	82	45	40	116	115	128	54
27	111	122	185	188	92	87	45	46	113	109	91	64
28	109	111	179	151	102	88	46	63	102	161	72	96
29	108	104	145	138	---	81	49	70	159	113	62	102
30	107	101	138	129	---	78	53	70	188	84	68	80
31	106	---	123	123	---	77	---	74	---	76	62	---
MEAN	336	113	109	190	121	131	61.0	57.1	73.3	218	92.3	57.6
MAX	3300	140	185	947	202	358	107	100	188	864	160	114
MIN	106	101	90	99	92	77	45	38	37	75	58	39
IN.	3.07	1.00	1.00	1.74	1.00	1.19	.54	.52	.65	2.00	.84	.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1999, BY WATER YEAR (WY)

MEAN	182	164	202	266	306	336	238	164	172	212	216	215
MAX	867	642	749	766	812	1100	615	788	605	510	726	1268
(WY)	1995	1998	1965	1991	1986	1991	1958	1991	1965	1956	1994	1969
MIN	35.4	46.9	69.3	71.1	81.6	45.1	61.0	57.1	44.0	48.3	47.0	38.4
(WY)	1955	1991	1991	1989	1957	1955	1999	1999	1955	1968	1954	1954

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1950 - 1999	
ANNUAL MEAN	255		131		222	
HIGHEST ANNUAL MEAN					478	1965
LOWEST ANNUAL MEAN					87.9	1968
HIGHEST DAILY MEAN	4750	Mar 9	3300	Oct 1	16600	Sep 22 1969
LOWEST DAILY MEAN	42	Jun 20	37	Jun 7	28	Sep 14 1954
ANNUAL SEVEN-DAY MINIMUM	44	Jul 6	41	Jun 3	31	Oct 22 1954
INSTANTANEOUS PEAK FLOW			5240	Oct 1	20600	Sep 22 1969
INSTANTANEOUS PEAK STAGE			9.87	Oct 1	16.65	Sep 22 1969
INSTANTANEOUS LOW FLOW			36	Jun 8	28	Oct 26 1954
ANNUAL RUNOFF (INCHES)	27.44		14.08		23.95	
10 PERCENT EXCEEDS	442		185		440	
50 PERCENT EXCEEDS	131		101		133	
90 PERCENT EXCEEDS	57		47		62	

OCHLOCKONEE RIVER BASIN
02330150 OCHLOCKONEE RIVER NEAR SMITH CREEK, FL

LOCATION.--Lat 30°10′35″, long 84°40′05″, in NE¼ sec. 31, T. 3 S., R. 4 W., Wakulla County, Hydrologic Unit 03120002, at bridge on County Road 368 and Forest Road FH-18, 1.3 mi upstream from Smith Creek, 2.0 mi southwest of community of Smith Creek, and 39 mi upstream from mouth.

DRAINAGE AREA.--2,080 mi^2.

PERIOD OF RECORD.--November 1964 to November 1992 (annual peak stage); October 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is undetermined. Prior to Nov. 29, 1972, crest-stage gage at NGVD of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage-height, 29.75 ft above NGVD of 1929, Sept. 25, 1969, discharge not determined.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24800	617	783	1120	2200	1600	894	e380	362	1160	1270	490
2	31800	575	763	1050	2180	1560	838	e410	352	1370	1110	419
3	21200	796	751	1240	2130	1520	822	e380	351	1380	1010	385
4	14500	1070	748	1530	2150	1410	819	346	337	1390	1000	359
5	13500	828	748	1650	2190	1450	824	331	319	1480	956	337
6	12500	764	747	1590	2170	1560	882	314	303	1610	751	322
7	8840	909	745	1420	1870	1600	923	368	295	1690	604	319
8	6800	872	745	1350	1710	1580	906	747	287	1750	575	351
9	5790	795	707	1380	1760	1590	e800	1100	277	1850	678	381
10	4880	767	570	1490	1740	1680	e750	991	277	2070	1030	411
11	4330	725	595	1690	1580	1740	e700	815	317	2360	1220	403
12	3750	673	640	1720	1500	1750	e680	587	332	2490	1120	357
13	3210	907	724	1600	1500	1740	e640	493	382	2460	1010	328
14	2810	1040	889	1450	1430	1870	e600	451	432	2560	872	312
15	2620	917	1030	1260	1230	2030	e630	421	436	2800	785	304
16	2350	831	944	1150	1250	2310	e600	392	457	2800	861	298
17	2070	856	830	1180	1250	2460	e580	371	448	2740	871	291
18	1900	897	640	1250	1180	2090	e550	358	403	2640	941	283
19	1830	930	486	1270	1480	1870	e510	344	377	2560	1130	286
20	1720	1020	463	1290	1610	1880	e500	333	387	2520	1160	306
21	1580	1020	557	1310	1610	1870	e480	324	370	2520	1130	318
22	1500	952	710	1330	1610	1740	e460	319	350	2340	1090	327
23	1310	917	778	1450	1610	1590	e440	319	438	1900	1030	314
24	1270	885	874	1830	1620	1510	e420	314	496	1760	958	322
25	1340	900	900	2430	1600	1460	e400	301	500	1670	710	337
26	1180	976	894	2890	1570	1340	e380	289	542	1880	742	338
27	986	1020	910	2730	1630	1090	e360	278	644	2160	848	431
28	909	980	1110	2510	1650	1010	e340	283	694	1990	957	672
29	909	873	1290	2490	---	1060	e340	322	665	1750	977	513
30	937	812	1340	2400	---	1040	e360	359	790	1610	878	426
31	764	---	1260	2260	---	972	---	376	---	1480	653	---
MEAN	5932	871	812	1655	1679	1612	614	433	421	2024	933	365
MAX	31800	1070	1340	2890	2200	2460	923	1100	790	2800	1270	672
MIN	764	575	463	1050	1180	972	340	278	277	1160	575	283
CFSM	2.85	.42	.39	.80	.81	.77	.30	.21	.20	.97	.45	.18
IN.	3.29	.47	.45	.92	.84	.89	.33	.24	.23	1.12	.52	.20

e Estimated

02330150 OCHLOCKONEE RIVER NEAR SMITH CREEK, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1999, BY WATER YEAR (WY)

MEAN	2919	1975	2140	2349	3228	4646	1334	991	727	1289	961	1084
MAX	5932	4505	3954	3655	4510	10090	1879	1956	1484	2024	1361	2619
(WY)	1999	1998	1998	1998	1998	1998	1998	1997	1997	1999	1997	1998
MIN	627	548	812	1655	1679	1612	614	433	275	391	588	353
(WY)	1998	1997	1999	1999	1999	1999	1999	1999	1998	1998	1998	1997

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1996 - 1999	
ANNUAL MEAN	2683		1454		1970	
HIGHEST ANNUAL MEAN					2798	1998
LOWEST ANNUAL MEAN					1454	1999
HIGHEST DAILY MEAN	31800	Oct 2	31800	Oct 2	31800	Oct 2 1998
LOWEST DAILY MEAN	241	Jun 19	277	Jun 9	241	Jun 19 1998
ANNUAL SEVEN-DAY MINIMUM	249	Jun 14	296	Jun 5	249	Jun 14 1998
INSTANTANEOUS PEAK FLOW			33000	Oct 2	33000	Oct 2 1998
INSTANTANEOUS PEAK STAGE			18.30	Oct 2	18.30	Oct 2 1998
INSTANTANEOUS LOW FLOW			272	Jun 10	236	Jun 19 1998
ANNUAL RUNOFF (CFSM)	1.29		.70		.95	
ANNUAL RUNOFF (INCHES)	17.51		9.49		12.87	
10 PERCENT EXCEEDS	5520		2280		4150	
50 PERCENT EXCEEDS	1020		937		1230	
90 PERCENT EXCEEDS	283		337		319	

CARABELLE RIVER BASIN
02330400 NEW RIVER NEAR SUMATRA, FL

LOCATION.--Lat 30°02′19″, long 84°50′38″, in SE¼ sec. 16, T. 5 S., R. 6 W., Liberty County, Hydrologic Unit 03130013, on left bank 1,000 ft downstream from closed Ownen bridge and dead ends of Forest Road 125 at river, 1.8 mi downstream from Cat Branch, 4.6 mi west of Tate Fire Tower, and 8.2 mi east of Sumatra.

DRAINAGE AREA.--157 mi^2.

PERIOD OF RECORD.-November 1964 to October 1986 (annual maximum discharge and gage-height), December 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929; from USGS Benchmark “TT 24 S”; elevation, 25.587 ft above NGVD of 1929.

REMARKS.--No estimated daily discharges. Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,670 ft^3/s, Sept. 23, 1969, gage height 27.38 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1990	11	7.6	53	276	86	36	134	174	284	355	113
2	2510	8.3	6.6	51	252	74	32	167	147	452	309	105
3	2570	8.6	5.7	84	228	91	24	142	110	518	267	81
4	2380	8.1	4.9	79	219	99	20	99	76	514	231	57
5	2050	6.0	4.6	80	213	87	17	79	66	492	181	37
6	1700	4.4	4.3	90	199	87	13	64	49	439	141	26
7	1450	3.8	4.0	89	185	92	9.5	111	34	391	115	18
8	1400	3.5	3.5	82	169	80	6.9	240	28	358	95	13
9	1580	3.1	6.5	89	150	85	5.0	323	16	362	112	8.6
10	1530	3.3	9.7	127	134	114	3.6	389	15	453	153	5.2
11	1350	3.1	6.9	118	117	118	2.6	393	24	556	194	3.1
12	1130	3.1	6.0	122	100	145	2.1	349	28	561	220	2.0
13	936	3.1	14	125	85	166	1.6	284	148	577	206	1.3
14	789	3.1	19	119	70	223	1.4	218	135	631	169	1.0
15	678	3.0	13	110	59	277	1.3	179	97	670	132	.71
16	576	3.5	15	97	49	297	.84	165	131	675	119	.27
17	484	3.8	17	87	43	327	.74	140	153	666	132	.04
18	395	5.0	16	83	60	351	.55	105	125	644	158	.00
19	307	17	14	84	64	350	.37	71	92	611	193	4.2
20	232	27	12	76	60	326	.30	43	65	576	223	34
21	183	25	10	77	75	286	.24	25	45	535	259	22
22	147	20	9.3	76	90	242	.21	15	31	496	253	8.2
23	115	18	9.0	111	92	200	.17	7.7	26	461	235	4.4
24	90	20	7.7	226	91	167	.16	3.8	47	462	233	2.6
25	68	17	7.1	269	83	141	.18	2.2	87	460	225	1.7
26	51	15	9.7	324	72	117	.18	1.5	126	499	230	1.3
27	38	14	13	372	65	95	.17	1.3	141	507	219	98
28	30	12	16	390	81	76	.47	2.0	150	479	196	433
29	23	10	44	377	---	59	14	62	153	441	169	565
30	18	8.9	71	344	---	45	81	201	189	416	151	549
31	14	---	55	303	---	36	---	184	---	399	120	---
MEAN	865	9.72	14.3	152	121	159	9.19	136	90.3	503	193	73.2
MAX	2570	27	71	390	276	351	81	393	189	675	355	565
MIN	14	3.0	3.5	51	43	36	.16	1.3	15	284	95	.00
IN.	6.35	.07	.10	1.12	.80	1.17	.07	1.00	.64	3.69	1.42	.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 1999, BY WATER YEAR (WY)

MEAN	865	9.72	14.3	152	121	159	9.19	247	106	277	384	459
MAX	865	9.72	14.3	152	121	159	9.19	359	121	503	671	845
(WY)	1999	1999	1999	1999	1999	1999	1999	1997	1997	1999	1997	1998
MIN	865	9.72	14.3	152	121	159	9.19	136	90.3	37.7	193	73.2
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1998	1999	1999

SUMMARY STATISTICS	FOR 1999 WATER YEAR		WATER YEARS 1997 - 1999	
ANNUAL MEAN	196		196	
HIGHEST ANNUAL MEAN			196	1999
LOWEST ANNUAL MEAN			196	1999
HIGHEST DAILY MEAN	2570	Oct 3	2570	Oct 3 1998
LOWEST DAILY MEAN	.00	Sep 18	.00	Jun 5 1998
ANNUAL SEVEN-DAY MINIMUM	.19	Apr 21	.00	Jun 12 1998
INSTANTANEOUS PEAK FLOW	2600	Oct 3	2600	Oct 3 1998
INSTANTANEOUS PEAK STAGE	23.63	Oct 3	23.63	Oct 3 1998
INSTANTANEOUS LOW FLOW	.00	Apr 21	.00	Sep 11 1997
ANNUAL RUNOFF (INCHES)	16.95		16.96	
10 PERCENT EXCEEDS	481		678	
50 PERCENT EXCEEDS	87		118	
90 PERCENT EXCEEDS	3.1		.90	

02357150 SPRING CREEK NEAR REYNOLDSVILLE, GA

LOCATION.--Lat 30°54′14″, long 84°44′57″, Decatur County, Hydrologic Unit 03130010, on right bank, 1 mi upstream of Smith Landing, and 3 mi north-northeast of Reynoldsville.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1998 to September 1999.

GAGE.--Water-stage and velocity recorder.

REMARKS.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1820	617	e593	514	1050	716	533	283	213	505	e337	249
2	3630	604	e570	510	1050	716	564	290	199	696	310	241
3	4260	591	555	518	1040	721	615	288	189	781	301	233
4	3780	e588	542	539	1050	704	659	294	187	745	297	223
5	3090	e589	533	552	1050	690	655	287	182	760	287	223
6	2470	597	529	619	1030	681	610	280	176	707	266	227
7	2020	606	516	698	993	667	571	276	167	596	e260	223
8	1740	609	514	762	945	669	535	276	172	507	e257	206
9	1540	599	494	712	900	670	511	291	187	472	e258	204
10	e1390	580	489	640	851	660	491	300	179	445	e260	194
11	e1290	608	489	641	824	649	475	307	170	433	261	204
12	e1210	696	487	700	795	640	454	304	162	429	257	202
13	e1150	708	490	669	770	641	442	296	153	430	258	199
14	e1090	698	479	650	748	656	432	286	154	428	267	190
15	e1040	669	472	629	734	668	418	278	154	449	275	189
16	e1000	657	470	634	722	729	404	283	174	479	298	190
17	e957	640	469	635	709	788	391	286	172	466	301	189
18	e917	629	466	638	717	818	383	282	192	444	294	189
19	e889	626	463	655	733	808	373	268	188	452	357	178
20	e858	619	463	676	884	749	365	256	180	481	389	174
21	834	600	454	667	1000	702	359	246	173	546	344	169
22	789	586	447	683	975	658	347	237	175	615	313	178
23	771	578	433	724	907	631	336	242	182	575	303	180
24	737	573	453	821	837	616	325	235	168	524	292	186
25	720	576	452	950	788	e595	316	224	152	475	293	181
26	694	590	473	1120	752	e580	314	229	169	450	286	182
27	e673	620	501	1340	732	e568	314	223	257	435	277	184
28	656	640	527	1470	723	e555	311	211	268	380	274	179
29	645	e632	542	1410	---	e542	299	217	280	387	265	180
30	639	e619	542	1270	---	530	290	212	370	380	264	175
31	620	---	536	1120	---	525	---	213	---	e364	257	---
MEAN	1417	618	498	780	868	663	436	265	191	511	289	197
MAX	4260	708	593	1470	1050	818	659	307	370	781	389	249
MIN	620	573	433	510	709	525	290	211	152	364	257	169

e Estimated

02357150 SPRING CREEK NEAR REYNOLDSVILLE, GA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

MEAN	1417	618	498	780	868	663	436	265	191	511	289	197
MAX	1417	618	498	780	868	663	436	265	191	511	289	197
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	1417	618	498	780	868	663	436	265	191	511	289	197
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

SUMMARY STATISTICS FOR 1999 WATER YEAR

ANNUAL MEAN	561	
HIGHEST DAILY MEAN	4260	Oct 3
LOWEST DAILY MEAN	152	Jun 25
ANNUAL SEVEN-DAY MINIMUM	163	Jun 11
INSTANTANEOUS PEAK FLOW	4470	Oct 3
INSTANTANEOUS PEAK STAGE	81.82	Oct 3
INSTANTANEOUS LOW FLOW	152	Jun 25
10 PERCENT EXCEEDS	903	
50 PERCENT EXCEEDS	507	
90 PERCENT EXCEEDS	189	

02358000 APALACHICOLA RIVER AT CHATTAHOOCHEE, FL

LOCATION.--Lat 30°42′03″, long 84°51′33″, in NW¼ sec. 32, T. 4 N., R. 6 W., Jackson County, Hydrologic Unit 03130011, on downstream side of abandoned bridge downstream of U.S. Highway 90, 0.6 mi downstream from Jim Woodruff Dam, 0.6 mi upstream from Mosquito Creek, 1.0 mi west of Chattahoochee, and 106 mi upstream from mouth.

DRAINAGE AREA.--17,200 mi^2, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for some periods, published in WSP 1304. Prior to October 1939, published as "near River Junction." Gage-height records collected at site 0.9 mi downstream October 1919 to September 1925, and at site approximately 100 ft downstream October 1925 to December 1958 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1906: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (National Weather Service bench mark). Prior to Dec. 16, 1939, water-stage recorder at site 0.9 mi downstream at datum 44.85 ft higher. Dec. 16, 1939 to June 25, 1952, water-stage recorder, June 26, 1952 to June 2, 1954, nonrecording gage, and June 3, 1954 to Oct. 14, 1958, water-stage recorder, at site approximately 100 ft downstream at datum 45.58 ft. Oct. 15, 1958 to Sept. 30, 1987, water-stage recorder at datum 40.58 ft.

REMARKS.--Records good. Flow regulated by Lake Seminole Reservoir (02357500) 0.6 mi upstream since Feb. 4, 1957, Walter F. George Lake (02343240) since 1962, Bartlett's Ferry Reservoir (02341000) since 1926, West Point Lake (02339400) since October 1974, and Lake Sidney Lanier Reservoir (02334400) since 1956.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58900	14500	9710	16900	25200	22000	18900	7140	6350	14000	12400	6980
2	54700	15400	9620	16900	29000	22000	18900	7260	6830	12700	14500	7020
3	32900	14700	9590	17100	29200	20900	18700	7340	6720	12500	15600	7060
4	22500	13100	9540	17100	29400	20800	18600	7290	6380	12000	15700	7190
5	20700	13800	9410	17400	29000	20400	18300	7310	6580	12000	15700	7120
6	21800	14800	9310	17500	e28800	19400	16000	7300	6550	12000	15900	7180
7	21600	20300	9040	17200	e28500	19300	12700	10000	8760	12100	15600	6950
8	20900	21600	8760	15300	28300	19200	11800	11700	17800	12700	15500	6600
9	20700	22300	8810	13800	26500	19400	11500	11800	18600	12900	15600	6580
10	19500	21100	8760	13500	24600	19300	11300	11700	18100	12200	15900	6770
11	16600	23200	8880	11800	23000	17400	11200	11700	17400	12200	15400	6630
12	16100	13200	8790	10300	20000	14300	11100	11600	16900	11900	15100	6530
13	16100	16100	8830	10200	17700	13100	11000	10600	16400	11600	14600	6580
14	15700	16100	8860	10200	17500	13100	11000	8880	15900	11700	13300	6570
15	15200	16100	8860	12000	17600	12600	10900	8690	15300	11400	11000	6530
16	14900	16300	8920	12600	17400	12600	10500	8840	15000	11600	7970	6560
17	13900	16400	8820	12100	17100	12200	8270	8900	14900	11600	7340	6560
18	13300	16400	9030	12100	17300	12100	7860	8860	14000	11400	7120	6540
19	13000	16400	9250	12100	18000	12200	7820	8830	12600	11200	7060	6500
20	12600	16500	9320	12000	20700	13700	7860	8870	8310	11200	7110	6310
21	12900	16200	9310	12000	21400	14500	7710	9630	5950	11200	7150	6090
22	12900	16200	9320	12300	21500	14300	7460	10400	6770	11400	7060	6180
23	12300	16200	12300	14700	21400	15100	7290	10300	9210	11700	6980	5670
24	11200	16200	17700	31400	21200	18000	7230	8320	6070	12300	7050	6240
25	11400	14300	18300	25600	21300	19300	7220	7450	6410	12200	7080	6290
26	11600	14200	18400	20000	21200	20000	7180	7250	6660	12300	7100	6190
27	9770	13800	18400	18600	21100	20100	7130	7090	5970	12200	7010	6210
28	11600	11700	18400	18000	21100	20200	7010	6940	7970	12400	e7360	6380
29	13700	10000	18200	19100	---	20100	7060	6980	12700	12500	e7300	6300
30	14200	9810	17500	21000	---	19300	7040	7070	14100	11900	e7450	6120
31	14700	---	16900	21600	---	18800	---	6980	---	12100	7140	---
MEAN	18640	15900	11510	15880	22680	17280	10880	8807	11040	12040	10870	6548
MAX	58900	23200	18400	31400	29400	22000	18900	11800	18600	14000	15900	7190
MIN	9770	9810	8760	10200	17100	12100	7010	6940	5950	11200	6980	5670
IN.	1.25	1.03	.77	1.06	1.37	1.16	.71	.59	.72	.81	.73	.42

e Estimated

02358000 APALACHICOLA RIVER AT CHATTAHOOCHEE, FL--Continued
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1999, BY WATER YEAR (WY)

MEAN	12730	13510	20580	28280	34380	41350	34520	22060	16610	16990	15140	12280
MAX	38500	31790	70390	62470	67310	171600	80700	53260	39460	87780	31950	25440
(WY)	1965	1993	1949	1936	1998	1929	1944	1964	1973	1994	1994	1994
MIN	5319	5524	7614	7262	10420	12780	10880	8807	7148	6510	4750	6092
(WY)	1955	1932	1982	1956	1989	1955	1999	1999	1941	1988	1988	1954

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1929 - 1999	
ANNUAL MEAN	31500		13460		22310	
HIGHEST ANNUAL MEAN					35680	1929
LOWEST ANNUAL MEAN					11280	1955
HIGHEST DAILY MEAN	227000	Mar 12	58900	Oct 1	291000	Mar 20 1929
LOWEST DAILY MEAN	8130	Sep 18	5670	Sep 23	3900	Nov 15 1987
ANNUAL SEVEN-DAY MINIMUM	8450	Jul 23	6120	Sep 21	4530	Aug 10 1988
INSTANTANEOUS PEAK FLOW			64400	Oct 2	293000	Mar 20 1929
INSTANTANEOUS PEAK STAGE			60.19	Oct 2	79.55	Mar 20 1929
INSTANTANEOUS LOW FLOW			4940	Sep 23	2570	Aug 6 1986
ANNUAL RUNOFF (INCHES)	24.87		10.62		17.63	
10 PERCENT EXCEEDS	63200		20900		44000	
50 PERCENT EXCEEDS	16600		12300		16200	
90 PERCENT EXCEEDS	9400		6950		8920	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59.21	44.61	41.94	45.81	49.31	48.02	46.70	40.63	40.21	44.47	43.59	40.56
2	58.32	45.09	41.89	45.83	50.82	48.02	46.70	40.69	40.48	43.81	44.68	40.58
3	52.16	44.77	41.88	45.93	50.86	47.59	46.65	40.74	40.42	43.71	45.24	40.60
4	48.24	44.04	41.85	45.90	50.95	47.55	46.59	40.71	40.23	43.41	45.26	40.67
5	47.48	44.34	41.79	46.05	50.81	47.38	46.47	40.72	40.35	43.40	45.25	40.63
6	47.96	44.82	41.74	46.08	---	46.94	45.39	40.71	40.33	43.40	45.35	40.67
7	47.86	47.23	41.61	45.95	---	46.89	43.79	42.15	41.54	43.45	45.23	40.54
8	47.56	47.78	41.48	45.10	50.52	46.87	43.22	43.13	46.21	43.84	45.20	40.36
9	47.48	48.11	41.50	44.36	49.84	46.92	42.98	43.19	46.59	43.90	45.24	40.35
10	46.99	47.63	41.47	44.24	49.10	46.90	42.79	43.18	46.35	43.50	45.37	40.45
11	45.70	48.46	41.53	43.15	48.46	46.03	42.77	43.17	46.07	43.48	45.11	40.37
12	45.44	43.95	41.49	42.19	47.17	44.63	42.65	43.08	45.85	43.34	44.97	40.32
13	45.47	45.46	41.51	42.18	46.18	44.04	42.60	42.46	45.61	43.04	44.75	40.34
14	45.29	45.46	41.52	42.16	46.10	44.02	42.62	41.53	45.37	43.12	44.08	40.34
15	45.06	45.45	41.52	43.31	46.14	43.75	42.56	41.44	45.06	42.94	42.68	40.32
16	44.91	45.57	41.55	43.78	46.05	43.76	42.36	41.52	44.93	43.03	41.08	40.33
17	44.42	45.62	41.50	43.48	45.93	43.52	41.22	41.54	44.89	43.06	40.75	40.34
18	44.13	45.60	41.61	43.49	46.02	43.49	41.01	41.52	44.48	42.88	40.64	40.32
19	43.96	45.61	41.72	43.45	46.33	43.56	40.99	41.51	43.70	42.77	40.60	40.30
20	43.73	45.62	41.75	43.39	47.48	44.31	41.01	41.54	41.22	42.76	40.63	40.20
21	43.91	45.50	41.74	43.39	47.79	44.71	40.93	41.94	39.99	42.75	40.65	40.08
22	43.93	45.48	41.75	43.58	47.84	44.62	40.80	42.38	40.43	42.88	40.60	40.13
23	43.46	45.49	43.34	44.75	47.78	45.00	40.71	42.38	41.67	43.15	40.56	39.80
24	42.75	45.49	46.18	51.69	47.72	46.32	40.68	41.25	40.06	43.56	40.60	40.16
25	42.88	44.61	46.43	49.49	47.73	46.89	40.67	40.94	40.24	43.56	40.61	40.19
26	43.05	44.54	46.50	47.20	47.70	47.21	40.65	40.81	40.39	43.58	40.63	40.13
27	42.28	44.38	46.50	46.56	47.68	47.22	40.62	40.71	40.01	43.55	40.58	40.14
28	43.05	43.15	46.49	46.31	47.66	47.28	40.56	40.53	41.04	43.63	---	40.23
29	44.13	42.09	46.43	46.80	---	47.26	40.59	40.56	43.67	43.70	---	40.19
30	44.41	41.98	46.09	47.64	---	46.90	40.58	40.60	44.53	43.32	---	40.09
31	44.69	---	45.84	47.85	---	46.68	---	40.56	---	43.43	40.65	---
MEAN	46.13	45.26	42.91	45.20	---	45.94	42.60	41.54	42.73	43.37	---	40.32
MAX	59.21	48.46	46.50	51.69	---	48.02	46.70	43.19	46.59	44.47	---	40.67
MIN	42.28	41.98	41.47	42.16	---	43.49	40.56	40.53	39.99	42.75	---	39.80

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1962 to June 1972, January 1974 to current year.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	GAGE HEIGHT (FEET) (00065)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDIMENT, SUSPENDED (MG/L) (80154)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)
OCT 1998						
22...	1123	880	43.89	71	19	12800
22...	1124	880	43.89	88	41	12800
22...	1125	1040	43.89	91	16	12800
22...	1126	1040	43.89	94	9	12800
22...	1127	1140	43.89	100	8	12800
22...	1129	1140	43.89	100	8	12800
22...	1130	1200	43.89	100	9	12800
22...	1132	1200	43.89	100	9	12800
22...	1134	1290	43.89	100	10	12800
22...	1136	1290	43.89	100	8	12800
DEC						
22...	1036	895	41.77	65	12	9380
22...	1037	895	41.77	100	6	9380
22...	1039	1050	41.77	100	7	9380
22...	1040	1050	41.77	100	9	9380
22...	1042	1140	41.77	100	5	9380
22...	1043	1140	41.77	100	6	9380
22...	1045	1200	41.77	96	7	9380
22...	1046	1200	41.77	100	7	9380
22...	1048	1280	41.77	100	6	9380
22...	1049	1280	41.77	100	8	9380
MAR 1999						
17...	1115	872	43.57	54	32	12200
17...	1118	872	43.57	91	7	12200
17...	1121	1050	43.58	86	7	12200
17...	1123	1050	43.58	100	6	12200
17...	1126	1140	43.59	100	6	12200
17...	1129	1140	43.59	96	7	12200
17...	1133	1200	43.59	62	7	12200
17...	1136	1200	43.59	100	6	12200
17...	1140	1280	43.59	100	6	12200
17...	1144	1280	43.59	100	7	12200
APR						
15...	1039	875	42.48	78	10	10900
15...	1041	875	42.48	96	7	10900
15...	1043	1040	42.48	80	10	10900
15...	1045	1040	42.48	88	9	10900
15...	1047	1140	42.48	79	37	10900
15...	1051	1200	42.48	88	9	10900
15...	1053	1200	42.49	88	10	10900
15...	1056	1280	42.49	74	9	10900
15...	1058	1280	42.49	77	14	10900
MAY						
25...	1315	900	40.86	92	7	7570
25...	1316	900	40.86	83	7	7570
25...	1318	1060	40.86	79	7	7570
25...	1320	1060	40.86	100	5	7570
25...	1322	1150	40.86	79	7	7570
25...	1323	1150	40.86	100	6	7570
25...	1326	1200	40.86	85	8	7570
25...	1328	1200	40.86	92	7	7570
25...	1330	1280	40.86	100	7	7570
25...	1332	1280	40.86	86	8	7570

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999--Continued

JUL						
15...	1135	1040	42.84	66	12	11300
15...	1139	1140	42.83	57	10	11300
15...	1141	1140	42.83	96	7	11300
15...	1144	1200	42.82	100	6	11300
15...	1146	1200	42.82	69	7	11300
15...	1150	1280	42.83	83	8	11300
15...	1155	1280	42.84	88	9	11300
AUG 1999						
25...	1014	900	40.82	100	4	7250
25...	1016	900	40.82	100	2	7250
25...	1020	1060	40.82	100	2	7250
25...	1022	1060	40.82	100	2	7250
25...	1025	1150	40.82	100	3	7250
25...	1028	1150	40.82	100	2	7250
25...	1031	1200	40.82	100	2	7250
25...	1034	1200	40.82	100	3	7250
25...	1038	1270	40.83	100	3	7310
25...	1041	1270	40.83	100	3	7310

02358700 APALACHICOLA RIVER NEAR BLOUNTSTOWN, FL

LOCATION.--Lat 30°25′30″, long 85°01′53″, in NE¼ sec. 3, T. 1 S., R. 8 W., Calhoun County, Hydrologic Unit 03130011, on right bank 500 ft upstream from Neal Lumber Company Landing at McNeal, 0.5 mi upstream from Old River cutoff, 1.5 mi southeast of Blountstown, and 78 mi upstream from mouth.

DRAINAGE AREA.--17,600 mi^2, approximately.

PERIOD OF RECORD.--January 1920 to September 1957 gage-height records collected in this vicinity by the National Weather Service are in the files of the Geological Survey. Miscellaneous discharge measurements from some periods August 1938 to August 1957 are in files of the U.S. Army Corps of Engineers, Mobile, Alabama District. October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 26.96 ft above National Geodetic Vertical Datum of 1929 (National Weather Service benchmark). Prior to Sept. 17, 1921, nonrecording gage near present site at different datum. Sept. 17, 1921 to Aug. 28, 1957, nonrecording gage at several sites within 500 ft of present site at present datum. Since Aug. 26, 1960, auxiliary nonrecording gage at site 2.2 mi upstream at bridge on State Highway 20, at present datum.

COOPERATION.--Records from October 1957 to current year, were collected and computed by the U.S. Army Corps of Engineers and were reviewed by the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 266,000 ft^3/s, Mar. 13, 1998; maximum gage height, 27.23 ft, Mar. 13, 1998; minimum daily discharge, 4,680 ft^3/s (estimated), Aug. 3, 1986.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1920, 28.6 ft present datum, Mar. 21, 1929, discharge not determined, from National Weather Service records.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 56,700 ft^3/s, Oct. 2, gage height, 18.62 ft; minimum daily, 6,630 ft^3/s, Sept. 24.

DISCHARGE, MAIN CHANNEL ONLY, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999, DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52100	9660	9980	17700	24600	22700	20100	8150	7350	15100	12400	7700
2	56700	9460	9830	17900	29100	23500	20100	8190	7260	13700	14100	7690
3	41700	9430	9790	18200	30100	22700	20100	8160	7350	13000	15900	7690
4	29300	9420	9740	18000	30500	22300	20000	8150	6960	12500	16300	7730
5	24600	9490	9590	18200	30800	22100	19800	8090	7050	12200	16400	7760
6	23900	9990	9510	18300	31300	21200	19000	8090	7090	12100	16500	7770
7	23600	11300	9340	18200	33800	20800	15400	8990	7140	12300	16500	7840
8	22900	12400	9110	16900	33800	20700	13500	11600	14000	12900	16500	7570
9	22300	11700	9080	15100	29700	20800	12700	12100	18400	13100	16700	7460
10	21100	10300	9040	14500	27300	20900	12400	12100	18800	12700	16900	7800
11	18600	14200	9080	13300	25200	20100	12200	12200	18300	12300	16700	7640
12	17400	16600	9100	10800	23300	17200	12100	12200	17700	12300	16300	7390
13	17200	17000	9080	10300	19900	14900	12000	11600	17500	12200	15800	7350
14	16800	17000	9100	10200	18800	14700	12100	9870	17100	12500	14900	7350
15	16300	17100	9070	11100	18500	14300	12000	9190	16000	11900	12700	7330
16	16000	17300	9070	12800	18500	13800	11900	9100	15700	12200	10000	7300
17	15000	17400	9020	12700	18200	13500	10700	9130	15500	12300	8540	7330
18	14300	17500	9110	12600	18600	13100	9480	9050	15000	11700	8010	7350
19	13800	17400	9290	12500	18700	13000	9250	9010	13700	11400	7810	7390
20	13300	17400	9310	12300	20800	13500	e9050	8960	10600	11100	7790	7420
21	13500	17500	9320	12300	22100	15000	e8840	9320	7290	11000	7760	7100
22	13600	17500	9400	12400	22700	15200	e8650	10000	6800	11000	7680	6910
23	12900	17500	11400	13900	22700	15300	8450	10300	8580	11400	7640	6730
24	11000	17500	17200	26900	22500	17400	8380	9290	7420	e11700	7700	6630
25	10600	15800	18800	28600	22400	19200	8290	8350	6990	e12000	7760	6880
26	10500	15200	19300	23600	22400	20700	8290	7880	7270	e12700	7750	6890
27	10400	14800	19300	20300	22400	21000	8250	7880	6750	12700	7650	7000
28	10300	13000	19300	19300	22400	21000	8220	7620	7010	12900	7720	7130
29	10000	10700	19200	19200	---	21000	8180	7570	10700	12900	7900	7080
30	9960	10100	18500	21400	---	20800	8210	7620	14000	12500	7900	6940
31	9790	---	17800	22300	---	20100	---	7660	---	12300	7860	---
MEAN	19340	14060	11800	16510	24320	18470	12250	9272	11380	12340	11680	7338
MAX	56700	17500	19300	28600	33800	23500	20100	12200	18800	15100	16900	7840
MIN	9790	9420	9020	10200	18200	13000	8180	7570	6750	11000	7640	6630
IN.	1.27	.89	.77	1.08	1.44	1.21	.78	.61	.72	.81	.77	.47

CAL YR 1998 MEAN 34320 MAX 266000 MIN 9020 IN. 26.48
WTR YR 1999 MEAN 14010 MAX 56700 MIN 6630 IN. 10.81

e Estimated

02358700 APALACHICOLA RIVER NEAR BLOUNTSTOWN, FL--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17.97	3.79	3.99	8.10	11.01	10.27	9.18	2.77	2.19	6.89	5.40	2.23
2	18.62	3.66	3.90	8.23	12.68	10.58	9.18	2.80	2.12	6.13	6.35	2.22
3	16.10	3.64	3.87	8.37	13.02	10.26	9.18	2.78	2.19	5.76	7.24	2.21
4	12.73	3.63	3.84	8.28	13.15	10.12	9.15	2.77	1.89	5.48	7.45	2.23
5	11.03	3.68	3.74	8.34	13.24	10.04	9.06	2.73	1.96	5.30	7.47	2.25
6	10.73	4.00	3.69	8.38	13.40	9.67	8.71	2.73	1.99	5.25	7.52	2.25
7	10.62	4.82	3.58	8.36	14.15	9.50	7.01	3.35	2.03	5.35	7.51	2.30
8	10.34	5.46	3.43	7.75	14.15	9.44	6.03	4.96	6.30	5.72	7.50	2.09
9	10.11	5.01	3.41	6.87	12.90	9.48	5.61	5.27	8.42	5.83	7.57	2.00
10	9.63	4.21	3.38	6.57	12.05	9.55	5.43	5.28	8.60	5.59	7.67	2.25
11	8.51	6.43	3.41	5.92	11.25	9.21	5.32	5.32	8.40	5.40	7.59	2.12
12	7.97	7.60	3.42	4.52	10.50	7.87	5.27	5.31	8.14	5.39	7.36	1.93
13	7.87	7.77	3.41	4.17	9.11	6.78	5.23	4.98	8.03	5.32	7.11	1.90
14	7.71	7.81	3.42	4.12	8.60	6.66	5.26	3.92	7.84	5.51	6.66	1.89
15	7.44	7.84	3.40	4.66	8.50	6.44	5.22	3.48	7.31	5.17	5.48	1.86
16	7.29	7.93	3.40	5.68	8.47	6.19	5.16	3.42	7.15	5.30	3.92	1.84
17	6.83	8.00	3.37	5.59	8.35	6.04	4.42	3.44	7.09	5.38	2.92	1.85
18	6.47	8.01	3.43	5.52	8.53	5.82	3.67	3.39	6.84	5.04	2.55	1.87
19	6.21	7.99	3.55	5.50	8.59	5.77	3.52	3.36	6.12	4.83	2.40	1.90
20	5.94	7.99	3.56	5.39	9.50	6.05	e3.39	3.33	4.35	4.68	2.37	1.92
21	6.05	8.01	3.57	5.38	10.04	6.84	e3.25	3.57	2.14	4.60	2.35	1.68
22	6.09	8.01	3.62	5.46	10.26	6.94	e3.12	4.01	1.76	4.60	2.28	1.53
23	5.72	8.02	4.87	6.25	10.26	6.95	2.98	4.22	3.07	4.84	2.24	1.38
24	4.61	8.01	7.91	11.89	10.20	7.96	2.93	3.55	2.24	e5.03	2.29	1.30
25	4.37	7.22	8.64	12.50	10.17	8.81	2.87	2.91	1.91	e5.23	2.32	1.50
26	4.32	6.90	8.83	10.63	10.15	9.44	2.87	2.58	2.13	e5.61	2.30	1.51
27	4.27	6.73	8.86	9.29	10.14	9.57	2.84	2.58	1.72	5.61	2.23	1.60
28	4.18	5.74	8.86	8.86	10.15	9.59	2.82	2.39	1.93	5.71	2.27	1.70
29	4.03	4.42	8.81	8.81	---	9.59	2.79	2.35	4.42	5.73	2.39	1.66
30	3.98	4.08	8.50	9.76	---	9.48	2.81	2.39	6.29	5.48	2.39	1.56
31	3.87	---	8.18	10.11	---	9.19	---	2.42	---	5.34	2.35	---
TOTAL	251.61	186.41	151.85	229.26	302.52	260.10	154.28	108.36	136.57	167.10	145.45	56.53
MEAN	8.12	6.21	4.90	7.40	10.80	8.39	5.14	3.50	4.55	5.39	4.69	1.88
MAX	18.62	8.02	8.86	12.50	14.15	10.58	9.18	5.32	8.60	6.89	7.67	2.30
MIN	3.87	3.63	3.37	4.12	8.35	5.77	2.79	2.35	1.72	4.60	2.23	1.30

CAL YR 1998 TOTAL 4002.17 MEAN 10.96 MAX 27.17 MIN 3.37
WTR YR 1999 TOTAL 2150.04 MEAN 5.89 MAX 18.62 MIN 1.30

e Estimated

02358784 MUDDY BRANCH NEAR MARIANNA, FL

LOCATION.--Lat 30°49′58″, long 85°12′31″, in SW¼ sec. 14, T. 5 N., R. 10 W., Jackson County, Hydrologic Unit 03130012, at downstream side of culvert at County Road 167, 1.4 mi west of Marianna Municipal Airport, 1.4 mi north of State Highway 166, 2.4 mi upstream from Chipola River, and 4.2 mi north of Marianna.

DRAINAGE AREA.--10.4 mi^2.

PERIOD OF RECORD.--October 1998 to September 1999.

GAGE.--Water-stage recorder.

REMARKS.--Records good, except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	e1.0	e1.0	.43	3.3	.37	.64	.09	.13	3.2	.33	.03
2	e19	e1.5	e1.0	.84	2.0	.30	.51	.01	.11	1.5	.63	.01
3	e13	e2.8	e1.0	2.3	1.5	.32	.35	.00	.07	1.1	1.8	.00
4	e10	e2.3	e1.0	1.3	1.4	.26	.51	.00	.04	.92	.60	.00
5	e8.0	e2.1	e1.0	.96	1.3	.24	.66	.00	.03	.83	.32	.00
6	e6.0	e2.0	e1.0	.82	1.2	.33	.87	.36	.01	.75	.23	.00
7	e5.0	e2.0	1.0	.82	1.2	.46	.83	23	.04	2.3	.22	.00
8	3.9	e1.9	.99	.85	1.2	.30	.69	13	.01	1.3	.30	.00
9	e3.7	e1.9	.94	1.1	1.1	.81	.72	2.9	.00	.98	.32	.00
10	e3.5	e1.8	.87	1.1	1.1	.93	.77	1.3	.00	.84	.28	.00
11	e3.2	e1.7	.81	.99	1.0	.42	.78	1.0	.14	.77	.26	.00
12	e3.0	e1.6	.75	.92	.98	.31	.82	1.1	1.7	.83	.23	.00
13	e2.9	e1.5	.75	.90	.93	.27	.50	1.1	.69	2.5	.19	.00
14	e2.8	e1.4	.70	.93	.91	2.6	.40	.76	.31	5.5	.19	.00
15	e2.6	e1.3	.63	1.0	.89	1.4	.37	.44	.56	1.6	.34	.00
16	e2.5	e1.2	.55	.94	.84	.65	.33	.32	2.1	1.3	.37	.00
17	e2.4	e1.1	.49	.90	.94	.45	.27	.27	2.8	1.2	.21	.00
18	e2.3	e1.0	.42	5.6	1.9	.40	.11	.23	.68	.98	1.1	.00
19	e2.2	e1.0	.38	2.8	1.3	.36	.05	.20	.21	.95	.73	.00
20	e2.1	e1.0	.35	2.0	.90	.35	.02	.15	.07	1.1	.32	.00
21	e2.0	e1.0	.31	1.8	.60	.32	.00	.13	.02	.87	.18	.00
22	e1.9	e1.0	.35	1.8	.47	.28	.00	.15	.00	.76	.12	.00
23	e1.8	e1.0	.33	7.6	.45	.26	.00	.19	.00	.69	.10	.00
24	e1.7	e1.0	.29	3.4	.44	.26	.05	.20	.00	.63	.11	.00
25	e1.6	e1.0	.33	2.1	.42	.26	.14	.17	2.2	1.0	.13	.00
26	e1.5	e1.0	.67	1.8	.40	.25	.18	.24	2.1	1.4	.09	.00
27	e1.4	e1.0	.62	1.6	.39	.22	.22	.67	1.4	.82	.06	.90
28	e1.3	e1.0	.59	1.5	.49	.22	.26	.37	4.2	.61	.05	1.7
29	e1.2	e1.0	.59	1.5	---	.21	.26	.23	1.7	.52	.11	.39
30	e1.1	e1.0	.53	1.5	---	.21	.24	.18	2.5	.46	.13	.07
31	e1.0	---	.48	1.7	---	.25	---	.15	---	.41	.06	---
MEAN	4.50	1.40	.67	1.74	1.06	.46	.39	1.58	.79	1.25	.33	.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

MEAN	4.50	1.40	.67	1.74	1.06	.46	.38	1.58	.79	1.25	.33	.10

SUMMARY STATISTICS	FOR 1999 WATER YEAR	
ANNUAL MEAN	1.19	
HIGHEST DAILY MEAN	25	Oct 1
LOWEST DAILY MEAN	.00	Apr 21
ANNUAL SEVEN-DAY MINIMUM	.00	Sep 3
INSTANTANEOUS PEAK FLOW	31	May 7
INSTANTANEOUS PEAK STAGE	6.70	May 7
INSTANTANEOUS LOW FLOW	.00	Apr 21
10 PERCENT EXCEEDS	2.3	
50 PERCENT EXCEEDS	.69	
90 PERCENT EXCEEDS	.01	

e Estimated

02359000 CHIPOLA RIVER NEAR ALTHA, FL

LOCATION.--Lat 30°32′02″, long 85°09′55″, in NW¼ sec. 32, T. 2 N., R. 9 W., Calhoun County, Hydrologic Unit 03130012, on right downstream bank at State Highway 274, 0.9 mi downstream from Holliman Branch, 3.5 mi southwest of Altha, and 54 mi upstream from mouth.

DRAINAGE AREA.--781 mi^2.

PERIOD OF RECORD.--November 1912 to December 1913, September 1921 to September 1927, August 1929 to September 1931, March 1943 to current year. Monthly discharge only for some periods published in WSP 1304.

REVISED RECORDS.--WSP 1384: Drainage area. WSP 1504: 1924, 1925 (M), 1926.

GAGE.--Water-stage recorder. Datum of gage is 19.95 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Jan. 13, 1950, and Mar. 13, 1978 to Mar. 20, 1979, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharge. Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6100	1150	1140	1160	2260	1300	1210	833	939	3120	1140	874
2	4820	1100	1120	1110	2260	1300	1230	770	916	3280	1090	851
3	4300	1140	1090	1210	2190	1320	1190	719	876	3240	1080	857
4	4520	1140	1060	1210	2110	1320	1100	747	829	2950	1120	844
5	4690	1170	1050	1270	2040	1310	1050	784	796	2450	1110	802
6	4470	1150	1000	1440	1970	1350	1110	770	743	1940	1040	779
7	3980	1090	990	1680	1830	1400	1050	1090	743	1720	993	784
8	3410	1050	997	1780	1690	1370	1000	1450	788	1900	969	813
9	2930	1020	1080	1680	1680	1480	943	1600	769	1940	1060	804
10	2660	1060	1040	1500	1570	1680	996	1650	767	1960	1210	817
11	2570	1150	1010	1410	1520	1640	952	1910	837	1970	1420	804
12	2600	1180	1030	1420	1480	1600	911	1950	1100	1840	1370	757
13	2570	1290	1050	1460	1450	1520	867	1620	1060	2050	1240	740
14	2410	1440	1030	1530	1390	1670	829	1190	1260	2180	1150	731
15	2170	1740	1000	1570	1340	1750	828	1030	1170	2270	1040	716
16	2000	2010	980	1460	1290	1740	880	976	1150	2440	980	747
17	1830	2050	983	1370	1250	1780	814	1060	1150	2600	994	723
18	1630	1800	960	1510	1490	1810	781	1080	1010	2650	993	686
19	1590	1580	960	1720	1570	1740	791	977	944	2670	1130	680
20	1540	1420	941	1670	1660	1560	848	906	854	2480	1180	709
21	1480	1410	913	1660	1680	1360	782	859	810	2140	1110	779
22	1420	1390	964	1540	1640	1250	770	838	822	2000	1020	811
23	1400	1310	979	1840	1510	1210	749	781	830	1890	958	763
24	1360	1310	1040	2420	1380	1230	831	771	840	1640	1000	714
25	1260	1250	1050	2410	1300	1140	774	838	912	1590	1060	731
26	1210	1280	1170	2430	1250	1220	714	799	1160	1680	1040	713
27	1210	1230	1270	2580	1260	1190	707	912	1570	1790	990	747
28	1160	1270	1290	2750	1290	1100	757	924	2020	1700	985	792
29	1200	1220	1300	2750	---	1080	845	955	2320	1550	928	778
30	1180	1170	1310	2580	---	1090	786	920	2730	1440	915	763
31	1170	---	1260	2270	---	1090	---	935	---	1280	936	---
MEAN	2479	1319	1066	1755	1620	1406	903	1053	1090	2140	1073	770
MAX	6100	2050	1310	2750	2260	1810	1230	1950	2730	3280	1420	874
MIN	1160	1020	913	1110	1250	1080	707	719	743	1280	915	680
IN.	3.66	1.88	1.57	2.59	2.16	2.08	1.29	1.55	1.56	3.16	1.58	1.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1999, BY WATER YEAR (WY)

MEAN	1105	977	1252	1816	2169	2419	2108	1359	1245	1297	1208	1158
MAX	6000	2763	3617	5936	5687	5465	7200	3890	3636	5353	3273	7642
(WY)	1927	1948	1948	1926	1926	1998	1948	1964	1989	1994	1946	1926
MIN	379	370	394	473	671	540	757	616	522	484	475	397
(WY)	1969	1991	1956	1956	1955	1955	1968	1968	1968	1968	1968	1990

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1913 - 1999	
ANNUAL MEAN	2059		1392		1510	
HIGHEST ANNUAL MEAN					2977	1948
LOWEST ANNUAL MEAN					613	1955
HIGHEST DAILY MEAN	14500	Mar 13	6100	Oct 1	21000	Sep 19 1926
LOWEST DAILY MEAN	588	Aug 31	680	Sep 19	312	Jun 18 1972
ANNUAL SEVEN-DAY MINIMUM	625	Aug 26	713	Sep 14	336	Oct 27 1968
INSTANTANEOUS PEAK FLOW			6470	Oct 1	25000	Sep 20 1926
INSTANTANEOUS PEAK STAGE			22.95	Oct 1	33.55	Sep 20 1926
INSTANTANEOUS LOW FLOW			674	Sep 18	309	Nov 18 1990
ANNUAL RUNOFF (INCHES)	35.80		24.20		26.27	
10 PERCENT EXCEEDS	4230		2260		2790	
50 PERCENT EXCEEDS	1260		1190		1130	
90 PERCENT EXCEEDS	771		783		631	

02359051 CHIPOLA RIVER AT COCKRAN LANDING NEAR WEWAHITCHKA, FL

LOCATION.--Lat 30°06′01″, long 85°10′53″, NE¼ sec. 30, T. 4 S., R. 9 W., Gulf County, Hydrologic Unit 03130012, on left bank at Cockran Landing, 2.34 mi downstream from Dead Lake, 1.45 mi southeast of Wewahitchka and 11.5 mi upstream from mouth.

DRAINAGE AREA.--1,8206 mi^2, approximately.

PERIOD OF RECORD.-- October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--No estimated daily discharges. Records good. Discharge for main channel only and includes flow diverted from the Apalachicola River through the Chipola Cutoff.

COOPERATION.--Records from October 1987 to current year, were collected and computed by U.S. Army Corps of Engineers and were reviewed by Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, not determined, July 12, 1994, gage height 25.16 ft; minimum discharge 2,460 ft^3/s, Aug. 9, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of January 1978 reached a stage of 25.64 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,800 ft^3/s, Oct. 2, gage height, 19.64 ft; minimum discharge, 3,010 ft^3/s, Sept. 25.

DISCHARGE, MAIN CHANNEL ONLY, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12100	4460	4980	6780	8100	7730	7330	4180	3950	5500	5520	3830
2	12600	4400	4710	6710	8210	7740	7340	4110	3920	6110	5440	3770
3	12600	4350	4520	6730	8500	7820	7350	4040	3860	6400	5550	3730
4	12400	4300	4420	6730	8830	7840	7370	3970	3810	6430	5780	3710
5	12000	4260	4350	6720	9050	7800	7340	3950	3700	6400	5960	3730
6	11400	4240	4280	6700	9210	7760	7280	3920	3620	6240	6070	3730
7	10800	4280	4230	6710	9330	7740	7160	4150	3590	5980	6120	3740
8	10400	4450	4190	6720	9430	7620	6770	4590	3660	6070	6210	3760
9	9970	4700	4190	6680	9530	7660	6290	5070	4490	6080	6240	3710
10	9510	4760	4120	6500	9510	7760	5870	5430	5430	5990	6270	3700
11	9050	4670	4100	6240	9350	7810	5590	5640	6060	6000	6340	3750
12	8490	4920	4060	5920	9070	7770	5400	5790	6500	6070	6380	3720
13	8010	5400	4070	5480	8710	7450	5250	5850	6670	5990	6370	3650
14	7740	5770	4060	5110	8230	7160	5140	5760	6840	5940	6310	3570
15	7500	6040	4050	4900	7800	6890	5060	5410	6890	5960	6150	3510
16	7250	6280	4020	4920	7640	6680	5020	5040	6820	5920	5790	3460
17	7010	6490	4010	5140	7250	6500	4970	4760	6700	5810	5200	3440
18	6760	6630	3970	5250	7250	6320	4760	4590	6560	5830	4670	3440
19	6510	6710	3960	5300	7240	6150	4480	4480	6350	5910	4330	3470
20	6270	6710	3990	5360	7250	6000	4310	4410	6010	5990	4130	3510
21	6120	6680	4000	5370	7360	5990	4220	4350	5380	5960	4060	3500
22	5930	6640	4020	5360	7510	6080	4150	4360	4570	5810	3980	3430
23	5830	6630	4030	5520	7620	6140	4070	4430	4150	5690	3940	3370
24	5670	6670	4230	6050	7730	6150	4000	4500	4150	5680	3930	3310
25	5360	6640	4920	7100	7740	6350	3950	4380	3970	5780	3990	3270
26	5080	6510	5640	8020	7740	6610	3920	4180	3840	5870	4000	3280
27	4920	6310	6110	8500	7720	6860	3900	4010	3840	5840	4000	3310
28	4780	6130	6450	8490	7740	7080	4130	3940	3810	5830	3970	3350
29	4690	5790	6700	8240	---	7220	4240	3910	4020	5840	3950	3420
30	4590	5370	6820	8040	---	7290	4280	3940	4740	5790	3920	3450
31	4520	---	6830	8040	---	7330	---	3940	---	5660	3870	---
MEAN	7931	5573	4646	6430	8238	7074	5365	4551	4930	5947	5111	3554
MAX	12600	6710	6830	8500	9530	7840	7370	5850	6890	6430	6380	3830
MIN	4520	4240	3960	4900	7240	5990	3900	3910	3590	5500	3870	3270
IN.	7.58	5.16	4.44	6.15	7.11	6.76	4.96	4.35	4.56	5.69	4.89	3.29

WTR YR 1999 MEAN 5769 MAX 12600 MIN 3270 IN. 64.95

02359051 CHIPOLA RIVER AT COCKRAN LANDING NEAR WEWAHITCHKA, FL--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.32	13.00	13.73	15.83	17.01	16.68	16.21	12.30	11.81	14.18	14.37	11.51
2	19.62	12.90	13.35	15.76	17.09	16.68	16.21	12.17	11.75	14.91	14.25	11.40
3	19.61	12.82	13.09	15.78	17.28	16.75	16.22	12.06	11.65	15.22	14.38	11.31
4	19.50	12.74	12.93	15.78	17.49	16.76	16.23	11.95	11.55	15.27	14.65	11.25
5	19.26	12.68	12.82	15.77	17.63	16.72	16.20	11.90	11.35	15.24	14.84	11.28
6	18.94	12.65	12.72	15.75	17.73	16.69	16.15	11.85	11.20	15.08	14.96	11.27
7	18.64	12.72	12.63	15.76	17.80	16.66	16.03	12.22	11.13	14.81	15.00	11.26
8	18.41	12.98	12.57	15.77	17.86	16.56	15.65	12.89	11.27	14.92	15.08	11.30
9	18.18	13.34	12.58	15.73	17.92	16.59	15.14	13.56	12.64	14.93	15.10	11.19
10	17.91	13.43	12.46	15.54	17.91	16.67	14.67	14.01	13.92	14.84	15.12	11.15
11	17.63	13.30	12.43	15.26	17.81	16.71	14.33	14.27	14.68	14.86	15.18	11.23
12	17.27	13.65	12.37	14.91	17.64	16.67	14.09	14.45	15.16	14.95	15.21	11.17
13	16.94	14.27	12.38	14.38	17.41	16.39	13.90	14.51	15.35	14.87	15.19	11.02
14	16.71	14.73	12.36	13.90	17.10	16.13	13.75	14.40	15.54	14.82	15.11	10.86
15	16.50	15.04	12.34	13.62	16.76	15.87	13.64	13.97	15.60	14.84	14.93	10.75
16	16.28	15.31	12.30	13.65	16.47	15.65	13.59	13.49	15.54	14.80	14.50	10.66
17	16.06	15.53	12.28	13.94	16.28	15.45	13.50	13.11	15.41	14.69	13.75	10.63
18	15.81	15.68	12.22	14.09	16.28	15.26	13.22	12.86	15.28	14.72	13.02	10.63
19	15.55	15.76	12.20	14.15	16.27	15.07	12.82	12.70	15.06	14.82	12.50	10.68
20	15.30	15.76	12.25	14.22	16.28	14.90	12.54	12.58	14.70	14.92	12.17	10.75
21	15.13	15.73	12.27	14.24	16.38	14.89	12.40	12.48	13.95	14.89	12.04	10.74
22	14.92	15.69	12.30	14.23	16.51	14.98	12.27	12.50	12.86	14.72	11.90	10.61
23	14.80	15.68	12.32	14.42	16.61	15.04	12.15	12.60	12.22	14.59	11.82	10.50
24	14.61	15.72	12.64	15.05	16.70	15.06	12.03	12.70	12.22	14.59	11.79	10.38
25	14.22	15.69	13.64	16.15	16.70	15.26	11.94	12.52	11.94	14.72	11.88	10.29
26	13.87	15.55	14.57	16.95	16.70	15.54	11.90	12.19	11.74	14.82	11.87	10.31
27	13.64	15.34	15.12	17.28	16.67	15.80	11.85	11.92	11.75	14.80	11.86	10.38
28	13.46	15.14	15.49	17.27	16.69	16.00	12.22	11.80	11.70	14.80	11.80	10.45
29	13.33	14.75	15.75	17.11	---	16.12	12.40	11.75	12.05	14.80	11.75	10.58
30	13.19	14.24	15.88	16.97	---	16.18	12.45	11.80	13.17	14.72	11.70	10.65
31	13.09	---	15.89	16.97	---	16.21	---	11.79	---	14.55	11.60	---
MEAN	16.38	14.39	13.16	15.36	17.03	16.00	13.86	12.75	13.14	14.83	13.53	10.87
MAX	19.62	15.76	15.89	17.28	17.92	16.76	16.23	14.51	15.60	15.27	15.21	11.51
MIN	13.09	12.65	12.20	13.62	16.27	14.89	11.85	11.75	11.13	14.18	11.60	10.29

WTR YR 1999 MEAN 14.27 MAX 19.62 MIN 10.29

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL

LOCATION.--Lat 29°56′57″, Long 85°00′56″, in SW¼ sec. 14, T. 6 S., R. 8 W., Franklin County, Hydrologic Unit 03130011, on left bank at Brickyard Landing, 0.5 mi north of Fort Gadsden, 5.3 mi southwest of Sumatra, and 20.6 mi upstream from mouth.

DRAINAGE AREA.--19,200 mi^2, approximately.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WRD FL-98-4: 1994-97.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark).

REMARKS.--Records fair. Discharges below 15,000 ft^3/s are tide affected.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38200	11900	12900	23900	29900	28500	26000	10100	9170	e15000	16400	9250
2	42100	11800	12200	24100	30200	28400	25800	9840	9140	e20000	15700	8810
3	48300	11900	11800	24600	31000	28900	25500	9570	8840	e21000	15900	8630
4	54900	11400	11600	23800	32300	28900	25300	9620	8560	e20800	17000	8660
5	58200	10800	11300	23200	33400	28600	25200	9990	8270	e19600	18600	8660
6	54100	10500	11200	23000	34600	28600	25100	10800	8160	e19300	19600	8920
7	48300	10800	11200	23200	35400	28400	24700	10400	8110	e19000	20200	8940
8	45600	11300	11100	23400	36100	27700	23500	e9820	8160	e19000	20900	8890
9	41000	12000	10800	23800	36700	27900	21000	e9800	8840	e19000	21400	8940
10	37600	12700	10600	22900	37300	28100	18200	e11200	e16000	e19200	21500	8710
11	35100	12500	10600	20900	37200	27800	15800	e12500	e23000	e19600	21600	8810
12	33100	12500	10700	19200	36200	27600	13500	e12300	e24000	e20000	21300	8940
13	31000	13100	11000	16700	34500	26800	13100	e12200	e23200	e19200	21000	8500
14	29000	16400	10500	13700	32200	26400	13000	e12300	e22800	e19100	20700	8060
15	27500	18200	10200	12900	29900	24500	13100	e12100	e22100	e19000	20300	7600
16	26000	20400	10200	12600	27900	22200	12800	e11200	e21600	e18800	19000	7870
17	24700	21400	10200	13000	26600	20500	12500	e10300	e21000	e19200	15700	8000
18	23600	21800	10200	13500	26500	19400	11700	e9500	e20500	e20000	12000	8290
19	22500	22200	10800	13800	26000	18200	11200	10800	e20200	21000	11200	8660
20	21000	22500	10700	14000	25300	17100	10600	10500	e20000	20100	10400	10200
21	19600	22600	10800	14000	25200	16500	10300	10400	e19000	18700	9740	9220
22	18000	22400	10900	14400	25800	16700	10200	10300	e18000	17200	9500	8060
23	16500	22600	10600	16700	26600	17300	10100	10500	e15200	16300	9450	7950
24	16000	22700	11100	18800	27600	17700	9720	10900	e13000	16400	9500	8080
25	14200	22600	12000	22200	28000	18600	9500	10500	e14000	16600	9700	8110
26	13200	22100	15600	26800	28200	20300	9720	9500	e16000	17600	9600	8430
27	12700	20900	18600	29800	28200	21800	9920	9200	e13000	18400	9400	9070
28	12600	19700	21000	31100	28700	23200	10100	9040	e13400	18200	9370	8940
29	12400	18200	23000	30800	---	24200	e10400	8840	e13700	18000	9320	8810
30	12100	15800	23700	30000	---	24800	10800	8890	e13000	17700	9350	8350
31	12000	---	23900	29500	---	25400	---	8970	---	17200	9300	---
MEAN	29070	16860	12940	20980	30620	23900	15610	10380	15330	18720	14990	8612
MAX	58200	22700	23900	31100	37300	28900	26000	12500	24000	21000	21600	10200
MIN	12000	10500	10200	12600	25200	16500	9500	8840	8110	15000	9300	7600
IN.	1.75	.98	.78	1.26	1.66	1.44	.91	.62	.89	1.12	.90	.50

e Estimated

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1999, BY WATER YEAR (WY)

MEAN	15760	16770	25100	31800	43350	48220	36980	25250	19890	22190	19730	16620
MAX	40720	32420	52700	62310	71920	95690	78430	46350	29450	81670	42360	33700
(WY)	1995	1978	1993	1998	1998	1998	1980	1991	1980	1994	1994	1994
MIN	7326	6577	9808	10380	10130	17090	15610	10380	9984	8042	7384	8441
(WY)	1987	1982	1988	1981	1989	1989	1999	1999	1986	1988	1986	1986

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1978 - 1999	
ANNUAL MEAN	36630		18110		26730	
HIGHEST ANNUAL MEAN					38760	1998
LOWEST ANNUAL MEAN					14060	1981
HIGHEST DAILY MEAN	152000	Mar 15	58200	Oct 5	178000	Mar 24 1990
LOWEST DAILY MEAN	10200	Dec 15	7600	Sep 15	5800	Nov 4 1981
ANNUAL SEVEN-DAY MINIMUM	10400	Dec 14	8140	Sep 13	6010	Oct 31 1981
INSTANTANEOUS PEAK FLOW			58600	Oct 5	179000	Mar 24 1990
INSTANTANEOUS PEAK STAGE			8.29	Oct 5	15.36	Mar 15 1998
INSTANTANEOUS LOW FLOW			7600	Sep 15	5800	Nov 4 1981
ANNUAL RUNOFF (INCHES)	25.91		12.81		18.91	
10 PERCENT EXCEEDS	73800		28800		49300	
50 PERCENT EXCEEDS	24700		16700		21000	
90 PERCENT EXCEEDS	11300		9010		10100	

DISCHARGE, MAIN CHANNEL ONLY, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20900	11900	12900	17000	19000	18700	17800	10100	9170	e14100	13700	9250
2	21700	11800	12200	17100	19100	18700	17800	9840	9140	e15800	13700	8810
3	23000	11900	11800	17300	19300	18800	17600	9570	8840	e16100	13700	8630
4	24200	11400	11600	17000	19700	18800	17600	9620	8560	e16000	13800	8660
5	24500	10800	11300	16700	20000	18700	17600	9990	8270	e15700	14300	8660
6	24100	10500	11200	16600	20200	18700	17500	10800	8160	e15600	14900	8920
7	23100	10800	11200	16700	20400	18700	17400	10400	8110	e15500	15400	8940
8	22500	11300	11100	16800	20600	18500	16800	e9820	8160	e15500	15700	8890
9	21500	12000	10800	17000	20700	18500	15800	e9800	8840	e15500	16000	8940
10	20800	12700	10600	16600	20900	18600	13900	e11200	e15500	e15600	16000	8710
11	20200	12500	10600	15800	20800	18500	13700	e12500	e16500	e15700	16000	8810
12	19700	12500	10700	14500	20600	18400	13500	e12300	e16800	e15800	15900	8940
13	19200	13100	11000	13700	20200	18100	13100	e12200	e16600	e15600	15800	8500
14	18700	13700	10500	13500	19700	18000	13000	e12300	e16300	e15500	15700	8060
15	18200	14200	10200	12900	19100	17200	13100	e12100	e16100	e15500	15500	7600
16	17700	15500	10200	12600	18500	16300	12800	e11200	e16000	e15400	14300	7870
17	17200	16000	10200	13000	18100	15600	12500	e10300	e15500	e15600	13500	8000
18	16800	16100	10200	13500	18000	15000	11700	e9500	e16000	e15700	12000	8290
19	16300	16300	10800	13500	17800	14300	11200	10800	e15900	15800	11200	8660
20	15700	16400	10700	13500	17600	13900	10600	10500	e15800	15400	10400	10200
21	15100	16400	10800	13600	17600	13800	10300	10400	e15500	14300	9740	9220
22	14100	16400	10900	13600	17700	13800	10200	10300	e15300	13800	9500	8060
23	13700	16500	10600	13700	18100	14000	10100	10500	e15100	13700	9450	7950
24	13700	16500	11100	14600	18400	14200	9720	10900	e13000	13700	9500	8080
25	13600	16500	12000	16300	18500	14500	9500	10500	e14000	13700	9700	8110
26	13200	16300	13500	18100	18600	15500	9720	9500	e14500	13900	9600	8430
27	12700	15800	14100	19000	18600	16100	9920	9200	e13000	14500	9400	9070
28	12600	15200	15800	19300	18700	16700	10100	9040	e13400	14500	9370	8940
29	12400	14000	16600	19300	---	17100	e10400	8840	e13700	14300	9320	8810
30	12100	13600	16900	19100	---	17400	10800	8890	e13000	14300	9350	8350
31	12000	---	17000	18900	---	17600	---	8970	---	14000	9300	---
MEAN	17780	13950	11910	15830	19160	16860	13190	10380	13160	15040	12640	8612
MAX	24500	16500	17000	19300	20900	18800	17800	12500	16800	16100	16000	10200
MIN	12000	10500	10200	12600	17600	13800	9500	8840	8110	13700	9300	7600

CAL YR 1998 MEAN 18480 MAX 35100 MIN 10200
WTR YR 1999 MEAN 14020 MAX 24500 MIN 7600

e Estimated

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.92	3.83	4.45	5.78	6.32	6.21	5.97	3.19	3.15	---	4.97	3.12
2	7.21	3.84	4.05	5.80	6.35	6.20	5.96	3.07	3.11	---	4.88	2.98
3	7.63	3.87	3.85	5.85	6.42	6.25	5.93	3.03	2.94	---	4.91	2.88
4	8.06	3.74	3.77	5.77	6.53	6.24	5.91	3.13	2.78	---	5.06	2.92
5	8.27	3.48	3.69	5.71	6.62	6.22	5.91	3.38	2.66	---	5.23	2.99
6	8.01	3.27	3.62	5.69	6.71	6.22	5.89	3.49	2.65	---	5.33	3.09
7	7.65	3.41	3.63	5.70	6.77	6.20	5.86	3.32	2.59	---	5.40	3.04
8	7.46	3.66	3.58	5.73	6.83	6.13	5.74	---	2.67	---	5.47	3.01
9	7.14	4.02	3.46	5.77	6.88	6.15	5.48	---	3.04	---	5.53	2.96
10	6.89	4.29	3.33	5.67	6.93	6.17	5.18	---	---	---	5.54	2.87
11	6.70	4.23	3.29	5.48	6.92	6.15	4.88	---	---	---	5.55	2.93
12	6.53	4.17	3.35	5.29	6.84	6.12	4.60	---	---	---	5.52	2.96
13	6.36	4.58	3.52	5.01	6.70	6.05	4.38	---	---	---	5.48	2.79
14	6.20	4.97	3.27	4.65	6.52	6.01	4.31	---	---	---	5.46	2.59
15	6.07	5.19	3.14	4.39	6.33	5.83	4.43	---	---	---	5.41	2.35
16	5.94	5.42	3.14	4.18	6.15	5.60	4.32	---	---	---	5.27	2.47
17	5.82	5.53	3.17	4.39	6.03	5.43	4.14	---	---	---	4.86	2.53
18	5.72	5.57	3.18	4.58	6.02	5.31	3.88	---	---	---	4.27	2.74
19	5.61	5.60	3.47	4.60	5.97	5.18	3.54	3.55	---	5.48	3.83	3.27
20	5.47	5.64	3.44	4.61	5.91	5.07	3.33	3.49	---	5.39	3.61	3.55
21	5.32	5.64	3.46	4.63	5.91	5.00	3.22	3.45	---	5.23	3.40	3.42
22	5.16	5.63	3.46	4.70	5.95	5.02	3.26	3.43	---	5.08	3.27	2.68
23	5.00	5.64	3.36	5.00	6.03	5.09	3.17	3.48	---	4.96	3.28	2.58
24	4.92	5.65	3.56	5.25	6.13	5.13	2.99	3.56	---	4.98	3.28	2.65
25	4.74	5.65	4.18	5.60	6.16	5.23	2.93	3.54	---	5.01	3.33	2.65
26	4.49	5.60	4.84	6.05	6.18	5.41	2.99	3.26	---	5.12	3.26	2.78
27	4.29	5.48	5.23	6.31	6.18	5.57	3.13	3.05	---	5.21	3.21	3.15
28	4.19	5.34	5.49	6.42	6.22	5.71	3.30	2.94	---	5.19	3.16	3.07
29	4.12	5.19	5.69	6.40	---	5.81	---	2.92	---	5.17	3.14	2.96
30	4.02	4.88	5.76	6.33	---	5.87	3.49	2.96	---	5.13	3.15	2.80
31	3.92	---	5.78	6.29	---	5.92	---	3.10	---	5.08	3.15	---
TOTAL	185.83	143.01	121.21	167.63	178.51	178.50	---	---	---	---	137.21	86.78
MEAN	5.99	4.77	3.91	5.41	6.38	5.76	---	---	---	---	4.43	2.89
MAX	8.27	5.65	5.78	6.42	6.93	6.25	---	---	---	---	5.55	3.55
MIN	3.92	3.27	3.14	4.18	5.91	5.00	---	---	---	---	3.14	2.35

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL.--Continued
WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1987 to current year.
REMARKS.--Discharge for sediment samples represent main channel only.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	GAGE HEIGHT (FEET) (00065)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDIMENT, SUSPENDED (MG/L) (80154)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)
OCT 1998						
23...	1003	100	5.02	89	18	16700
23...	1009	195	5.02	90	18	16700
23...	1011	290	5.02	56	29	16700
23...	1013	290	5.02	77	20	16700
23...	1015	390	5.02	45	37	16700
23...	1021	500	5.02	23	76	16700
DEC						
29...	1120	94.0	5.69	81	22	23000
29...	1122	94.0	5.69	89	19	23000
29...	1124	170	5.68	83	22	22900
29...	1125	170	5.68	75	25	22900
29...	1127	260	5.68	77	25	22900
29...	1128	260	5.68	69	29	22900
29...	1130	350	5.68	73	23	22900
29...	1132	350	5.68	81	21	22900
29...	1134	460	5.68	73	25	22900
29...	1135	460	5.68	98	16	22900
MAR 1999						
11...	1110	93.0	6.14	93	62	27800
11...	1112	93.0	6.14	82	21	27800
11...	1115	172	6.14	82	13	27800
11...	1118	172	6.14	78	17	27800
11...	1121	256	6.14	63	24	27800
11...	1124	256	6.14	65	22	27800
11...	1127	350	6.14	80	16	27800
11...	1130	350	6.14	75	19	27800
11...	1135	460	6.14	82	18	27800
11...	1139	460	6.14	75	20	27800
APR						
23...	1118	200	3.04	9	192	10100
23...	1119	200	3.04	97	17	10100
23...	1121	305	3.04	100	14	10100
23...	1122	305	3.04	100	16	10100
23...	1124	400	3.04	100	14	10100
23...	1125	400	3.04	100	15	10100
23...	1127	490	3.04	100	11	10100
23...	1128	490	3.04	100	23	10100
JUN						
02...	1110	87.0	3.14	84	36	9570
02...	1112	87.0	3.14	91	26	9570
02...	1118	176	3.14	89	26	9570
02...	1121	280	3.15	96	26	9620
02...	1123	280	3.15	87	28	9620
02...	1126	375	3.15	92	24	9620
02...	1128	350	3.15	100	24	9620
02...	1131	480	3.15	96	24	9620
02...	1133	460	5.48	99	24	9620

JUL						
19...	1238	85.0	5.48	86	18	20900
19...	1241	85.0	5.48	88	16	20900
19...	1244	175	5.48	81	22	20900
19...	1246	175	5.48	79	20	20900
19...	1250	270	5.48	71	24	20900
19...	1253	270	5.48	75	22	20900
19...	1257	380	5.48	88	20	20900
19...	1300	380	5.48	83	22	20900
19...	1303	460	5.48	87	20	20900
19...	1307	460	5.48	82	20	20900
AUG						
24...	1130	80.0	3.28	98	15	9990
24...	1133	80.0	3.28	100	13	9990
24...	1139	200	3.28	100	16	9990
24...	1142	305	3.28	81	18	9990
24...	1144	305	3.28	94	17	9990
24...	1147	400	3.28	100	14	9990
24...	1153	490	3.28	100	14	9990
24...	1156	490	3.28	100	13	9990

ECONFINA CREEK BASIN
02359315 MARTIN BAYOU AT US 98 AT SPRINGFIELD, FL

LOCATION.--Lat 30°08′06″, long 85°36′56″, in SE¼ sec. 14, T. 4 S., R. 14 W., Bay County, Hydrologic Unit 03140101, at upstream side of concrete weir control structure above U.S. Highway 98, at boundary of Parker and Springfield communities, 0.9 mi west of State Road 22-A, and 1.2 mi south of State Highway 22.

DRAINAGE AREA.--3.96 mi^2.

PERIOD OF RECORD.--October 1998 to September 1999.

GAGE.--Water-stage recorder, and crest-stage gage.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e480	e17	e13	e20	12	8.1	7.5	9.9	44	9.9	6.4	5.2
2	e185	e17	e11	e29	12	7.5	6.9	7.6	24	9.3	8.3	5.5
3	e100	e16	e9.5	e73	11	9.8	6.3	6.6	16	9.1	9.1	5.5
4	e65	e16	8.6	e58	12	8.6	5.9	6.2	12	7.6	14	5.3
5	e50	e16	e8.0	e40	10	7.7	5.7	8.4	9.7	6.9	27	5.2
6	e48	e16	e8.8	e29	9.1	8.5	5.4	6.8	8.4	6.6	20	5.2
7	e46	e15	e9.4	e21	7.9	8.6	5.2	164	7.3	7.0	15	5.2
8	e42	e15	e11	e18	7.6	7.0	4.9	118	9.1	6.9	23	4.9
9	e38	e15	e12	e22	7.5	12	4.8	59	13	6.8	35	4.9
10	e36	e15	e11	e32	7.3	15	5.0	37	23	7.9	20	4.7
11	e34	e15	e10	e21	6.9	13	5.1	25	36	8.2	13	4.2
12	e33	e14	e9.0	e19	6.7	11	4.8	20	25	8.6	10	3.9
13	e32	e14	e12	e16	5.9	9.5	4.1	17	20	14	10	3.6
14	e31	e14	e16	e20	5.5	20	4.3	14	16	13	11	3.3
15	e30	e14	e12	e42	5.6	18	4.2	11	12	11	8.8	3.1
16	e29	e55	e10	e33	5.7	14	3.6	9.6	9.8	10	7.4	3.0
17	e28	e50	e9.0	e21	6.7	12	3.0	8.5	8.8	28	9.8	2.7
18	e27	e40	e8.0	e39	26	11	2.7	7.8	7.6	47	13	3.3
19	e26	e35	e7.5	e55	16	9.5	2.7	7.4	6.4	33	10	4.6
20	e25	e33	e7.0	e35	11	8.3	2.8	6.8	5.7	23	16	6.4
21	e24	e32	e6.5	e20	8.7	7.5	3.3	6.5	6.6	17	19	6.0
22	e23	e30	e6.0	e15	7.1	6.9	3.4	6.3	6.9	14	13	4.7
23	e22	e42	e6.0	e30	6.8	6.5	3.4	5.9	7.0	12	11	4.6
24	e21	e56	e8.8	e25	9.6	6.4	3.3	5.5	6.9	10	11	4.4
25	e20	e43	e9.4	e20	9.3	6.3	3.4	5.6	9.6	8.5	10	4.3
26	e20	e34	e29	e18	8.8	6.2	3.2	5.5	10	7.0	9.0	4.8
27	e19	e27	e47	e15	8.2	5.7	3.2	6.6	14	6.2	11	6.7
28	e19	e22	e41	13	9.1	5.2	30	6.5	14	5.6	8.2	6.3
29	e18	e17	e43	12	---	5.2	30	5.7	12	5.2	6.7	6.3
30	e18	e14	e36	11	---	5.4	16	5.6	11	6.4	6.2	5.4
31	e18	---	e25	11	---	6.1	---	33	---	6.2	5.8	---
MEAN	51.8	25.3	14.9	26.9	9.29	9.24	6.47	20.8	13.7	12.0	12.8	4.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

MEAN	51.8	25.3	14.9	26.9	9.29	9.24	6.47	20.8	13.7	12.0	12.8	4.77

SUMMARY STATISTICS	FOR 1999 WATER YEAR	
ANNUAL MEAN	17.4	
HIGHEST DAILY MEAN	e480	Oct 1
LOWEST DAILY MEAN	2.7	Apr 18
ANNUAL SEVEN-DAY MINIMUM	3.0	Apr 17
INSTANTANEOUS PEAK FLOW	e480	Oct 1
INSTANTANEOUS LOW FLOW	1.8	Apr 17
10 PERCENT EXCEEDS	34	
50 PERCENT EXCEEDS	10	
90 PERCENT EXCEEDS	5.1	

e Estimated

02359500 ECONFINA CREEK NEAR BENNETT, FL.

LOCATION.--Lat 30°23′04″, long 85°33′24″, in SE¼ sec. 20, T. 1 S., R. 13 W., Bay County, Hydrologic Unit 03140101, near center of span on downstream side of bridge on State Highway 388, 0.5 mi downstream from Old Mill Branch, 1.6 mi southwest of Bennett, and 11 mi upstream from mouth.

DRAINAGE AREA.--122 mi^2.

PERIOD OF RECORD.--October 1935 to September 1994. Monthly discharge only for October and November 1936, published in WSP1304. October 1998 to September 1999.

REVISED RECORDS.--WSP 872: 1937. WSP 1906: Drainage area. WRD FL-80-4: 1979. WRD FL-93-4: 1948 (M), 1989 (M).

GAGE.--Water-stage recorder. Datum of gage is 1.03 ft above National Geodetic Vertical Datum of 1929. Nov. 11, 1935 to Jan. 29, 1962, nonrecording gage and Jan. 30, 1962 to June 16, 1966, water-stage recorder at site 150 ft downstream at present datum. June 17, 1966 to Sept. 28, 1966, nonrecording gage and Oct. 1, 1966 to Sept. 30, 1994, water -stage recorder at present site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow includes large ground-water inflow.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since September 1926, 15.0 ft present datum, from floodmark, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1730	557	513	523	598	495	507	504	658	600	532	532
2	1260	556	511	531	619	479	537	482	609	640	536	515
3	925	560	511	599	579	480	512	470	561	594	535	504
4	802	565	511	612	558	500	493	463	537	553	533	500
5	772	562	512	557	546	483	484	472	546	541	527	499
6	872	556	511	538	531	479	479	473	550	538	517	499
7	830	552	511	529	524	538	475	1390	566	553	510	511
8	808	550	514	523	520	543	472	1550	560	567	535	520
9	775	549	518	536	515	638	471	1150	538	561	578	506
10	742	549	511	565	512	789	469	723	540	562	625	508
11	698	554	509	555	509	723	465	619	645	557	556	502
12	674	562	505	532	504	587	460	613	655	545	537	491
13	659	558	513	523	502	541	456	616	753	567	525	484
14	647	551	513	533	498	621	454	609	761	609	538	479
15	636	550	509	597	494	662	456	587	596	577	560	475
16	625	615	505	593	479	598	452	563	575	602	559	472
17	616	630	504	551	476	554	451	547	556	753	599	470
18	611	602	502	619	553	536	450	536	530	778	601	470
19	608	576	501	643	581	525	448	527	513	717	561	478
20	603	570	501	592	527	517	448	519	502	831	532	493
21	597	557	501	561	497	511	447	512	498	746	542	491
22	588	549	502	550	483	505	444	517	499	626	588	484
23	582	572	503	621	477	502	442	533	522	615	582	477
24	579	627	505	772	477	500	441	515	685	682	571	473
25	575	614	505	763	475	498	446	503	665	622	654	471
26	570	577	555	628	469	496	480	503	637	665	843	469
27	568	549	590	576	465	494	475	605	666	666	682	478
28	567	531	563	556	478	490	574	726	697	595	595	492
29	565	521	581	546	---	487	593	678	665	565	571	494
30	562	515	559	539	---	484	590	576	618	549	557	482
31	560	---	535	540	---	487	---	578	---	538	541	---
MEAN	716	565	519	578	516	540	479	634	597	617	572	491
MAX	1730	630	590	772	619	789	593	1550	761	831	843	532
MIN	560	515	501	523	465	479	441	463	498	538	510	469
IN.	6.77	5.16	4.90	5.46	4.40	5.10	4.38	5.99	5.46	5.83	5.40	4.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1999, BY WATER YEAR (WY)

MEAN	512	504	515	542	553	586	568	513	521	562	579	563
MAX	1261	890	818	780	838	1045	1176	789	958	1005	962	824
(WY)	1995	1948	1948	1993	1986	1991	1948	1946	1989	1994	1939	1937
MIN	337	323	317	350	348	358	332	337	342	356	352	344
(WY)	1956	1956	1956	1956	1957	1956	1956	1956	1955	1955	1955	1955

SUMMARY STATISTICS	FOR 1999 WATER YEAR		WATER YEARS 1936 - 1999	
ANNUAL MEAN	569		543	
HIGHEST ANNUAL MEAN			1261	1995
LOWEST ANNUAL MEAN			376	1956
HIGHEST DAILY MEAN	1730	Oct 1	4670	Mar 3 1991
LOWEST DAILY MEAN	441	Apr 24	307	Jan 9 1956
ANNUAL SEVEN-DAY MINIMUM	445	Apr 19	308	Jan 9 1956
INSTANTANEOUS PEAK FLOW	1840	Oct 1	5850	Mar 3 1991
INSTANTANEOUS PEAK STAGE	9.97	Oct 1	14.37	Mar 3 1991
INSTANTANEOUS LOW FLOW	437	Apr 25	307	Jan 9 1956
ANNUAL RUNOFF (INCHES)	63.36		60.49	
10 PERCENT EXCEEDS	665		707	
50 PERCENT EXCEEDS	545		512	
90 PERCENT EXCEEDS	477		404	

02365200 CHOCTAWHATCHEE RIVER NEAR PITTMAN, FL

LOCATION.--Lat 30°56′59″, long 85°50′35″, in NW¼ sec. 9, T. 6 N., R. 16 W., Holmes County, Hydrologic Unit 03140203, on downstream side of bridge on State Highway 2, 1.5 mi west of Pittman, 3.8 mi downstream from Florida-Alabama State line and 84 mi upstream from mouth.

DRAINAGE AREA.--3,209 mi^2.

PERIOD OF RECORD.--May 1957, April 1960 and October 1975 to June 1976 (gage height and discharge measurements only), July 1976 to September 1981, October 1996 to September 1998 (gage height and discharge measurements only), October 1998 to September 1999.

GAGE.--Water-stage recorder. Datum of gage is 51.83 ft above National Geodetic Vertical Datum of 1929 (levels by Northwest Florida Water Management District). Apr. 8, 1957 to Sept. 15, 1976, nonrecording gage at same site and datum. July 1, 1976 to Sept. 30, 1981, water stage recorder. Oct. 1, 1996 to Sept. 30, 1998, nonrecording gage.

REMARKS.-- Records poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Minimum discharge, 550 ft^3/s, part of each day Oct. 5, 8, 9, 1981.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e48400	e1900	e2250	e2780	e4400	e2600	e2740	e2100	1760	17800	2230	1340
2	e42200	e1920	e1920	e2770	e4890	e2550	e2830	e2000	1800	16400	2010	1240
3	e33300	e2160	e2130	e3750	e5040	e2600	e2720	e1900	1810	15100	1780	1120
4	e27000	e2360	e2090	e4490	e4710	e2640	e2610	e1850	1690	12200	1660	1080
5	e21700	e2240	e2060	e4470	e4350	e2590	e2460	e1800	1480	7780	1550	1060
6	e17100	e2050	e2070	e3940	e4030	e2600	e2330	e2400	1490	4750	1510	1040
7	e13400	e1930	e2090	e3440	e3770	e3060	e2220	e4550	1650	3910	1420	1020
8	e10600	e1870	e2350	e3160	e3530	e3340	e2110	e7150	1750	4140	1420	1150
9	e9180	e1850	e2700	e3410	e3320	e3540	e2020	e9650	1690	4490	1510	1360
10	e8060	e2160	e2800	e4200	e3140	e3970	e1920	11500	1500	4180	1740	1470
11	e6880	e3700	e2990	e4720	e3010	e3980	e1820	9710	1410	3540	1950	1450
12	e5600	e4480	e2940	e4500	e2860	e3540	e1730	5880	1630	3390	1960	1190
13	e4600	e4420	e2820	e3350	e2740	e3500	e1650	3760	1960	4350	3150	1070
14	e4000	e3650	e2670	e3170	e2640	e4750	e1570	3570	2180	6050	3390	1000
15	e3610	e3150	e2630	e3050	e2540	e6320	e1510	4060	2330	6290	2530	944
16	e3330	e3260	e2590	e3000	e2470	e7810	e1460	3070	2830	5320	1840	904
17	e3090	e3360	e2410	e2930	e2500	e9490	e1450	2530	4460	4440	1540	885
18	e2910	e3170	e2220	e2960	e2550	e11000	e1490	2220	5270	5130	1640	855
19	e2780	e2890	e2110	e3030	e2620	e9980	e1560	2040	3930	5020	1380	838
20	e2680	e2670	e2000	e3450	e2750	e8490	e1660	2150	2690	4960	1300	868
21	e2580	e2530	e1940	e3560	e2620	e6700	e1760	2110	2210	5090	1280	987
22	e2460	e2460	e1890	e3660	e2550	e4680	e1690	1810	2000	3620	1150	1020
23	e2330	e2580	e2000	e3760	e2470	e3660	e1500	1650	2330	3150	1170	955
24	e2230	e3030	e2050	e4520	e2430	e3210	e1380	1640	2640	3580	1230	936
25	e2160	e3340	e2670	e4560	e2430	e3000	e1400	1760	3860	3830	1600	914
26	e2110	e3230	e2720	e4560	e2340	e2880	e1500	1580	5200	4270	2430	884
27	e2060	e2990	e2820	e4600	e2320	e2760	e1550	1700	6840	5680	2200	866
28	e2030	e2760	e2900	e5080	e2440	e2640	e1800	2130	9310	4870	2170	902
29	e1990	e2540	e2790	e5560	---	e2520	e1950	2200	11800	3410	1970	955
30	e1960	e2360	e2740	e4690	---	e2480	2040	2000	15800	2750	1730	975
31	e1930	---	e2800	e4230	---	e2550	---	1800	---	2520	1550	---
TOTAL	294260	83010	75160	119350	87460	135430	56430	104270	107300	182010	55990	31278
MEAN	9492	2767	2425	3850	3124	4369	1881	3364	3577	5871	1806	1043
MAX	48400	4480	2990	5560	5040	11000	2830	11500	15800	17800	3390	1470
MIN	1930	1850	1890	2770	2320	2480	1380	1580	1410	2520	1150	838
MED	3330	2620	2410	3750	2690	3340	1740	2130	2200	4490	1660	994
AC-FT	583700	164700	149100	236700	173500	268600	111900	206800	212800	361000	111100	62040
CFSM	2.96	.86	.76	1.20	.97	1.36	.59	1.05	1.11	1.83	.56	.32
IN.	3.41	.96	.87	1.38	1.01	1.57	.65	1.21	1.24	2.11	.65	.36

e Estimated

02365200 CHOCTAWHATCHEE RIVER NEAR PITTMAN, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1999, BY WATER YEAR (WY)

MEAN	3672	3454	4553	7075	7712	10730	7462	5372	3378	3064	2553	2159
MAX	9492	5727	10700	15520	12730	18540	15910	12040	6725	5871	3933	3777
(WY)	1999	1978	1977	1978	1979	1980	1980	1978	1978	1999	1978	1977
MIN	1238	1633	2081	1971	3124	4369	1881	2002	1611	1232	1490	1043
(WY)	1979	1979	1981	1981	1999	1999	1999	1977	1981	1981	1981	1999

SUMMARY STATISTICS	FOR 1999 WATER YEAR		WATER YEARS 1976 - 1999	
ANNUAL TOTAL	1331948			
ANNUAL MEAN	3649		5077	
HIGHEST ANNUAL MEAN			7220	1978
LOWEST ANNUAL MEAN			2817	1981
HIGHEST DAILY MEAN	e48400	Oct 1	64000	Jan 28 1978
LOWEST DAILY MEAN	838	Sep 19	691	Sep 30 1981
ANNUAL SEVEN-DAY MINIMUM	897	Sep 15	735	Sep 24 1981
INSTANTANEOUS PEAK FLOW	e48400	Oct 1	64700	Jan 28 1978
INSTANTANEOUS PEAK STAGE			28.56	Jan 28 1978
INSTANTANEOUS LOW FLOW	806	Sep 19	687	Sep 30 1981
ANNUAL RUNOFF (AC-FT)	2642000		3678000	
ANNUAL RUNOFF (CFSM)	1.14		1.58	
ANNUAL RUNOFF (INCHES)	15.44		21.50	
10 PERCENT EXCEEDS	5580		10600	
50 PERCENT EXCEEDS	2590		3210	
90 PERCENT EXCEEDS	1410		1390	

e Estimated

02365470 WRIGHTS CREEK AT SH 177A NEAR BONIFAY, FL

LOCATION.--Lat 30°51′25″, long 85°45′44″, in NW¼ sec. 8, T. 5 N., R. 17 S., Holmes County, Hydrologic Unit 03140203, on downstream side of bridge on U.S. Highway 177A, 0.4 mi above Caney Branch, 7.3 mi upstream of mouth, and 7.6 mi northwest of Bonifay.

DRAINAGE AREA.--148 mi^2.

PERIOD OF RECORD.--March 1983 to September 1987, discharge measurements and annual maximum discharge. October 1998 to September 1999.

GAGE.--Water-stage recorder. Datum of gage is 42.94 ft above National Geodetic Vertical Datum of 1929. Mar. 23, 1983 to Sept. 30, 1987, nonrecording gage at same site and datum.

REMARKS.--Records good, except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,200 ft^3/s, Mar. 6, 1984, gage height, 13.73 ft; minimum, 32 ft^3/s, May 25, 1999.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e542	e126	e107	181	363	195	135	47	65	1040	94	52
2	e563	e131	108	166	448	173	134	44	59	743	89	49
3	e536	e128	e102	254	437	164	118	41	53	504	92	47
4	e478	e122	e101	328	376	188	109	40	47	300	80	45
5	e409	e117	e102	309	326	173	99	39	43	202	73	44
6	e352	e113	e112	229	283	156	89	42	40	173	67	42
7	e319	e119	e117	185	254	181	92	56	45	187	63	42
8	e308	e131	167	167	236	181	81	68	54	271	62	42
9	e312	e134	217	171	221	227	71	73	47	253	79	42
10	e308	e149	211	286	215	374	71	57	43	313	104	42
11	e289	e167	183	383	194	352	72	48	43	238	101	40
12	e260	e204	146	312	180	276	65	45	54	273	80	38
13	e240	e236	135	236	166	219	62	47	70	618	71	37
14	e220	e242	129	205	158	323	60	55	66	1070	64	36
15	e196	e212	122	268	146	456	59	69	59	837	63	35
16	e191	e186	114	336	139	403	56	69	65	564	80	34
17	e185	e167	106	317	138	309	54	54	66	423	75	33
18	e178	e166	100	269	232	245	52	46	59	306	67	33
19	e170	e163	95	276	276	211	49	44	50	238	68	35
20	e167	e155	93	248	234	181	49	41	43	312	63	39
21	e161	e155	94	226	196	159	49	39	40	329	56	40
22	e148	e148	115	195	167	146	47	36	38	293	52	39
23	e142	e152	156	360	152	134	46	34	39	172	52	38
24	e139	e146	167	922	146	123	44	34	95	135	54	37
25	e133	e148	156	1090	144	125	43	33	209	121	110	35
26	e136	e138	240	914	135	123	43	43	436	355	86	35
27	e133	e124	350	572	131	114	45	96	665	403	82	36
28	e131	e111	334	431	156	107	47	72	1050	243	75	38
29	e127	e108	296	374	---	101	47	60	1060	162	64	40
30	e121	e106	259	341	---	95	48	53	1170	129	62	41
31	e126	---	219	317	---	102	---	56	---	108	58	---
MEAN	249	150	160	351	223	204	67.9	51.0	196	365	73.7	39.5
MAX	563	242	350	1090	448	456	135	96	1170	1070	110	52
MIN	121	106	93	166	131	95	43	33	38	108	52	33

e Estimated

02365470 WRIGHTS CREEK AT SH 177A NEAR BONIFAY, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

MEAN	249	150	160	351	223	204	67.9	51.0	196	365	73.7	39.5
MAX	249	150	160	351	223	204	67.9	51.0	196	365	73.7	39.5
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	249	150	160	351	223	204	67.9	51.0	196	365	73.7	39.5
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 1999 WATER YEAR	
ANNUAL MEAN	178	
HIGHEST DAILY MEAN	1170	Jun 30
LOWEST DAILY MEAN	33	May 25
ANNUAL SEVEN-DAY MINIMUM	35	Sep 13
INSTANTANEOUS PEAK FLOW	1210	Jun 30
INSTANTANEOUS PEAK STAGE	8.43	Jun 30
INSTANTANEOUS LOW FLOW	32	May 25
10 PERCENT EXCEEDS	352	
50 PERCENT EXCEEDS	129	
90 PERCENT EXCEEDS	42	

02365769 BRUCE CREEK AT SH 81 NEAR REDBAY, FL

LOCATION.--Lat 30°37′28″, long 85°56′33″, in NE¼ sec. 33, T. 3 N., R. 17 W., Walton County, Hydrologic Unit 03140203, on downstream side of bridge on State Highway 81, 0.6 mi north of Bruce Creek School, 1.4 mi south of Knox Hill, and 2.4 mi north of Redbay.

DRAINAGE AREA.--82.4 mi^2.

PERIOD OF RECORD.--October 1998 to September 1999.

GAGE.--Water-stage recorder.

REMARKS.--Records good, except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4550	e137	e50	150	209	133	108	82	77	531	70	58
2	e2180	e133	49	135	271	99	111	43	178	541	58	48
3	e1080	e140	e47	185	212	103	88	33	308	351	53	43
4	e774	e167	e45	219	179	151	79	28	123	260	49	39
5	e600	e157	e44	151	171	104	73	26	56	224	75	36
6	e547	e140	e43	132	148	130	66	25	41	196	56	34
7	e444	e130	e43	130	134	423	60	38	39	208	46	32
8	e401	e124	373	124	127	423	55	188	56	445	61	63
9	e380	e123	751	127	119	433	52	146	47	358	133	81
10	e359	e122	555	174	112	1100	49	63	38	268	383	48
11	e323	e133	275	159	106	679	46	65	39	237	479	38
12	e296	e216	181	124	99	394	43	86	56	188	314	32
13	e279	e301	176	120	90	275	39	98	191	386	189	29
14	e263	e208	194	124	82	368	36	99	403	613	125	27
15	e248	e153	153	228	77	487	34	141	446	407	131	25
16	e240	e178	125	240	74	357	e32	81	191	252	144	23
17	e229	e198	111	156	72	248	e30	49	179	241	127	22
18	e219	e173	99	193	229	223	e29	35	227	218	109	22
19	e213	e148	89	323	234	227	e27	28	116	401	93	21
20	e208	e135	88	239	141	228	e26	27	76	423	74	23
21	e203	e128	91	167	112	211	e25	26	60	288	60	26
22	e192	e123	118	144	97	188	e24	23	45	189	52	28
23	e178	e132	135	277	86	160	e24	22	40	132	53	25
24	e167	e176	118	876	82	134	e23	21	45	153	51	23
25	e161	e196	123	684	79	118	e23	20	63	232	263	22
26	e159	e150	190	398	74	135	e23	19	180	282	433	21
27	e154	e125	319	292	70	153	23	22	329	351	230	23
28	e149	e90	256	265	83	109	23	54	641	303	107	24
29	e145	e70	335	242	---	93	36	45	704	176	79	28
30	e141	e55	317	211	---	83	134	36	543	120	90	33
31	e139	---	198	186	---	80	---	41	---	92	83	---
MEAN	504	149	184	231	127	260	48.0	55.2	185	292	138	33.2
MAX	4550	301	751	876	271	1100	134	188	704	613	479	81
MIN	139	55	43	120	70	80	23	19	38	92	46	21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

MEAN	504	149	184	231	127	260	48.0	55.2	185	292	138	33.2
MAX	504	149	184	231	127	260	48.0	55.2	185	292	138	33.2
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	504	149	184	231	127	260	48.0	55.2	185	292	138	33.2
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 1999 WATER YEAR	
ANNUAL MEAN	185	
HIGHEST DAILY MEAN	e4550	Oct 1
LOWEST DAILY MEAN	19	May 26
ANNUAL SEVEN-DAY MINIMUM	22	May 21
INSTANTANEOUS PEAK FLOW	e4550	Oct 1
INSTANTANEOUS PEAK STAGE	18.73	Mar 10
INSTANTANEOUS LOW FLOW	19	May 26
10 PERCENT EXCEEDS	381	
50 PERCENT EXCEEDS	128	
90 PERCENT EXCEEDS	28	

e Estimated

02366500 CHOCTAWHATCHEE RIVER NEAR BRUCE, FL

LOCATION.--Lat 30°27′03″, long 85°53′54″, in NE¼ sec. 36, T. 1 N., R. 17 W., Walton County, Hydrologic Unit 03140203, near center of main channel on upstream side of bridge on State Highway 20, 4.0 mi southeast of Bruce, 5.8 mi downstream from Holmes Creek, and 21 mi upstream from mouth.

DRAINAGE AREA.--4,384 mi^2.

PERIOD OF RECORD.--October 1930 to March 1983; Apr. 1983 to May 1984 (discharge measurements only); June 1984 to current year.

REVISED RECORDS.--WSP 872: 1937. WSP 1384: Drainage area. WSP 1504: 1931-34.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Apr. 1, 1983 to May 14, 1999, nonrecording gage at same site and datum. Apr. 6, 1934 to Mar. 31, 1983, water-stage recorder at same site at datum 3.94 ft lower. Oct. 1, 1930 to Apr. 5, 1934, nonrecording gage at site 1.0 mi downstream at datum 4.19 ft lower.

REMARKS.--Records fair.

EXTREMES OUTSIDE OF PERIOD OF RECORD.--Flood of March 1929 reached a stage of 25.0 ft at former site and datum, from floodmarks, discharge, 220,000 ft^3/s, from rating curve extended above 145,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e27000	e4000	5310	6490	9960	5160	5370	e3750	4020	9170	6840	3860
2	e42500	e3950	5100	6370	9650	5230	e5200	e3900	3840	11000	6000	3510
3	e58000	e3900	4990	6430	9480	e5310	e5400	e4000	3730	13700	5120	3180
4	e72500	e3840	4910	6570	9360	5470	e5800	e4200	3710	16500	4400	2920
5	e70000	e4180	4890	6790	8700	5590	e6000	e3950	3540	17500	3940	2770
6	e64900	e4480	4600	6880	8410	5750	e5850	e3700	3400	17000	3620	2680
7	e58500	e4600	4550	7070	8360	6130	e5700	e3600	3290	15800	3360	2620
8	e52500	e4360	4510	7220	8140	6230	e5450	e3500	3300	13800	3290	2670
9	e46000	e4120	4550	7540	7810	6350	e5200	e3750	3390	11900	3220	2610
10	e41000	e3880	4850	7270	7320	6590	e5000	e4600	3470	10100	3340	2650
11	e35500	e3620	5470	6970	7100	6880	e4750	e5500	3410	8680	3610	2740
12	e30000	e3400	6270	6740	6940	7120	e4520	e6500	3290	7840	3930	2810
13	e25000	e3600	6650	6880	6860	7640	e4400	6880	3700	7490	4070	2770
14	e21000	e4200	6960	7180	6750	8140	e4050	8250	4110	7260	4090	2610
15	e17500	4900	6840	7920	6610	8010	e3800	8670	4300	7320	4320	2440
16	e15000	5980	6560	7740	6390	8200	e3550	8060	4430	7850	4580	2320
17	e12500	6310	6200	7780	6390	8220	e3350	7030	4440	8680	4690	2230
18	e10000	6440	6120	7380	6260	8980	e3220	6140	4560	9450	4540	2150
19	e8800	6280	6030	7100	6100	9920	e3240	5320	4850	9630	4270	2100
20	e7800	6250	5600	6980	5810	11600	e3280	4510	5190	9230	4090	2080
21	7000	6180	5170	6820	5470	13700	e3400	3930	5460	8780	3910	2110
22	6170	5910	5010	6890	5380	14200	e3500	3650	5490	8530	3760	2140
23	5630	5980	4640	7040	5310	13000	e3620	3470	4950	8330	3690	2190
24	5440	5880	4520	8030	5430	12000	e3800	3280	4260	8110	3620	2220
25	5440	5470	4390	8250	5360	10000	e3600	3100	4230	7640	3450	2180
26	4970	5320	4640	8510	5270	8450	e3400	3030	4480	7090	3480	2170
27	4790	5540	4770	8740	5140	7630	2960	3100	5100	6660	3730	2160
28	4360	5490	6220	10500	5320	6920	e3280	3320	5790	6470	3970	2150
29	4110	5860	6320	10600	---	6380	e3300	3560	6560	6580	4160	2110
30	3860	5650	6560	10600	---	6130	e3600	3770	7740	6980	4400	2140
31	3820	---	6740	10700	---	5920	---	4010	---	7220	4230	---
MEAN	24890	4986	5482	7677	6967	7963	4253	4646	4401	9751	4120	2510
MAX	72500	6440	6960	10700	9960	14200	6000	8670	7740	17500	6840	3860
MIN	3820	3400	4390	6370	5140	5160	2960	3030	3290	6470	3220	2080
IN.	6.55	1.27	1.44	2.02	1.66	2.09	1.08	1.22	1.12	2.57	1.08	.64

e Estimated

02366500 CHOCTAWHATCHEE RIVER NEAR BRUCE, FL--Continued.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1999, BY WATER YEAR (WY)

MEAN	4551	4402	6425	9220	10680	12400	10920	6442	5182	5715	5896	4589
MAX	24890	13870	25970	29400	20460	31510	27220	20870	18080	48020	26770	24000
(WY)	1999	1931	1954	1936	1978	1998	1975	1946	1973	1994	1939	1937
MIN	1399	1742	1945	2344	3899	2534	3647	2580	1839	1865	1794	1626
(WY)	1969	1955	1956	1956	1951	1955	1967	1941	1988	1986	1968	1968

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1931 - 1999	
ANNUAL MEAN	10990		7342		7182	
HIGHEST ANNUAL MEAN					11620	1948
LOWEST ANNUAL MEAN					3454	1956
HIGHEST DAILY MEAN	93900	Mar 13	72500	Oct 4	164000	Jul 11 1994
LOWEST DAILY MEAN	2190	Jun 26	2080	Sep 20	1300	Oct 27 1968
ANNUAL SEVEN-DAY MINIMUM	2300	Sep 17	2140	Sep 18	1310	Oct 27 1968
INSTANTANEOUS PEAK FLOW			e72500	Oct 4	165000	Jul 11 1994
INSTANTANEOUS PEAK STAGE					26.76	Jul 11 1994
INSTANTANEOUS LOW FLOW			2020	Sep 20	1290	Oct 27 1968
ANNUAL RUNOFF (INCHES)	34.05		22.74		22.26	
10 PERCENT EXCEEDS	23700		10000		14200	
50 PERCENT EXCEEDS	5910		5440		5060	
90 PERCENT EXCEEDS	2520		3280		2320	

e Estimated

ALAQUA CREEK BASIN
02366996 ALAQUA CREEK NEAR PLEASANT RIDGE, FL

LOCATION.--Lat 30°40′08″, long 86°11′12″ in SW¼ sec. 18, T. 2 N., R. 19 W., Walton County, Hydrologic unit 03140102, at bridge on Nelson Road, 0.3 mi downstream from Cosson Mill Creek, 0.6 mi upstream from Oakie Creek, 1.5 mi southwest of Sconiers Mill, and 1.9 mi south of Pleasant Ridge.

DRAINAGE AREA.--39.1 mi^2.

PERIOD OF RECORD.--October 1998 to September 1999.

GAGE.--Water-stage recorder. Altitude of gage is National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair, except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e4400	e133	e112	e116	179	90	130	72	111	226	133	245
2	e2120	e130	e111	e115	125	82	98	67	192	102	220	157
3	e1050	e137	e110	e152	112	97	93	65	81	82	98	89
4	e755	e163	99	e208	113	84	91	63	69	74	87	81
5	e586	e154	e105	e172	98	80	89	66	63	73	84	77
6	e534	e137	e109	e130	95	190	86	67	61	70	81	75
7	e433	e127	e132	e118	94	233	85	194	67	86	80	73
8	e391	e121	e232	e113	93	104	84	103	59	94	119	72
9	e371	e120	e241	e119	92	481	83	72	57	81	159	72
10	e350	e119	e172	e169	91	359	81	66	56	99	178	124
11	e316	e130	e133	e204	90	195	79	63	63	83	96	120
12	e289	e211	e145	e155	88	157	76	63	68	123	e94	78
13	e272	e294	e168	e125	86	143	74	64	219	442	e92	72
14	e257	e203	e146	e119	85	426	75	124	111	201	89	67
15	e242	e152	e124	e126	85	238	74	72	84	117	84	65
16	e234	e174	e115	e126	86	167	72	64	88	149	80	63
17	e223	e193	e110	e117	89	146	72	61	199	235	79	61
18	e214	e169	e107	e114	99	135	71	59	83	116	84	60
19	e208	e144	e106	e116	93	124	71	68	70	126	82	58
20	e203	e132	e105	e114	86	115	70	60	64	110	77	58
21	e198	e125	e113	e109	85	111	69	57	61	95	77	59
22	e187	e120	e134	e106	82	105	68	56	60	84	74	68
23	e174	e128	e135	e128	82	101	67	55	61	107	73	69
24	e163	e172	e121	e239	83	99	67	55	67	324	80	64
25	e157	e191	e140	e290	80	126	69	54	99	211	120	60
26	e155	e164	e178	e140	79	128	69	55	128	231	111	59
27	e150	e139	e163	123	79	99	68	80	288	189	167	59
28	e155	e125	e157	118	148	95	67	65	194	115	165	58
29	163	e118	e157	114	---	93	91	76	126	96	105	65
30	e150	e114	e145	107	---	91	101	72	99	100	82	63
31	e136	---	e130	109	---	128	---	134	---	88	75	---
TOTAL	15236	4539	4255	4311	2697	4822	2390	2292	3048	4329	3225	2391
MEAN	491	151	137	139	96.3	156	79.7	73.9	102	140	104	79.7
MAX	4400	294	241	290	179	481	130	194	288	442	220	245
MIN	136	114	99	106	79	80	67	54	56	70	73	58
AC-FT	30220	9000	8440	8550	5350	9560	4740	4550	6050	8590	6400	4740
CFSM	12.6	3.87	3.51	3.56	2.46	3.98	2.04	1.89	2.60	3.57	2.66	2.04
IN.	14.50	4.32	4.05	4.10	2.57	4.59	2.27	2.18	2.90	4.12	3.07	2.27

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

MEAN	491	151	137	139	96.3	156	79.7	73.9	102	140	104	79.7
MAX	491	151	137	139	96.3	156	79.7	73.9	102	140	104	79.7
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	491	151	137	139	96.3	156	79.7	73.9	102	140	104	79.7
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 1999 WATER YEAR	
ANNUAL TOTAL	53535	
ANNUAL MEAN	147	
HIGHEST DAILY MEAN	e4400	Oct 1
LOWEST DAILY MEAN	54	May 25
ANNUAL SEVEN-DAY MINIMUM	56	May 20
INSTANTANEOUS PEAK FLOW	e4400	Oct 1
INSTANTANEOUS LOW FLOW	51	May 26
ANNUAL RUNOFF (AC-FT)	106200	
ANNUAL RUNOFF (CFSM)	3.75	
ANNUAL RUNOFF (INCHES)	50.93	
10 PERCENT EXCEEDS	216	
50 PERCENT EXCEEDS	107	
90 PERCENT EXCEEDS	65	

e Estimated

BLACKWATER BAY BASIN
02367900 YELLOW RIVER NEAR OAK GROVE, FL

LOCATION.--Lat 30°55′34″, long 86°33′34″ in SE¼ sec. 17, T. 5 N., R. 23 W., Okaloosa County, Hydrologic unit 03140103, at bridge on downstream side at State Highway 2, 0.7 mi east of Oak Grove, and 58 mi above mouth.

DRAINAGE AREA.--525 mi^2 approximately.

PERIOD OF RECORD.--September 1966 to October 1968, annual maximum and gage height only. October 1998 to September 1999.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1968, nonrecording gage at same site and datum.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Maximum discharge, 66,100 ft^3/s (est.), Oct. 1, stage falling; peak occurred Sept. 30, 1998, discharge and gage height, undetermined (HWM not recovered); maximum independent peak discharge, 4,320 ft^3/s, Mar. 17, gage height, 88.30 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e66100	570	798	784	998	535	878	457	629	e2450	e732	284
2	e42800	562	766	820	1320	594	956	393	574	e2040	e520	270
3	e24900	640	744	1540	1380	541	861	352	417	e1400	e419	254
4	e12700	614	725	2110	1150	503	730	322	345	e931	e369	240
5	e6860	589	708	2070	943	524	632	304	301	e753	363	e238
6	2930	564	695	1500	813	610	576	292	267	e652	e344	e235
7	2730	539	689	1100	732	581	547	2390	272	e685	e466	e224
8	3030	518	720	975	682	686	523	1890	285	e762	e516	e213
9	3080	507	e723	1260	658	1370	503	1510	294	e838	e524	e231
10	2860	506	e755	2020	639	1780	474	1430	264	e745	e507	e242
11	2410	1580	845	2170	622	1690	446	629	250	e719	415	e229
12	1880	1510	788	2030	608	1240	422	419	258	e1380	369	e214
13	1570	1250	1040	1510	585	829	399	367	332	e2250	341	e202
14	1400	1060	1330	1250	555	1810	378	545	576	e2020	316	e191
15	1270	1010	1260	1350	527	2610	360	461	907	e1690	296	e185
16	1170	1670	1030	1430	509	3080	e321	400	974	e1440	278	e182
17	1080	2220	857	1310	501	4010	e310	319	e1420	e1100	283	e179
18	1010	2010	761	1170	505	3450	e288	279	e1570	e1020	297	e177
19	954	1510	706	1070	520	1660	e288	420	e1590	e1030	278	e177
20	910	1190	678	978	536	1180	e277	397	e1410	e1210	254	e182
21	874	1070	673	911	536	1010	e255	336	e813	e1370	251	e186
22	821	1030	863	877	506	894	e243	312	e558	e1430	263	e188
23	763	1150	1250	1220	490	818	e243	269	e516	e1340	253	e191
24	717	1560	1140	1960	484	759	e232	283	e516	e991	288	e188
25	679	1730	952	2240	480	722	e243	315	e584	e1550	547	e184
26	659	1550	1130	2140	484	720	e288	283	e889	e1890	797	e181
27	644	1260	1220	1500	465	722	e321	831	e1470	e2010	576	e188
28	628	1050	1120	1060	484	674	500	1310	e1990	e2300	429	e199
29	610	923	1100	915	---	625	522	881	e2360	e2150	354	e205
30	594	843	1000	851	---	590	539	609	e2700	e1830	337	e207
31	582	---	872	820	---	665	---	588	---	e1150	297	---
MEAN	6104	1093	901	1385	668	1209	452	632	844	1391	396	209
MAX	66100	2220	1330	2240	1380	4010	956	2390	2700	2450	797	284
MIN	582	506	673	784	465	503	232	269	250	652	251	177

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

MEAN	6104	1093	901	1385	668	1209	452	632	844	1391	396	209
MAX	6104	1093	901	1385	668	1209	452	632	844	1391	396	209
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	6104	1093	901	1385	668	1209	452	632	844	1391	396	209
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 1999 WATER YEAR	
ANNUAL MEAN	1286	
HIGHEST DAILY MEAN	66100	Oct 1
LOWEST DAILY MEAN	177	Sep 18
ANNUAL SEVEN-DAY MINIMUM	181	Sep 15
INSTANTANEOUS PEAK FLOW	e66100	Oct 1
INSTANTANEOUS LOW FLOW	e177	Sep 18
10 PERCENT EXCEEDS	1920	
50 PERCENT EXCEEDS	695	
90 PERCENT EXCEEDS	255	

e Estimated

02369000 SHOAL RIVER NEAR CRESTVIEW, FL

LOCATION.--Lat 30°41′50″, long 86°34′15″ in SW¼ sec. 5, T. 2 N., R. 23 W., Okaloosa County, Hydrologic Unit 03140103, neter of bridge on downstream side of southbound lane on State Highway 85, 3.5 mi downstream from Titi Creek, 4.2 mi south of Crestview, and 7 mi upstream from mouth.

DRAINAGE AREA.--474 mi^2.

PERIOD OF RECORD.--July 1938 to current year.

REVISED RECORDS.--WSP 1274: 1939-40, 1944, 1947, 1950. WSP 1384: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 47.21 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 12, 1939, June 12, 1972 to Aug. 22, 1973, and July 8, 1994 to Oct. 6, 1995, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Maximum discharge, 48,800 ft^3/s, stage falling, peak occurred Sept. 30, 1998, discharge, 59,100 ft^3/s, gage height, 21.40 ft; maximum independent peak discharge, 4,690 ft^3/s, July 14, gage height, 8.00 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37000	1110	936	969	1120	792	1190	637	1740	1480	1200	889
2	17700	1080	925	956	1380	736	1150	579	1590	1330	1090	795
3	8780	1140	919	1270	1250	763	1000	544	2270	1240	1040	755
4	6290	1360	915	1730	1080	915	934	522	1300	1030	966	730
5	4880	1280	910	1430	995	839	899	518	930	914	1060	764
6	4450	1140	910	1080	933	791	865	528	826	885	1070	738
7	3610	1060	905	982	889	1300	833	820	1080	905	975	689
8	3260	1010	1100	948	864	1450	811	2070	1220	1050	975	775
9	3090	999	1930	990	845	1650	793	2510	1030	1080	1150	814
10	2920	990	2010	1410	830	3370	771	1220	916	1130	2200	722
11	2630	1080	1430	1700	818	3460	746	751	841	1070	2320	662
12	2410	1760	1110	1290	801	2120	721	648	932	1140	1590	625
13	2270	2450	1210	1040	778	1360	681	628	1170	2340	1150	601
14	2140	1690	1400	991	754	2330	664	850	1800	4370	1010	582
15	2020	1270	1220	1050	739	3550	653	1200	1640	4350	950	564
16	1950	1450	1030	1050	736	3440	643	928	1370	2830	939	546
17	1860	1610	956	973	734	2230	633	696	1610	2160	1080	531
18	1780	1410	919	949	738	1540	620	620	2300	1900	1020	526
19	1730	1200	895	965	758	1330	609	679	2020	1470	942	532
20	1690	1100	886	951	740	1230	603	746	1150	1330	1020	578
21	1650	1040	885	907	717	1150	595	635	903	1290	934	615
22	1560	997	938	880	709	1090	584	568	813	1160	868	583
23	1450	1070	1120	1070	692	1040	574	553	776	1010	937	548
24	1360	1430	1120	1990	708	1010	570	546	884	1210	1120	529
25	1310	1590	1010	2420	723	990	572	535	1300	2390	1350	524
26	1290	1370	1170	1740	693	998	581	512	1440	2860	2000	516
27	1250	1160	1480	1170	674	988	580	819	2340	3780	1730	533
28	1210	1040	1360	1040	721	942	579	1710	2980	3410	1170	558
29	1180	982	1310	988	---	912	607	1760	2650	2070	944	672
30	1150	953	1310	966	---	893	713	1320	1980	1460	918	728
31	1130	---	1090	965	---	978	---	1600	---	1340	947	---
MEAN	4097	1261	1139	1189	836	1490	726	911	1460	1806	1183	641
MAX	37000	2450	2010	2420	1380	3550	1190	2510	2980	4370	2320	889
MIN	1130	953	885	880	674	736	570	512	776	885	868	516
MED	1950	1140	1090	1040	756	1090	658	679	1300	1330	1040	608
IN.	9.97	2.97	2.77	2.89	1.84	3.62	1.71	2.22	3.44	4.39	2.88	1.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1999, BY WATER YEAR (WY)

MEAN	877	855	1025	1251	1399	1521	1321	1001	1010	1106	1128	1075
MAX	4097	2252	3601	2606	2974	3327	3056	2752	4421	5436	4385	4370
(WY)	1999	1996	1954	1978	1982	1948	1960	1978	1989	1994	1975	1998
MIN	304	331	345	417	515	365	469	342	367	374	355	301
(WY)	1955	1955	1956	1939	1951	1955	1967	1967	1968	1952	1972	1972

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1938 - 1999	
ANNUAL MEAN	1857		1404		1130	
HIGHEST ANNUAL MEAN					1781	1978
LOWEST ANNUAL MEAN					551	1955
HIGHEST DAILY MEAN	55500	Sep 30	37000	Oct 1	55500	Sep 30 1998
LOWEST DAILY MEAN	326	Jul 1	512	May 26	240	Oct 17 1972
ANNUAL SEVEN-DAY MINIMUM	354	Jun 26	542	Sep 22	241	Oct 13 1972
INSTANTANEOUS PEAK FLOW			48800	Oct 1	59100	Sep 30 1998
INSTANTANEOUS PEAK STAGE			20.16	Oct 1	21.40	Sep 30 1998
INSTANTANEOUS LOW FLOW			504	May 26	240	Oct 17 1972
ANNUAL RUNOFF (INCHES)	53.19		40.21		32.39	
10 PERCENT EXCEEDS	3070		2210		2050	
50 PERCENT EXCEEDS	1080		1030		846	
90 PERCENT EXCEEDS	468		613		433	

02370000 BLACKWATER RIVER NEAR BAKER, FL

LOCATION.--Lat 30°50′00″, long 86°44′05″, in SW¼ sec. 22, T. 4 N., R. 25 W., Okaloosa County, Blackwater River State Forest. Hydrologic unit 03140104, near left bank on downstream side of bridge on State Highway 4, 0.3 mi downstream from Red Wash Branch, 3.8 mi northwest of Baker, and 35 mi upstream from mouth.

DRAINAGE AREA.--205 mi^2

PERIOD OF RECORD.--March 1950 to September 1992; October 1996 to current year.

REVISED RECORDS.--WSP 1704: 1950 (M), 1951-52.

GAGE.--Water-stage recorder. Datum of gage is 60.5 ft above National Geodetic Vertical Datum of 1929 (from design datum of bridge curb furnished by Florida Department of Transportation).

REMARKS.--Records good. Maximum discharge, 10,200 ft^3/s, Oct. 1, stage falling; peak occurred Sept. 29, 1998, discharge, 26,500 ft^3/s, gage height 25.68 ft; maximum independent peak discharge, 1,720 ft^3/s, July 13, gage height, 8.00 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7040	179	e270	260	406	216	1080	236	318	403	202	163
2	3790	178	e260	465	419	199	780	194	271	323	189	155
3	2210	213	e280	1500	363	194	513	170	230	276	179	151
4	1270	192	e270	1070	329	191	392	155	198	236	168	148
5	955	179	e260	755	300	181	331	e320	178	205	163	147
6	788	174	e230	572	278	225	291	e1500	176	e260	156	145
7	674	170	210	479	267	476	270	e1300	247	e520	155	143
8	615	167	246	425	257	359	259	599	183	456	e175	150
9	569	166	279	549	250	901	242	342	179	328	e200	158
10	497	164	250	919	242	1250	224	252	189	268	e230	150
11	437	e800	223	711	237	731	209	205	195	231	276	141
12	389	e1200	218	538	231	489	197	182	289	391	298	134
13	353	e1000	409	459	226	402	185	189	258	1440	202	129
14	323	e500	480	436	221	1100	177	230	277	1110	172	126
15	298	e650	384	509	213	971	171	279	295	679	165	123
16	281	e1100	310	475	209	689	165	225	315	532	153	120
17	266	e950	267	416	206	501	161	183	337	456	171	118
18	255	e690	240	400	205	415	156	164	314	440	157	e121
19	246	e580	222	375	205	361	153	199	256	359	149	e139
20	237	e500	222	332	202	321	150	291	209	387	147	122
21	230	e475	218	311	199	292	147	265	180	348	157	124
22	222	e515	256	301	195	270	142	198	170	286	251	122
23	211	e810	326	483	191	252	139	166	161	247	206	119
24	205	e1400	280	713	193	239	136	179	168	257	e230	117
25	202	e1200	262	543	193	235	145	207	e240	400	e260	115
26	200	e750	364	430	187	248	201	e190	e550	816	461	114
27	196	e540	370	369	182	231	191	264	e880	579	444	115
28	193	e340	332	335	199	216	396	446	1090	390	294	120
29	190	e310	379	316	---	207	335	449	776	294	227	155
30	186	e280	352	305	---	200	269	340	551	249	192	160
31	183	---	295	301	---	331	---	358	---	221	174	---
MEAN	765	546	289	518	243	416	274	332	323	432	213	135
MAX	7040	1400	480	1500	419	1250	1080	1500	1090	1440	461	163
MIN	183	164	210	260	182	181	136	155	161	205	147	114
IN.	4.30	2.97	1.63	2.91	1.23	2.34	1.49	1.86	1.76	2.43	1.20	.73

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1999, BY WATER YEAR (WY)

MEAN	215	235	363	453	528	569	449	313	310	254	286	313
MAX	941	1142	2029	1200	1158	1661	1223	1438	1845	958	1772	1954
(WY)	1976	1990	1954	1978	1962	1990	1975	1978	1970	1975	1975	1998
MIN	64.0	67.8	74.2	96.8	154	86.1	100	91.4	78.0	82.0	75.6	65.9
(WY)	1955	1956	1956	1955	1951	1955	1968	1968	1968	1981	1954	1954

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1950 - 1999	
ANNUAL MEAN	645		375		357	
HIGHEST ANNUAL MEAN					738	1975
LOWEST ANNUAL MEAN					149	1968
HIGHEST DAILY MEAN	23900	Sep 29	7040	Oct 1	23900	Sep 29 1998
LOWEST DAILY MEAN	86	Aug 31	114	Sep 26	61	Sep 3 1954
ANNUAL SEVEN-DAY MINIMUM	93	Aug 26	117	Sep 22	61	Sep 2 1954
INSTANTANEOUS PEAK FLOW			10200	Oct 1	26500	Sep 29 1998
INSTANTANEOUS PEAK STAGE			18.69	Oct 1	25.68	Sep 29 1998
INSTANTANEOUS LOW FLOW			113	Sep 25	60	Sep 7 1954
ANNUAL RUNOFF (INCHES)	42.74		24.86		23.66	
10 PERCENT EXCEEDS	957		698		673	
50 PERCENT EXCEEDS	260		256		204	
90 PERCENT EXCEEDS	118		155		96	

BLACKWATER RIVER BASIN
02370500 BIG COLDWATER CREEK NEAR MILTON, FL

LOCATION.--Lat 30°42′30″, long 86°58′20″, in SW¼ sec.5, T.2 N., R.27 W., Santa Rosa County, Hydrologic Unit 03140104, near center channel on downstream side of bridge on State Highway 191, 3 mi upstream from mouth, and 6.5 mi northeast of Milton.

DRAINAGE AREA.--237 mi^2

PERIOD OF RECORD.--October 1938 to June 1979, October 1979 to September 1980 (gage heights and discharge measurements only). October 1980 to September 1991, October 1997 to August 1999 (discontinued). Monthly discharge only for some periods, published in WSP 1304. Prior to October 1956, published as Coldwater Creek near Milton. October 1956 to September 1957, published as Big Coldwater River near Milton.

REVISED RECORDS.--WSP 892: 1939. WSP 1384: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 9.10 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 2, 1938, non-recording gage at same site and datum.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Maximum discharge, 13,000 ft^3/s,Oct. 1, stage falling; peak occurred Sept. 29, 1998, discharge, 25,700 ft^3/s, gage height, 19.86 ft; maximum independent peak discharge, 2,650 ft^3/s, June 28, gage height, 7.94 ft; minimum discharge, 281 ft^3/s, May 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7080	345	361	527	826	465	1010	393	499	551	388	---
2	2070	341	367	533	840	427	837	356	402	478	355	---
3	1310	347	383	700	756	430	611	337	356	477	326	---
4	1070	339	376	746	701	428	530	325	332	432	307	---
5	925	329	377	612	654	407	469	322	328	400	303	---
6	836	324	390	584	600	439	417	325	317	375	307	---
7	774	320	393	583	558	577	422	352	438	458	297	---
8	738	318	412	583	438	517	423	340	395	705	300	---
9	700	318	377	673	471	1010	397	318	348	542	310	---
10	638	322	434	1140	464	1840	380	307	389	508	327	---
11	590	979	468	1180	447	1150	367	300	389	447	321	---
12	553	2140	454	1010	442	714	351	301	462	654	e315	---
13	524	1150	679	674	431	630	338	340	523	1600	e305	---
14	502	649	958	817	422	1210	332	346	552	1500	e300	---
15	485	807	937	1190	412	1510	331	315	908	761	e295	---
16	471	1400	704	917	414	915	322	299	1220	607	e295	---
17	456	1380	464	756	418	709	318	291	978	986	e310	---
18	443	951	494	734	426	631	320	287	707	1010	e300	---
19	435	730	485	703	430	586	324	333	499	674	e290	---
20	427	627	479	698	419	549	325	404	412	682	e290	---
21	418	563	485	702	411	521	324	326	371	565	e300	---
22	401	593	497	690	404	505	320	302	374	466	e440	---
23	385	881	507	859	401	486	318	306	600	417	e400	---
24	377	1880	476	1040	414	476	314	423	625	489	e420	---
25	376	1560	447	949	417	476	313	444	652	503	e460	---
26	370	910	481	839	407	505	319	351	799	732	e840	---
27	363	679	520	777	407	471	356	376	2020	690	e800	---
28	356	442	542	750	444	448	924	476	2140	485	e540	---
29	353	381	540	723	---	438	712	521	984	413	e410	---
30	354	368	543	696	---	432	468	450	695	385	e350	---
31	349	---	547	727	---	575	---	595	---	371	e320	---
TOTAL	25129	22373	15577	24112	13874	20477	13192	11161	19714	19363	11521	---
MEAN	811	746	502	778	496	661	440	360	657	625	372	---
MAX	7080	2140	958	1190	840	1840	1010	595	2140	1600	840	---
MIN	349	318	361	527	401	407	313	287	317	371	290	---
AC-FT	49840	44380	30900	47830	27520	40620	26170	22140	39100	38410	22850	---
CFSM	3.42	3.15	2.12	3.28	2.09	2.79	1.86	1.52	2.77	2.64	1.57	---
IN.	3.94	3.51	2.44	3.78	2.18	3.21	2.07	1.75	3.09	3.04	1.81	---

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1999, BY WATER YEAR (WY)

MEAN	416	451	524	610	647	753	625	494	577	539	550	566
MAX	1325	1278	1383	1422	1159	2240	1330	1209	2526	1404	2476	2435
(WY)	1976	1976	1954	1978	1962	1990	1961	1991	1989	1940	1975	1988
MIN	178	206	207	273	308	253	261	223	216	246	208	195
(WY)	1969	1956	1956	1956	1957	1955	1968	1956	1968	1981	1956	1968

SUMMARY STATISTICS FOR 1998 CALENDAR YEAR WATER YEARS 1939 - 1999

ANNUAL TOTAL	308644			
ANNUAL MEAN	846		559	
HIGHEST ANNUAL MEAN			861	1976
LOWEST ANNUAL MEAN			307	1968
HIGHEST DAILY MEAN	23000	Sep 29	29700	Mar 17 1990
LOWEST DAILY MEAN	165	Jul 1	158	Jun 10 1956
ANNUAL SEVEN-DAY MINIMUM	181	Jun 26	171	Oct 28 1968
INSTANTANEOUS PEAK FLOW			36900	Mar 17 1990
INSTANTANEOUS PEAK STAGE			22.98	Mar 17 1990
INSTANTANEOUS LOW FLOW			156	Jun 10 1956
ANNUAL RUNOFF (AC-FT)	612200		404700	
ANNUAL RUNOFF (CFSM)	3.57		2.36	
ANNUAL RUNOFF (INCHES)	48.45		32.03	
10 PERCENT EXCEEDS	1150		898	
50 PERCENT EXCEEDS	500		418	
90 PERCENT EXCEEDS	287		265	

02375500 ESCAMBIA RIVER NEAR CENTURY, FL

LOCATION.--Lat 30°57′54″, long 87°14′03″, in NW¼ sec. 10, T. 5 N., R. 30 W., Santa Rosa County, Hydrologic Unit 03140305, on left bank 16 ft downstream from bridge on State Highway 4, 1.2 mi downstream from Escambia Creek, 1.7 mi east of Century, and 52 mi upstream from mouth.

DRAINAGE AREA.--3,817 mi^2.

PERIOD OF RECORD.--October 1934 to current year.

REVISED RECORDS.-- WSP 1384: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 28.34 ft above National Geodetic Vertical Datum of 1929 (Florida Department of Transportation bench mark). Prior to Jan. 13, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good. Maximum discharge, 98,900 ft^3/s, Oct. 1, stage falling; peak occurred Sept. 30, 1998, discharge, 117,000 ft^3/s, gage height 24.11 ft; maximum independent peak discharge, 32,100 ft^3/s, Mar. 16, gage height 17.95 ft. Some gage-height fluctuation during periods of low flow are attributed to regulation by power plants at Point-A Dam, 85.4 mi and Gnatt Dam, 90.1 mi upstream from the gaging station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1850, 37.8 ft, March 1929, present datum, discharge not determined, from information by U.S. Army Corps of Engineers, Mobile District.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85500	3180	3800	3740	9890	3970	5550	2800	e3420	14500	3310	2060
2	72100	3210	3960	3630	10700	4040	7080	2570	e3520	15600	2970	1820
3	80300	3100	3390	4960	10800	3840	6870	2350	e2910	15800	2570	1820
4	86500	3190	3310	6780	9710	3930	6200	2300	2340	16300	2310	1650
5	78900	2950	3370	6090	8770	3900	5610	2200	2390	16400	e2120	1730
6	62900	2950	3430	5590	8510	4020	5230	2140	2190	13800	e2020	2020
7	52200	2940	3540	5140	7780	5270	5080	2250	2080	10000	e1990	2760
8	44200	2770	3260	4640	6940	5300	5850	5440	2040	8930	e1960	2990
9	35800	2680	3780	5050	6570	7100	5610	7830	2120	9030	e1950	2710
10	27700	2840	3870	6650	5950	10000	4540	8420	2110	8120	2400	2280
11	19100	4500	3690	7520	5640	8870	3890	8180	2180	6780	2680	1920
12	12700	5100	3580	6950	5080	7670	3640	7540	2230	7430	3050	1920
13	9880	4620	4750	5950	4760	6590	3320	6850	2430	10100	2430	1710
14	8480	3920	5670	5820	4620	13400	3410	5700	3060	10200	2200	1540
15	7190	4470	5270	6220	4220	26700	2860	4710	3550	9190	2380	1430
16	6430	6280	4500	6250	4000	30100	2900	3750	4540	8240	2140	1370
17	5950	6620	3960	5550	4080	30500	2810	2780	4590	7340	2070	1270
18	5590	5440	3850	4930	4020	30000	2700	2540	5390	7390	2020	1160
19	5050	4810	3660	4440	4390	28900	2860	2990	5820	8370	1780	1150
20	5050	4600	3480	4280	4580	27200	3490	2750	5210	8690	1770	1170
21	4760	4290	3490	4110	4510	23600	3510	3130	3750	8510	1940	1250
22	4410	4260	3530	3870	4370	18800	3370	2900	2850	7890	2000	1260
23	4340	4340	3660	4520	4300	13400	3270	3000	2860	7220	2010	1220
24	4060	5780	3560	6630	4220	9280	2950	2690	3030	7180	1790	1190
25	3750	6500	3370	8190	4070	7300	2510	2490	3130	6360	3410	1200
26	3680	5370	3730	8350	3870	6520	2400	2390	3820	6520	5210	1110
27	3770	4930	4030	7730	3600	5960	2600	2680	9310	7890	5090	1130
28	3430	4170	3890	7140	3560	5140	2300	3990	11300	6960	3480	1270
29	3480	4280	4220	6650	---	5030	2470	3920	11800	4970	2620	1300
30	3280	3980	4100	6350	---	4930	2780	3170	12900	4200	2420	1520
31	3280	---	3960	7600	---	4830	---	3210	---	3590	2310	---
MEAN	24310	4269	3860	5849	5840	11810	3922	3860	4296	9145	2529	1631
MAX	86500	6620	5670	8350	10800	30500	7080	8420	12900	16400	5210	2990
MIN	3280	2680	3260	3630	3560	3840	2300	2140	2040	3590	1770	1110
IN.	7.35	1.25	1.17	1.77	1.59	3.57	1.15	1.17	1.26	2.76	.76	.48

e Estimated

02375500 ESCAMBIA RIVER NEAR CENTURY, FL

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1999, BY WATER YEAR (WY)

MEAN	3027	3244	5647	8595	10330	12730	11160	5922	4417	4077	4019	3156
MAX	24310	14740	24600	31530	21160	30930	31430	19520	22500	20850	23560	12010
(WY)	1999	1949	1954	1936	1965	1998	1980	1978	1970	1994	1975	1975
MIN	647	1033	1157	1895	2596	1783	2180	1556	1077	1271	939	693
(WY)	1969	1955	1955	1956	1989	1955	1967	1963	1988	1968	1954	1968

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1935 - 1999	
ANNUAL MEAN	10630		6820		6339	
HIGHEST ANNUAL MEAN					11690	1975
LOWEST ANNUAL MEAN					2889	1968
HIGHEST DAILY MEAN	106000	Sep 30	86500	Oct 4	106000	Sep 30 1998
LOWEST DAILY MEAN	1440	Jul 9	1110	Sep 26	582	Oct 23 1968
ANNUAL SEVEN-DAY MINIMUM	1500	Sep 12	1190	Sep 21	605	Oct 15 1972
INSTANTANEOUS PEAK FLOW			98900	Oct 1	117000	Sep 30 1998
INSTANTANEOUS PEAK STAGE			23.06	Oct 1	24.35	Mar 18 1990
INSTANTANEOUS LOW FLOW			1100	Sep 26	578	Oct 23 1968
ANNUAL RUNOFF (INCHES)	37.80		24.26		22.57	
10 PERCENT EXCEEDS	20500		10000		14500	
50 PERCENT EXCEEDS	4170		4060		3730	
90 PERCENT EXCEEDS	1740		2030		1370	

02376033 ESCAMBIA RIVER NEAR MOLINO, FL

LOCATION.--Lat 30°40′12″, long 87°16′00″, in SE¼ sec. 20, T. 2 N., R. 20 W., Escambia County, Hydrologic Unit 03140305, near right bank on downstream side of bridge on State Highway 184, 4.1 mi northeast of Cottage Hill, and 5.5 mi southeast of Molino.

DRAINAGE AREA.--4,147 mi^2.

PERIOD OF RECORD.--April 1960 to September 1981 (gage heights and discharge measurements only). October 1983 to September 1987 (Daily discharges not computed for days with instantaneous gage heights below 1.5 ft), October 1987 to September 1994, October 1996 to current year.

GAGE.--Water-stage recorder. Elevation of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Flow generally affected by tide when discharge is less than 5,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97300	3940	4860	4690	7770	4100	5990	2590	3950	13800	5210	2700
2	99300	3930	4460	4840	8390	4120	5880	2800	3740	15700	4070	2540
3	87600	3940	4270	5030	10200	4430	6080	2730	3600	17700	3270	2290
4	86400	3780	4300	4860	11900	4230	6810	2710	3300	19400	2820	2310
5	91100	3520	3990	5370	12600	4230	7240	3050	2840	20300	2560	2210
6	89600	3210	3900	6510	12100	4660	7060	3110	2690	20700	2380	2290
7	79000	3120	4000	6950	11000	4950	6700	2840	2680	21000	2310	2400
8	65500	3290	4230	6660	10100	4870	6240	2870	2510	20600	2260	2670
9	53400	3360	3860	6560	9180	5870	5910	3160	2420	18200	2220	2940
10	42500	3490	3940	6190	8130	6890	6020	4260	2470	15300	2170	2920
11	34100	4010	4220	6400	7370	8470	6110	5650	2470	13000	2260	2730
12	27900	5240	4480	7140	6890	10600	5570	6960	2520	11800	2390	2500
13	23200	6110	5210	7940	6290	10900	4660	7800	2580	10200	2560	2350
14	19100	6030	4990	9120	5580	11000	4160	7980	2810	9210	2560	2190
15	15300	5930	5310	9030	5220	10200	4120	7380	3220	10300	2530	2020
16	12300	5950	5930	7990	5060	13400	3700	6460	3900	11700	2490	1970
17	10100	6220	6010	7470	4900	21800	3220	5460	4340	11800	2310	1910
18	8290	6630	5380	7270	4740	26300	2890	4270	4690	10900	2230	1940
19	7220	6930	5040	6810	4700	27300	2810	3110	4880	9620	2200	2180
20	6670	6620	4700	6180	4510	27100	2870	2930	5290	8770	2200	2330
21	6210	5900	4440	5580	4530	26500	3070	2960	5640	8720	2150	2370
22	5790	5420	4190	5070	4440	25300	3530	2980	5560	9130	2200	1980
23	5400	5590	3980	5280	4660	23300	3680	3070	4570	9280	2280	1890
24	5120	5920	4130	5280	4710	21000	3560	3220	3580	8940	2300	1980
25	4920	6000	4090	5290	4650	17800	3410	3140	3510	8310	2400	2030
26	4710	6370	4210	6340	4580	13900	3180	2800	4100	7890	2680	2060
27	4470	6800	4220	7610	4510	10400	3040	2610	4820	7400	3450	2160
28	4340	6590	4530	8710	4440	8170	3040	2820	5800	6940	4240	2180
29	4340	5930	4960	8800	---	7120	2920	3420	7950	7150	4530	2340
30	4240	5270	4740	8240	---	6360	2600	3950	11300	7280	3770	2090
31	4100	---	4750	7800	---	5900	---	4170	---	6470	2890	---
MEAN	32570	5168	4559	6678	6898	12300	4536	3976	4124	12180	2771	2282
MAX	99300	6930	6010	9120	12600	27300	7240	7980	11300	21000	5210	2940
MIN	4100	3120	3860	4690	4440	4100	2600	2590	2420	6470	2150	1890
IN.	9.06	1.39	1.27	1.86	1.73	3.42	1.22	1.11	1.11	3.39	.77	.61

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1999, BY WATER YEAR (WY)

MEAN	5447	4632	6512	10920	11640	15910	8448	5773	5877	7333	3631	3773
MAX	32570	8956	18920	24210	19080	37410	13870	14530	19160	22110	9523	9067
(WY)	1999	1993	1993	1998	1992	1990	1989	1991	1989	1994	1994	1988
MIN	1521	1961	2212	3126	2650	6373	4536	2076	1466	2300	2014	1811
(WY)	1988	1991	1991	1989	1989	1989	1999	1988	1988	1988	1990	1990

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1988 - 1999	
ANNUAL MEAN	12470		8225		7467	
HIGHEST ANNUAL MEAN					10680	1990
LOWEST ANNUAL MEAN					5040	1988
HIGHEST DAILY MEAN	100000	Mar 11	99300	Oct 2	111000	Mar 22 1990
LOWEST DAILY MEAN	1920	Jul 1	1890	Sep 23	1310	Oct 12 1987
ANNUAL SEVEN-DAY MINIMUM	2020	Jun 27	2040	Sep 22	1370	Jun 16 1988
INSTANTANEOUS PEAK FLOW			104000	Oct 1	113000	Mar 23 1990
INSTANTANEOUS PEAK STAGE			15.22	Oct 1	15.72	Mar 23 1990
INSTANTANEOUS LOW FLOW			1570	Sep 16	1040	Aug 30 1990
ANNUAL RUNOFF (INCHES)	40.83		26.93		24.46	
10 PERCENT EXCEEDS	25700		13200		17000	
50 PERCENT EXCEEDS	5090		4840		4300	
90 PERCENT EXCEEDS	2270		2390		2020	

BAYOU MARCUS CREEK BASIN

02376100 BAYOU MARCUS CREEK NEAR PENSACOLA, FL

LOCATION.--Lat 30°26′53″, long 87°17′26″, in SE¼ sec. 13, T. 2 S., R. 30 W., Escambia County, Hydrologic Unit 03140107, near mid channel on downstream side of eastbound bridge on U.S. Highway 90, 0.3 mi upstream from Turner's Creek, 4.5 mi upstream, and 5.3 mi northwest of City Hall in Pensacola.

DRAINAGE AREA.--10.8 mi^2.

PERIOD OF RECORD.--February 1958 to March 1960; October 1987 to September 1991, October 1998 to September 1999.

REVISED RECORDS.--WDR FL-88-4: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 11.21 ft above National Geodetic Vertical Datum of 1929. Feb. 12, 1958 to Mar. 17, 1960, water-stage recorder 100 ft upstream at present datum.

REMARKS.--Records good, except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e80	e25	e25	24	37	e22	e27	20	31	18	22	38
2	e58	e25	e24	39	28	e20	e22	18	24	17	20	29
3	e48	e26	e24	34	27	e21	e19	16	22	17	18	26
4	e42	e25	e24	26	26	e18	e18	17	20	16	26	24
5	e40	e24	e25	25	24	e16	e18	19	20	16	47	24
6	e39	e24	e24	24	23	e21	e19	18	19	15	38	22
7	e38	e25	e25	24	24	e29	e18	26	18	14	25	21
8	e37	e24	e27	24	23	e22	e17	20	18	37	29	20
9	36	e24	e26	49	23	e53	e17	18	19	24	76	21
10	e35	e25	e25	32	e27	e36	e18	16	19	49	65	20
11	e35	e26	24	25	e24	e20	e17	22	23	30	62	19
12	e34	e23	e28	24	e22	e18	e16	22	19	62	84	20
13	e34	e24	e64	27	e21	e36	e17	19	29	50	35	19
14	e33	e26	28	36	e22	e110	16	17	20	27	29	18
15	e33	e30	26	28	e21	e31	17	15	18	22	26	17
16	e32	e29	25	25	e20	e22	16	14	27	26	23	16
17	e31	e26	24	25	e19	e20	16	14	22	22	23	16
18	e31	e25	24	32	e19	e19	16	13	18	21	23	16
19	e30	e26	26	25	e18	e18	16	17	16	20	22	18
20	e30	e25	25	25	e18	e18	16	14	15	23	21	20
21	e30	e24	25	25	e17	e19	15	13	15	21	21	20
22	e29	e24	31	24	e16	e18	15	12	16	17	20	18
23	e28	e54	25	70	e16	e19	15	14	17	18	21	17
24	e28	e46	24	33	e17	e18	16	16	26	19	27	18
25	e28	e30	27	27	e18	e21	17	13	23	19	47	18
26	e27	e28	38	25	e17	e19	16	15	36	31	27	17
27	e27	e26	29	25	e17	e18	16	31	46	38	23	18
28	e27	e25	42	24	e26	e18	20	41	26	36	22	18
29	e26	e25	35	24	---	e18	38	38	25	34	23	18
30	e26	e25	26	25	---	e19	28	54	20	43	24	17
31	e25	---	25	50	---	e30	---	103	---	28	60	---
TOTAL	1077	814	870	925	610	787	552	705	667	830	1029	603
MEAN	34.7	27.1	28.1	29.8	21.8	25.4	18.4	22.7	22.2	26.8	33.2	20.1
MAX	80	54	64	70	37	110	38	103	46	62	84	38
MIN	25	23	24	24	16	16	15	12	15	14	18	16
AC-FT	2140	1610	1730	1830	1210	1560	1090	1400	1320	1650	2040	1200
CFSM	3.22	2.51	2.60	2.76	2.02	2.35	1.70	2.11	2.06	2.48	3.07	1.86
IN.	3.71	2.80	3.00	3.19	2.10	2.71	1.90	2.43	2.30	2.86	3.54	2.08

e Estimated

02376100 BAYOU MARCUS CREEK NEAR PENSACOLA, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1999, BY WATER YEAR (WY)

MEAN	31.3	28.8	26.3	31.6	30.6	35.5	25.7	29.4	27.8	30.8	31.0	29.1
MAX	48.7	36.6	32.6	40.6	51.5	45.9	29.8	43.6	46.9	40.5	50.1	61.8
(WY)	1989	1988	1989	1991	1988	1990	1990	1991	1989	1989	1988	1988
MIN	19.6	14.9	15.7	27.8	21.8	25.4	18.4	22.7	19.1	24.9	17.6	16.0
(WY)	1991	1991	1991	1989	1999	1999	1999	1988	1988	1990	1990	1990

SUMMARY STATISTICS	FOR 1999 WATER YEAR		WATER YEARS 1988 - 1999	
ANNUAL TOTAL	9469			
ANNUAL MEAN	25.9		29.8	
HIGHEST ANNUAL MEAN			35.4	1988
LOWEST ANNUAL MEAN			25.9	1999
HIGHEST DAILY MEAN	110	Mar 14	293	Mar 17 1990
LOWEST DAILY MEAN	12	May 22	12	Oct 12 1990
ANNUAL SEVEN-DAY MINIMUM	14	May 16	13	Oct 14 1991
INSTANTANEOUS PEAK FLOW	235	May 30	701	Mar 16 1990
INSTANTANEOUS PEAK STAGE	4.16	May 30	5.51	Mar 16 1990
INSTANTANEOUS LOW FLOW	12	May 22	12	Oct 12 1990
ANNUAL RUNOFF (AC-FT)	18780		21610	
ANNUAL RUNOFF (CFSM)	2.40		2.76	
ANNUAL RUNOFF (INCHES)	32.62		37.53	
10 PERCENT EXCEEDS	38		43	
50 PERCENT EXCEEDS	24		25	
90 PERCENT EXCEEDS	16		16	

ELEVENMILE CREEK BASIN

02376115 ELEVENMILE CREEK NEAR PENSACOLA, FL

LOCATION.--Lat 30°29′53″, long 87°20′09″, in SE¼ sec. 22, T. 1 S., R. 31 W., Escambia County, Hydrologic Unit 03140107, near left bank on downstream side of bridge on U.S. Highway 90, 1.8 mi upstream from Eightmile Creek, 4.0 mi upstream from mouth and 5.6 mi northwest of Pensacola High School in West Pensacola.

DRAINAGE AREA.--27.8 mi^2.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 10.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Discharges are increased by about 30 ft^3/s from a paper mill located about 10 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e370	e76	75	80	180	76	96	53	70	59	83	61
2	e280	e75	73	111	107	72	80	59	64	57	75	69
3	e230	e76	72	147	97	80	76	59	68	58	73	65
4	e200	e74	72	88	94	70	74	58	62	55	68	63
5	e180	e72	74	83	87	67	72	60	59	e57	72	e63
6	e170	e71	73	82	85	83	73	61	59	e55	65	e62
7	e165	73	72	82	81	91	68	62	56	e54	65	e61
8	e250	72	78	81	78	74	65	60	55	e100	66	60
9	e210	71	76	170	80	198	63	58	60	118	77	83
10	e190	73	72	143	84	136	66	58	59	84	77	63
11	e170	78	71	96	81	84	62	e70	62	73	89	62
12	e150	70	103	87	77	78	59	e70	79	128	103	58
13	e130	71	232	95	75	91	60	60	66	153	74	54
14	e115	77	101	324	79	408	60	60	70	82	69	54
15	e100	86	82	149	77	125	61	57	62	68	67	54
16	e95	86	78	98	77	92	59	57	69	e80	63	54
17	e92	77	73	90	75	84	61	56	68	e68	60	55
18	e90	74	66	84	79	81	59	55	59	e66	58	54
19	e89	79	73	77	73	75	60	60	57	e64	60	57
20	e88	75	75	76	71	70	61	54	58	e70	58	57
21	e87	72	70	76	71	71	58	52	55	e63	57	57
22	e86	74	79	73	66	67	62	55	57	e57	59	54
23	e85	167	70	153	69	68	62	58	58	e55	60	55
24	e84	142	e75	106	70	67	59	62	63	e58	72	55
25	e83	92	70	82	72	74	62	56	58	e58	90	54
26	e82	86	100	79	72	72	61	58	100	e97	69	48
27	e81	79	82	77	69	71	62	64	213	e130	66	47
28	e80	76	112	78	81	69	63	68	133	e240	76	47
29	e79	74	135	78	---	68	59	75	76	107	66	50
30	e78	75	92	81	---	69	55	68	67	131	60	53
31	e77	---	83	132	---	101	---	107	---	106	61	---
MEAN	138	81.4	85.8	105	82.4	94.6	64.6	61.6	71.4	85.5	69.6	57.6
MAX	370	167	232	324	180	408	96	107	213	240	103	83
MIN	77	70	66	73	66	67	55	52	55	54	57	47

e Estimated

ELEVENMILE CREEK BASIN
02376115 ELEVENMILE CREEK NEAR PENSACOLA, FL

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1999, BY WATER YEAR (WY)

MEAN	91.4	104	92.1	122	110	149	99.2	83.4	107	117	95.7	120
MAX	223	311	199	239	153	332	246	168	323	252	183	457
(WY)	1996	1996	1996	1998	1997	1998	1996	1991	1989	1994	1995	1998
MIN	52.5	47.4	53.6	67.5	70.5	81.9	64.6	51.1	57.6	66.7	58.8	53.1
(WY)	1991	1991	1991	1989	1989	1992	1999	1988	1988	1990	1990	1990

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1988 - 1999	
ANNUAL MEAN	156		83.3		108	
HIGHEST ANNUAL MEAN					160	1998
LOWEST ANNUAL MEAN					76.8	1992
HIGHEST DAILY MEAN	8000	Sep 28	408	Mar 14	8000	Sep 28 1998
LOWEST DAILY MEAN	45	Sep 15	47	Sep 27	33	Aug 24 1989
ANNUAL SEVEN-DAY MINIMUM	59	Jun 28	51	Sep 24	42	Nov 2 1990
INSTANTANEOUS PEAK FLOW			593	Mar 14	12800	Sep 28 1998
INSTANTANEOUS PEAK STAGE			7.24	Mar 14	16.94	Sep 28 1998
INSTANTANEOUS LOW FLOW			47	Sep 27	29	Aug 25 1989
10 PERCENT EXCEEDS	210		121		150	
50 PERCENT EXCEEDS	79		72		74	
90 PERCENT EXCEEDS	65		57		59	

PERDIDO RIVER BASIN

02376293 BRUSHY CREEK NEAR BRATT, FL

LOCATION.--Lat 30°58′42″, long 87°31′41″, in SE¼ sec. 3, T. 5 N., R. 5 E., Escambia County, Hydrologic Unit 03140106, at bridge on Nokomis Road, 0.8 mi downstream from Rocky Creek, 1.4 mi below Alabama-Florida State Line, 2.1 mi upstream from Reedy Creek, and 6.0 mi west of Bratt.

DRAINAGE AREA.--26.5 mi^2.

PERIOD OF RECORD.--October 1998 to September 1999.

GAGE.--Water-stage recorder. Altitude of gage is National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good, except for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge measured, 3,070 ft^3/s, Sept. 29, 1998, gage height, 184.11 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e320	e29	e39	e39	94	32	54	26	27	37	25	24
2	e260	e28	e38	e80	54	30	38	25	25	32	25	24
3	e190	e27	e37	e210	43	34	34	25	24	30	24	24
4	e155	e27	e35	e170	39	31	33	25	24	29	24	24
5	e128	e26	e34	e100	37	30	33	26	50	32	24	44
6	e106	e26	e33	e60	35	67	34	27	28	28	24	27
7	e92	e26	e34	e50	34	39	34	28	27	148	27	27
8	e86	e25	e41	e43	35	31	32	26	24	161	24	42
9	e76	e25	e45	e64	34	404	32	25	24	48	25	70
10	e67	e26	31	e82	33	143	31	24	24	35	26	29
11	e62	e125	e27	e63	32	50	30	25	27	32	25	25
12	e57	e98	e28	e49	32	42	29	27	32	137	24	23
13	e52	e50	e92	42	31	148	29	29	26	544	24	23
14	e48	e45	e78	52	30	871	29	27	28	140	23	22
15	46	e84	e51	51	30	183	29	24	37	50	22	22
16	e44	e130	e43	39	30	83	29	23	40	39	22	22
17	e41	e107	e39	35	31	54	28	23	33	50	24	22
18	e40	e90	e37	33	33	45	27	24	26	35	24	22
19	e39	e70	e35	32	32	41	28	36	24	34	37	22
20	e39	e54	e36	30	31	38	28	26	22	34	66	22
21	e38	e48	e35	30	31	39	28	24	22	32	62	23
22	e37	e47	e44	31	30	37	27	23	29	30	30	22
23	e36	e92	e48	117	30	36	27	23	75	28	26	22
24	e35	e130	e42	62	31	35	27	24	90	28	27	22
25	e34	e96	e43	42	30	36	26	24	79	28	42	22
26	e33	e70	e52	39	30	36	26	34	741	31	29	21
27	e32	e56	e49	37	30	34	27	86	558	28	25	24
28	e31	e49	e48	36	40	33	28	29	145	27	24	23
29	e30	e44	e57	36	---	33	27	26	118	26	23	30
30	e30	e41	e49	39	---	34	27	29	50	27	24	33
31	e29	---	e43	69	---	89	---	43	---	27	25	---
TOTAL	2313	1791	1343	1862	1002	2838	911	886	2479	1987	876	802
MEAN	74.6	59.7	43.3	60.1	35.8	91.5	30.4	28.6	82.6	64.1	28.3	26.7
MAX	320	130	92	210	94	871	54	86	741	544	66	70
MIN	29	25	27	30	30	30	26	23	22	26	22	21
AC-FT	4590	3550	2660	3690	1990	5630	1810	1760	4920	3940	1740	1590
CFSM	2.82	2.25	1.63	2.27	1.35	3.45	1.15	1.08	3.12	2.42	1.07	1.01
IN.	3.25	2.51	1.89	2.61	1.41	3.98	1.28	1.24	3.48	2.79	1.23	1.13

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 1999, BY WATER YEAR (WY)

MEAN	74.6	59.7	43.3	60.1	35.8	91.5	30.4	28.6	82.6	64.1	28.3	26.7
MAX	74.6	59.7	43.3	60.1	35.8	91.5	30.4	28.6	82.6	64.1	28.3	26.7
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999
MIN	74.6	59.7	43.3	60.1	35.8	91.5	30.4	28.6	82.6	64.1	28.3	26.7
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999

SUMMARY STATISTICS	FOR 1999 WATER YEAR	
ANNUAL TOTAL	19090	
ANNUAL MEAN	52.3	
HIGHEST DAILY MEAN	871	Mar 14
LOWEST DAILY MEAN	21	Sep 26
ANNUAL SEVEN-DAY MINIMUM	22	Sep 14
INSTANTANEOUS PEAK FLOW	2060	Jun 26
INSTANTANEOUS PEAK STAGE	183.39	Jun 26
INSTANTANEOUS LOW FLOW	21	Sep 26
ANNUAL RUNOFF (AC-FT)	37870	
ANNUAL RUNOFF (CFSM)	1.97	
ANNUAL RUNOFF (INCHES)	26.80	
10 PERCENT EXCEEDS	89	
50 PERCENT EXCEEDS	33	
90 PERCENT EXCEEDS	24	

PERDIDO RIVER BASIN

02376500 PERDIDO RIVER AT BARRINEAU PARK, FL

LOCATION.--Lat 30°41′25″, long 87°26′25″, in NW¼ sec. 23, T. 4 S., R. 6 E., Baldwin County, Ala., Hydrologic Unit 03140106, on right bank 25 ft downstream from bridge on county road, 1,000 ft downstream from Alligator Creek, 0.5 mi southwest of Barrineau Park, and 27 mi upstream from mouth.

DRAINAGE AREA.--394 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1941 to current year.

REVISED RECORDS.--WSP 1384: Drainage area. WRD FL-76-4: 1973-75 (M).

GAGE.--Water-stage recorder. Datum of gage is 25.77 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 22, 1949, nonrecording gage at same site and datum.

REMARKS.--Records good. Maximum discharge, 12,000 ft^3/s (estimated), Oct. 1; stage falling, peak occurred Sept. 29, 1998; discharge 44,000 ft^3/s, gage height, 26.30 ft; maximum independent peak discharge, 7,660 ft^3/s, June 28, gage height, 14.90 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 15,1929, reached a stage of 25.7 ft present datum, from information by local resident (discharge not determined).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e12000	564	604	637	1060	560	951	354	942	1290	508	362
2	e5000	558	593	771	1090	556	836	350	788	883	448	355
3	e2700	564	585	1520	1090	539	795	344	685	723	414	355
4	e1900	566	577	1170	930	532	714	338	565	612	397	367
5	e1500	554	572	952	770	516	618	352	790	538	464	369
6	e1280	545	567	831	662	562	546	366	1040	505	400	395
7	1310	539	564	739	602	1240	625	365	802	474	388	416
8	2170	536	565	669	577	959	544	361	556	478	410	417
9	1870	536	591	799	561	1060	491	352	464	824	404	509
10	1590	548	575	1320	551	1960	466	342	433	974	398	642
11	1400	2010	558	1590	543	2250	448	336	425	750	385	507
12	1140	2470	571	1460	529	2350	429	341	1070	895	378	431
13	979	1340	934	1020	519	1270	414	398	814	1250	365	389
14	877	940	1050	1420	508	1590	403	446	749	1320	356	363
15	819	1410	1030	1300	497	2500	393	452	762	1920	370	346
16	784	1590	899	988	492	3920	385	402	723	1630	352	334
17	754	1270	764	910	492	3090	382	365	654	906	394	324
18	729	1180	657	824	512	1400	376	350	633	703	397	317
19	711	1070	603	726	521	884	372	394	577	641	420	315
20	699	911	592	662	526	729	368	443	491	680	439	315
21	698	786	588	627	518	647	367	403	427	706	483	318
22	669	836	617	608	511	607	366	364	420	585	499	318
23	642	962	609	812	497	582	363	356	422	508	450	313
24	624	1160	572	1060	490	559	363	612	440	507	413	309
25	612	945	588	931	488	545	360	473	542	499	679	306
26	603	833	709	839	481	570	364	408	1050	695	625	305
27	592	752	688	749	474	550	363	462	2730	600	562	306
28	583	690	708	664	506	519	363	548	6200	497	483	312
29	577	650	873	612	---	495	362	590	5860	451	406	391
30	572	622	759	620	---	480	360	527	2800	450	380	428
31	569	---	681	788	---	522	---	735	---	563	368	---
MEAN	1515	931	672	923	607	1114	473	417	1162	776	433	371
MAX	12000	2470	1050	1590	1090	3920	951	735	6200	1920	679	642
MIN	569	536	558	608	474	480	360	336	420	450	352	305
IN.	4.43	2.64	1.97	2.70	1.60	3.26	1.34	1.22	3.29	2.27	1.27	1.05

e Estimated

02376500 PERDIDO RIVER AT BARRINEAU PARK, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1999, BY WATER YEAR (WY)

MEAN	518	620	723	965	987	1138	1032	722	675	709	715	747
MAX	2519	1865	2084	2636	2364	2791	3179	2402	2394	2023	2938	3460
(WY)	1996	1990	1954	1998	1990	1990	1983	1991	1989	1997	1975	1998
MIN	197	246	302	339	343	269	283	262	238	231	249	213
(WY)	1969	1956	1955	1957	1957	1955	1968	1988	1968	1968	1954	1968

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1941 - 1999	
ANNUAL MEAN	1422		785		795	
HIGHEST ANNUAL MEAN					1372	1998
LOWEST ANNUAL MEAN					371	1968
HIGHEST DAILY MEAN	40800	Sep 29	12000	Oct 1	40800	Sep 29 1998
LOWEST DAILY MEAN	372	Jun 19	305	Sep 26	188	Oct 13 1972
ANNUAL SEVEN-DAY MINIMUM	389	Jun 14	310	Sep 22	190	Oct 11 1972
INSTANTANEOUS PEAK FLOW			12000	Oct 1	44000	Sep 29 1998
INSTANTANEOUS PEAK STAGE			14.90	Jun 28	26.30	Sep 29 1998
INSTANTANEOUS LOW FLOW			305	Sep 26	188	Oct 12 1972
ANNUAL RUNOFF (INCHES)	48.99		27.05		27.40	
10 PERCENT EXCEEDS	2120		1290		1440	
50 PERCENT EXCEEDS	729		572		519	
90 PERCENT EXCEEDS	414		363		298	

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or flood-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage and flood-hydrograph partial-record stations are presented in a table of annual maximum stage and discharge. Discharge measurements made at miscellaneous sites for both low flows and high flows are given in a second table.

Crest-stage and flood-hydrograph partial-record stations

The following table contains annual maximum discharges for crest-stage and flood hydrograph stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A flood hydrograph station is a continual-record station that records the river stage of storm events above a base stage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage stations

Station No.	Station Name	Location	Drainage area (mi^2)	Period of Record	Annual Maximum		
					Water year	Gage height (feet)	Discharge (ft^3/s)
		OCKLAWAHA RIVER BASIN					
02240934	Unnamed Sink Drain near Flemington, Fla.	Lat 29°24′15″, long 82°20′30″, in SE¼ sec. 30, T. 12 S., R. 20 E., Marion County, Hydrologic Unit 03080102, at upstream side of culvert at County Road 318, 2.7 mi west of Flemington, and 6.2 mi southeast of Williston.	0.14	1996-99	1996	1.74	a
					1997	b	
					1998	3.81	a
					1999	1.06	a
022409424	Moores Branch Tributary near Micanopy, Fla.	Lat 29°28′01″, long 82°18′52″, in NE¼ sec. 9, T. 12 S., R. 20 E., Marion County, Hydrologic Unit 03080102, at upstream side of culvert at County Road 329, 3.1 mi southwest of Micanopy, and 4.2 mi north of Flemington.	0.41	1996-99	1996	4.78	a
					1997	5.33	a
					1998	7.12	a
					1999	5.97	a
		ST. JOHNS RIVER BASIN BELOW OCKLAWAHA RIVER					
02245449	South Fork Black Creek Tributary near Penny Farms, Fla.	Lat 29°58′41″, long 81°52′52″, in NE¼ sec. 15, T. 6 S., R. 24 E., Clay County, Hydrologic Unit 03080103, at upstream side of culvert on State Road 16, 1.0 mi east of junction with State Road 21, and 4.4 mi west of Penny Farms.	0.32	1996-99	1996	1.24	a
					1997	2.32	a
					1998	2.01	a
					1999	b	
02245573	Bull Creek Tributary near Middleburg, Fla.	Lat 30°00′44″, long 81°55′52″, in SW¼ sec. 32, T. 5 S., R. 24 E., Clay County, Hydrologic Unit 03080103, at upstream side of culvert on County Road 215, 2.9 mi south of junction with State Road 21, 3.5 mi north of junction of County Road 215 with State Road 16, and 5.4 mi southwest of Middleburg.	0.16	1996-99	1996	c	
					1997	2.41	a
					1998	2.11	a
					1999	1.36	a
02245606	Calf Branch Tributary near Middleburg, Fla.	Lat 30°01′21″, long 81°53′53″, in NE¼ sec. 33, T. 5 S., R. 24 E., Clay County, Hydrologic Unit 03080103, at upstream side of culvert on State Road 21, 0.7 mi south of junction with County Road 215, 3.1 mi southwest of Middleburg, and 3.6 mi north of junction of State Road 21 with State Road 16.	0.21	1996-99	1996	2.07	a
					1997	6.48	a
					1998	2.67	a
					1999	b	

Station No.	Station Name	Location	Drainage area (mi^2)	Period of Record	Annual Maximum		
					Water year	Gage height (feet)	Discharge (ft^3/s)
		WITHLACOOCHEE RIVER BASIN					
02312522	Trailer Park Drain near Brooksville, Fla.	Lat 28°30′18″, long 82°22′14″, in NW¼ sec. 12, T. 23 S., R. 19 E., Hernando County, HydroIogic Unit 03100208, at upstream side of culvert on County Road 581, and 3.9 mi southeast of Court House at Brooksville.	0.21	1996-99	1996 1997 1998 1999	1.70 1.41 3.69 1.89	a a a a
02312524	Tributary to Unnamed Sink near Brooksville, Fla.	Lat 28°31′01″, long 82°20′04″, in NE¼ sec. 6, T. 23 S., R. 20 E., Hernando County, Hydrologic Unit 03100208, at upstream side of culvert on Cedar Lane, 1.3 mi south of junction with U.S. Highway 98, and 4.2 mi southwest of Court House at Brooksville.	0.22	1996-99	1996 1997 1998 1999	1.26 2.02 5.00 3.12	a a a a
		SUWANNEE RIVER BASIN ABOVE WITHLACOOCHEE RIVER					
02315534	Rocky Creek Tributary near Wellborn, Fla.	Lat 30°18′51″, long 82°49′50″, in SE¼ sec. 17, T. 2 S., R. 15 E., Suwannee County, Hydrologic Unit 03110201, at bridge on County Road 136, 5.3 mi northwest of Houston, 5.5 mi west of White Springs, and 6.0 mi northwest of Wellborn.	1.2	1969-75 1996-97 1999	1996 1997 1999	5.53 7.42 b	a a
023156044	Sugar Creek Tributary near Suwannee Springs, Fla.	Lat 30°24′29″, long 82°55′13″, in SE¼ sec. 9, T. 1 S., R. 14 E., Hamilton County, Hydrologic Unit 03110201, at upstream side of culvert on State Road 132, and 1.3 mi northeast of Suwannee Springs.	0.06	1996-99	1996 1997 1998 1999	1.48 1.96 3.25 b	a a a
		SANTA FE RIVER BASIN					
02320978	New River Tributary near Raiford, Fla.	Lat 30°02′49″, long 82°15′58″, in SE¼ sec. 23, T. 5 S., R. 20 E., Union County, HydroIogic Unit 03110206, at upstream side of culvert at County Road 237, 0.2 mi south of State Road 121,1.3 mi southwest of Raiford, and 3.9 mi northeast of the junction of State Roads 121 and 100 at Lake Butler.	0.31	1996-99	1996 1997 1998 1999	1.19 2.66 3.95 b	a a a
02321506	Tributary To Santa Fe River Tributary near Worthington Springs, Fla.	Lat 29°56′45″, long 82°26′46″, in SE¼ sec. 19, T. 6 S., R. 19 E., Union County, HydroIogic Unit 03110206, at upstream side of culvert at State Road 18, 0.13 mi west of State Road 121, and 1.7 mi northwest of Worthington Springs.	0.22	1996-99	1996 1997 1998 1999	1.86 2.50 6.06 1.61	a a a a
02321793	Providence Branch at Providence, Fla.	Lat 30°00′29″, long 82°33′36″, in SW¼ sec. 31, T. 5 S., R. 18 E., Union County, Hydrologic Unit 03110206, at upstream side of culvert on County Road 245, 0.3 mi north of the junction with State Road 238, 0.5 mi south of the Olustee River, and 0.8 mi west of Providence.	0.94	1996-99	1996 1997 1998 1999	2.42 3.13 4.75 2.03	a a a a

Station No.	Station Name	Location	Drainage area (mi^2)	Period of Record	Annual Maximum		
					Water year	Gage height (feet)	Discharge (ft^3/s)
		SANTA FE RIVER BASIN--Continued					
02321795	Disappearing Branch near Providence, Fla.	Lat 30°02′34″, long 82°34′01″, in NE¼ sec. 34, T. 5 S., R. 17 E., Columbia County, Hydrologic Unit 03110206, at upstream side of culvert on County Road 245, 1.9 mi north of the Olustee River, 2.7 mi north of the junction with State Road 238, and 3.0 mi northwest of Providence.	0.81	1996-99	1996 1997 1998 1999	c 2.41 2.11 b	 a a
02322049	Bad Dog Run near Alachua, Fla.	Lat 29°49′32″, long 82°28′06″, in NE¼ sec. 1, T. 8 S., R. 18 E., Alachua County, HydroIogic Unit 03110206, at upstream side of culvert at County Road 239, 2.6 mi northeast of Alachua.	0.49	1996-99	1996 1997 1998 1999	16.62 14.55 15.61 13.93	a a a a
02322050	Shiloh Run near Alachua, Fla.	Lat 29°49′06″, long 82°28′21″, in SW¼ sec. 1, T. 8 S., R. 18 E., Alachua County, HydroIogic Unit 03110206, 6 ft upstream from culvert on County Road 239, 0.7 mi above mouth, and 2.8 mi southeast of Alachua.	0.32	1983-87 1996-99	1996 1997 1998 1999	b b 1.13 b	 a
02326372	Palmer Mill Branch at Monticello, Fla.	Lat 30°23′37″, long 83°50′42″, in SE¼ sec. 29, T. 2 N., R.5 E., Jefferson County, HydroIogic Unit 03110103, on right bank 10 ft upstream from culvert on U.S. Highway 90, 1.5 mi above mouth, and 1.5 mi east of Jefferson County Courthouse in Monticello.	0.48	1983-87 1996-99	1996 1997 1998 1999	6.66 6.39 6.98 5.51	147 130 169 79
		ST. MARKS AND WAKULLA RIVERS AND COASTAL AREA					
02326574	Ward Creek Tributary near Monticello, Fla.	Lat 30°38′21″, long 83°50'37″, in SE¼ sec. 20, T. 3 N., R. 5 E., Jefferson County, Hydrologic Unit 03120001, at upstream side of culvert on County Road 58, 1.8 mi east of U.S. Highway 19, and 6.2 mi north of Monticello.	0.08	1996-99	1996 1997 1998 1999	b 0.75 1.05 b	 a a
02326595	Halls Run near Miccosukee, Fla.	Lat 30°37′01″, long 84°02′28″, in NW¼ sec. 33, T. 3 N., R. 3 E., Leon County, Hydrologic Unit 03120001, at upstream side of culvert on State Road 59, and 1.5 mi north of Miccosukee.	0.11	1996-99	1996 1997 1998 1999	1.16 1.68 2.89 1.15	a a a a
		OCHLOCKONEE RIVER BASIN					
02329354	Attapulgus Creek Tributary near Jamieson, Fla.	Lat 30°39′42″, long 84°28′39″, in NW¼ sec. 18, T. 3 N., R. 2 W., Gadsden County, Hydrologic Unit 03120003, at upstream side of culvert on State Road 161, 0.3 mi south of State Road 159, 1.6 mi west of Jamieson, and 4.5 mi north of Havana.	1.03	1996-99	1996 1997 1998 1999	3.22 1.77 4.83 b	a a a
02329558	Church Branch near Quincy, Fla.	Lat 30°35′34″, long 84°31′18″, in NE¼ sec. 10, T. 2 N., R. 3 W., Gadsden County, Hydrologic Unit 03120003, at upstream side of culvert on State Road 12, and 3.6 mi east of the city hall in Quincy.	0.49	1996-99	1996 1997 1998 1999	2.45 3.51 4.31 2.91	52 111 163 76

Station No.	Station Name	Location	Drainage area (mi^2)	Period of Record	Annual Maximum		
					Water year	Gage height (feet)	Discharge (ft^3/s)
		OCHLOCKONEE RIVER BASIN--continued					
02329559	Littman Branch near Quincy, Fl	Lat 30°35′32″, long 84°31′08″, in NE¼ sec. 10, T. 2 N., R. 3 W., Gadsden County, Hydrologic Unit 03120003, at upstream side of culvert on State Road 12, and 3.8 mi east of the city hall in Quincy.	0.20	1996-99	1996	1.28	a
					1997	1.82	a
					1998	2.27	a
					1999	1.57	a
		APALACHICOLA RIVER BASIN					
02356510	South Mosquito Creek Tributary near Hardaway, Fla.	Lat 30°39′11″, long 84°43′58″, in SW ¼ sec. 15, T. 3 N., R. 5 W., Gadsden County, Hydrologic Unit 03130011, at upstream side of culvert on County Road 379B, 0.9 mi south of railroad crossing at County Road 379B, and 1.4 mi north of Hardaway.	0.20	1996-99	1996	5.12	a
					1997	5.94	a
					1998	6.02	a
					1999	4.45	a
		CHIPOLA RIVER BASIN					
02358946	Mockingbird Run near Cypress, Fla.	Lat 30°39′41″, long 85°06′48″, in NW¼ sec. 14, T. 3 N., R. 9 W., Jackson County, Hydrologic Unit 03130012, at upstream side of culvert on County Road 264A, 4.3 mi south of Cypress, and 5.5 mi southeast of Oakdale.	0.58	1996-99	1996	0.32	a
					1997	1.43	a
					1998	4.60	a
					1999	0.76	a
		PEA RIVER BASIN					
02364806	Poplar Branch near Leonia, Fla.	Lat 30°57′07″, long 85°58′15″, in NE¼ sec. 7, T. 6 N., R. 17 W., Holmes County, Hydrologic Unit 03140202, at upstream side of culvert on County Road 185, 2.3 mi southeast of Royals Crossroads, and 4.0 mi northwest of Leonia.	0.54	1996-99	1996	1.88	a
					1997	3.36	a
					1998	6.44	a
					1999	2.22	a
		CHOCTAWHATCHEE RIVER BELOW PEA RIVER					
02365408	Poplar Springs Branch near Noma, Fla.	Lat 30°57′52″, long 85°34′16″, in SE¼ sec. 31, T. 7 N., R. 13 W., Holmes County, Hydrologic Unit 03140203, at upstream side of culvert on State Road 2, 3.0 mi east of Noma, and 3.2 mi west of Graceville.	0.08	1996-99	1996	1.91	a
					1997	1.39	a
					1998	2.39	a
					1999	1.57	a
		CHOCTAWHATCHEE RIVER BASIN					
02365715	Camp Branch Tributary near Redbay, Fla.	Lat 30°38′45″, long 85°56′13″, in SE¼ sec. 21, T. 3 N., R. 17 W., Walton County, Hydrologic Unit 03140203, at upstream side of culvert on State Road 81, 3.8 mi north of Redbay, and 4.6 mi south of U.S. Highway I-10 interchange at State Road 81.	0.90	1996-99	1996	5.86	a
					1997	2.68	a
					1998	4.79	a
					1999	1.57	a

Station No.	Station Name	Location	Drainage area (mi^2)	Period of Record	Annual Maximum		
					Water year	Gage height (feet)	Discharge (ft^3/s)
		SHOAL RIVER BASIN					
02368326	Caney Creek Tributary No. 2 near Paxton, Fla.	Lat 30°56′02″, long 86°13′32″, in NE¼ sec. 15, T. 5 N., R. 20 W., Walton County, Hydrologic Unit 03140103, on upstream side of culvert on County Road 0605, 2.6 mi north of the community of Caney Creek, and 5.2 mi southeast of Paxton.	0.19	1996-99	1996 1997 1998 1999	4.21 6.41 10.00 4.69	20 77 134 32
02368329	Caney Creek Tributary No. 1 near Paxton, Fla.	Lat 30°55′39″, long 86°13′17″, in SW¼ sec. 14, T. 5 N., R. 20 W., Walton County, Hydrologic Unit 03140103, on upstream side of culvert on County Road 0605, 2.1 mi north of the community of Caney Creek, and 5.7 mi southeast of Paxton.	0.11	1996-99	1996 1997 1998 1999	3.32 4.94 5.70 5.29	a a a a
		BLACKWATER RIVER BASIN					
02370018	Long Branch near Beaver Creek, Fla.	Lat 30°51′00″, long 86°46′14″, in NW¼ sec. 17, T. 4 N., R. 25 W., Okaloosa County, Hydrologic Unit 03140104, at upstream side of culvert on State Road 4, 1.1 mi east of county line, 2.1 mi south of Beaver Creek, and 6.1 mi east of Munson.	0.55	1996-98	1996 1997 1998	2.21 2.37 10.06	a a a
02370370	Manning Creek Tributary at Berrydale, Fla.	Lat 30°53′58″, long 87°01′20″, in NW¼ sec. 35, T. 5 N., R. 28 W., Santa Rosa County, Hydrologic Unit 03140104, at upstream side of culvert on State Road 4, 0.5 mi west of Berrydale, and 0.9 mi southeast of State Road 87.	1.24	1996-99	1996 1997 1998 1999	5.29 2.35 5.88 1.52	a a a a
		PERDIDO RIVER BASIN					
02376315	Buckeye Branch Tributary near Walnut Hill, Fla.	Lat 30°51′15″, long 87°30′54″, in NW¼ sec. 23, T. 4 N., R. 33 W., Escambia County, Hydrologic Unit 03140106, at upstream side of culvert on County Road 97A, and 2.1 mi south of Walnut Hill.	0.34	1996-99	1996 1997 1998 1999	4.18 3.49 5.52 2.71	a a a a

a Discharge not determined.
b Maximum peak water year below CSI.
c CSI destroyed during only event water year.

ELEVATION OF LAKES

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304356082321700 JONES CREEK POND NEAR FARGO, GA

LOCATION.--Lat 30°43′56″, long 82°32′17″, Clinch County, Hydrologic Unit 03110201, attached to wooden post of walkway on upstream side of dam on Williamsburg Road in Suwannee Forest, and 3.5 mi northeast of Fargo.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--February 1999 to September 1999.

GAGE.--Nonrecording gage.

REMARKS.--Records good. Weekly staff gage readings furnished by Suwannee Forest employees.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 5.22 ft, Feb. 16, 1999; minimum observed gage height, 3.94 ft, June 1, 23, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 5.22 ft, Feb. 16; minimum observed gage height, 3.94 ft, June 1, 23.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	4.98	---	3.94	4.34	---	---
2	---	---	---	---	---	---	---	---	---	---	---	4.82
3	---	---	---	---	---	---	---	4.56	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	4.58	---
6	---	---	---	---	---	---	---	---	---	4.54	---	---
7	---	---	---	---	---	---	4.96	---	4.10	---	---	---
8	---	---	---	---	---	---	---	---	4.06	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	4.64
10	---	---	---	---	---	---	---	---	4.02	---	---	---
11	---	---	---	---	---	4.98	---	---	---	---	---	---
12	---	---	---	---	---	---	---	4.50	---	---	4.58	---
13	---	---	---	---	---	---	4.84	---	---	5.00	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	4.98	---	---
16	---	---	---	---	5.22	---	---	---	4.10	---	---	4.56
17	---	---	---	---	---	---	---	4.38	---	---	---	---
18	---	---	---	---	---	5.04	---	---	---	---	---	---
19	---	---	---	---	---	5.03	---	---	---	---	4.64	---
20	---	---	---	---	---	---	---	---	---	---	---	4.56
21	---	---	---	---	---	---	4.70	---	3.98	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	5.02	---	---	3.94	4.90	---	---
24	---	---	---	---	---	---	---	4.18	---	---	4.62	---
25	---	---	---	---	---	---	---	4.14	---	---	---	---
26	---	---	---	---	---	---	4.58	---	---	---	4.84	---
27	---	---	---	---	---	---	---	---	---	---	---	4.66
28	---	---	---	---	---	---	4.62	---	4.08	---	---	---
29	---	---	---	---	---	---	---	---	---	4.86	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

304553082295000 GATOR CREEK DAM NEAR FARGO, GA

LOCATION.--Lat 30°45′53″, long 82°29′50″, Clinch County, Hydrologic Unit 03110201, attached to metal post on upstream side of concrete dam abutment on River Road in Suwannee Forest, and 6.5 mi northeast of Fargo.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--February 1999 to September 1999.

GAGE.--Nonrecording gage.

REMARKS.--Records good. Weekly staff gage readings furnished by Suwannee Forest employees.

EXTREMES FOR PERIOD OF RECORD.--Maximum observed gage height, 5.79 ft, Feb. 16, 1999; minimum observed gage height, 4.56 ft, Feb. 16, 1999; minimum observed gage height, 4.56 ft, June 23, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum observed gage height, 5.79 ft, Feb. 16; minimum observed gage height, 4.56 ft, June 23.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	5.64	---	4.68	4.94	---	---
2	---	---	---	---	---	---	---	---	---	---	---	5.06
3	---	---	---	---	---	---	---	5.26	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	5.06	---
6	---	---	---	---	---	---	---	---	---	5.22	---	---
7	---	---	---	---	---	---	5.64	---	4.74	---	---	---
8	---	---	---	---	---	---	---	---	4.71	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	4.88
10	---	---	---	---	---	---	---	---	4.66	---	---	---
11	---	---	---	---	---	5.74	---	---	---	---	---	---
12	---	---	---	---	---	---	---	5.20	---	---	5.06	---
13	---	---	---	---	---	---	5.54	---	---	5.66	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	5.79	---	---	---	4.70	5.60	---	4.80
17	---	---	---	---	---	---	---	5.08	---	---	---	---
18	---	---	---	---	---	5.74	---	---	---	---	---	---
19	---	---	---	---	---	5.72	---	---	---	---	5.08	---
20	---	---	---	---	---	---	---	---	---	---	---	4.86
21	---	---	---	---	---	---	5.44	---	4.60	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	5.70	---	---	4.56	5.44	---	---
24	---	---	---	---	---	---	---	4.90	---	---	4.97	---
25	---	---	---	---	---	---	---	4.88	---	---	---	---
26	---	---	---	---	---	---	5.34	---	---	---	5.08	---
27	---	---	---	---	---	---	---	---	---	---	---	5.00
28	---	---	---	---	---	---	5.34	---	4.74	---	---	---
29	---	---	---	---	---	---	---	---	---	5.24	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---

02329200 LAKE JACKSON NEAR TALLAHASSEE, FL

LOCATION.--Lat 30° 31′43″, long 84° 21′30″, in SW$^1/_4$ sec. 32, T. 2 N., R. 1 W., Leon County, Hydrologic Unit 03120003, on southwest side of lake, east of U.S. Highway 27, and 6.0 mi northwest of Tallahassee.

SURFACE AREA.--4,001 acres (6.25 mi^2), at elevation 87 ft NGVD.

DRAINAGE AREA.--43.2 mi^2.

PERIOD OF RECORD.--March 1950 to January 1953, March 1954 to August 1956, September 1956 to August 1958 (fragmentary), September 1958 to May 1990. June 1990 to current year (fragmentary). Records of elevation prior to October 1960 are available in file of the Geological Survey.

GAGE.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.-Lake has no surface outlet. Some outflow from lake through sinkhole to ground water.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily elevation, 96.16 ft, June 18, 1966 (from recorded range in stage); minimum observed, 75.68 ft, Jan. 4, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum observed elevation, 84.96 ft, Oct. 2; minimum observed 78.35 ft, Sept. 30.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1998 TO SEPTEMBER 199
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	82.34	---	80.80	---	---	---
2	84.96	84.34	---	---	---	---	---	---	---	80.40	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	83.74	---	---	---	---	---	---	---	---	---
5	---	---	---	---	83.20	82.74	82.28	81.38	---	---	80.00	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	83.34	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	80.38	---	---
9	84.88	---	---	---	---	---	---	---	---	---	---	78.58
10	---	---	83.64	---	---	---	---	---	80.62	---	---	---
11	---	84.20	---	---	---	82.66	---	---	---	---	---	---
12	---	---	---	---	83.06	---	---	---	---	---	---	---
13	---	---	---	---	---	---	82.00	---	---	---	---	---
14	---	---	---	83.26	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	80.48	---	78.46
16	84.78	84.10	---	---	---	---	---	---	---	---	---	---
17	---	---	83.49	---	---	---	---	---	---	---	79.44	---
18	---	---	---	---	---	82.67	---	81.26	80.62	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	81.72	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	83.44	83.22	82.92	---	---	---	---	80.36	---	---
23	84.54	---	---	---	---	---	---	---	---	---	---	78.40
24	---	---	---	---	---	---	---	---	80.38	---	---	---
25	---	83.90	---	---	---	82.50	---	---	---	---	79.22	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	80.88	---	---	---	---
28	---	---	---	---	---	---	81.56	---	---	---	---	---
29	84.42	---	83.48	83.36	---	---	---	---	---	80.22	---	---
30	---	---	---	---	---	---	---	---	---	---	---	78.35
31	---	---	---	---	---	---	---	---	---	---	78.92	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

OCHLOCKONEE RIVER BASIN
02329900 LAKE TALQUIN NEAR BLOXHAM, FL

LOCATION.--Lat 30°23′15″, long 84°38′45″, in SW$^1/_4$ sec. 16, T.1 S., R.4 W., Leon County, Hydrologic Unit 03120003, at left upstream end of C.H. Corn Hydroelectric Dam on Ochlockonee River, 1.0 mi northwest of Bloxham, and 3.5 midownstream from Oklawaha Creek.

SURFACE AREA.--6,850 acres (10.7 mi^2), at elevation 60.0 ft NGVD, from data provided by Florida Power Corporation.

DRAINAGE AREA.--1,700 mi^2.

PERIOD OF RECORD.--January 1930 to September 1950 (month-end contents only, published only in WSP 1304); October 1951 to September 1960 (month-end elevations and contents); October 1960 to September 1982, March 1985 to September 30 1992 (month-end elevations, contents and daily elevations); October 1,1992 to current year, daily elevations.

REVISED RECORDS.--WSP 1905, WRD FL-76-4: Drainage area.

GAGE.--Nonrecording gage and water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by concrete dam with riprapped earth embankments. Spillway is equipped with seven taintor gates, each 16ft high by 25 ft wide. Storage began in June 1929; water in lake first reached minimum operating level January 1930. Usable capacity, 69,800 acre-ft between elevations, 60.0 ft, minimum operating level, and 68.5 ft, top of closed taintor gates. Dead storage is unknown. Contents are available by request.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily contents, 99,400 acre-ft, Sept. 22, 1969, elevation, 71.16 ft; maximum instantaneous elevation, 71.60 ft, Sept. 22, 1969; minimum daily elevation after January 1930, 48.70 ft, Oct. 22,23, 1957 (earth embankment breached).

EXTREMES FOR CURRENT YEAR.--Maximum daily contents, 75,300 acre-ft, Oct. 1, elevation, 69.05 ft; minimum daily contents, 62,900 acre-ft, Oct. 3, elevation, 67.79 ft.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69.05	68.61	68.51	68.58	68.49	68.46	68.49	68.44	68.43	68.62	68.48	68.42
2	68.05	68.61	68.52	68.56	68.54	68.46	68.52	68.41	68.42	68.61	68.48	68.40
3	67.79	68.49	68.52	68.51	68.54	68.51	68.54	68.40	68.40	68.59	68.51	68.39
4	68.29	68.55	68.52	68.48	68.49	68.56	68.57	68.40	68.38	68.57	68.52	68.37
5	68.32	68.57	68.52	68.47	68.43	68.53	68.56	68.41	68.39	68.57	68.55	68.34
6	68.42	68.50	68.52	68.50	68.50	68.50	68.53	68.42	68.38	68.52	68.58	68.32
7	68.50	68.50	68.52	68.53	68.53	68.51	68.50	68.51	68.35	68.67	68.60	68.31
8	68.50	68.50	68.52	68.53	68.50	68.52	68.47	68.50	68.37	68.73	68.66	68.30
9	68.55	68.50	68.58	68.54	68.49	68.49	68.44	68.47	68.34	68.65	68.58	68.30
10	68.51	68.51	68.61	68.53	68.51	68.54	68.46	68.43	68.37	68.54	68.49	68.35
11	68.49	68.59	68.63	68.48	68.53	68.55	68.45	68.44	68.46	68.47	68.47	68.38
12	68.50	68.57	68.61	68.46	68.51	68.51	68.44	68.48	68.48	68.42	68.46	68.38
13	68.52	68.49	68.57	68.45	68.47	68.46	68.43	68.53	68.49	68.51	68.44	68.38
14	68.47	68.49	68.51	68.49	68.52	68.54	68.45	68.55	68.49	68.61	68.47	68.38
15	68.49	68.50	68.49	68.53	68.49	68.55	68.40	68.58	68.50	68.53	68.55	68.35
16	68.53	68.51	68.46	68.55	68.46	68.44	68.46	68.58	68.57	68.45	68.59	68.31
17	68.53	68.53	68.48	68.53	68.50	68.54	68.45	68.56	68.61	68.53	68.65	68.29
18	68.50	68.55	68.54	68.52	68.45	68.60	68.44	68.54	68.64	68.52	68.63	68.28
19	68.49	68.52	68.58	68.52	68.43	68.59	68.46	68.52	68.65	68.60	68.61	68.26
20	68.49	68.50	68.60	68.52	68.46	68.56	68.45	68.51	68.63	68.46	68.56	68.29
21	68.49	68.52	68.58	68.52	68.47	68.53	68.48	68.48	68.63	68.39	68.51	68.39
22	68.54	68.51	68.57	68.51	68.49	68.54	68.49	68.46	68.62	68.47	68.45	68.40
23	68.52	68.51	68.55	68.53	68.48	68.52	68.49	68.45	68.62	68.53	68.40	68.41
24	68.44	68.53	68.50	68.54	68.49	68.47	68.50	68.39	68.61	68.54	68.43	68.40
25	68.44	68.51	68.49	68.42	68.50	68.43	68.53	68.38	68.59	68.53	68.52	68.40
26	68.48	68.49	68.56	68.49	68.47	68.49	68.52	68.36	68.58	68.44	68.64	68.40
27	68.51	68.48	68.56	68.53	68.44	68.52	68.50	68.41	68.60	68.49	68.60	68.44
28	68.53	68.49	68.52	68.50	68.43	68.49	68.52	68.43	68.65	68.50	68.53	68.50
29	68.46	68.50	68.49	68.49	---	68.47	68.56	68.42	68.69	68.48	68.45	68.51
30	68.47	68.51	68.50	68.50	---	68.47	68.53	68.45	68.65	68.44	68.43	68.52
31	68.54	---	68.54	68.52	---	68.48	---	68.45	---	68.45	68.45	---
MEAN	68.46	68.52	68.54	68.51	68.49	68.51	68.49	68.46	68.52	68.53	68.53	68.37
MAX	69.05	68.61	68.63	68.58	68.54	68.60	68.57	68.58	68.69	68.73	68.66	68.52
MIN	67.79	68.48	68.46	68.42	68.43	68.43	68.40	68.36	68.34	68.39	68.40	68.26

CAL YR 1998 MEAN 64.30 MAX 69.36 MIN 57.93
WTR YR 1999 MEAN 68.49 MAX 69.05 MIN 67.79

WELL DESCRIPTIONS AND GROUND-WATER DATA

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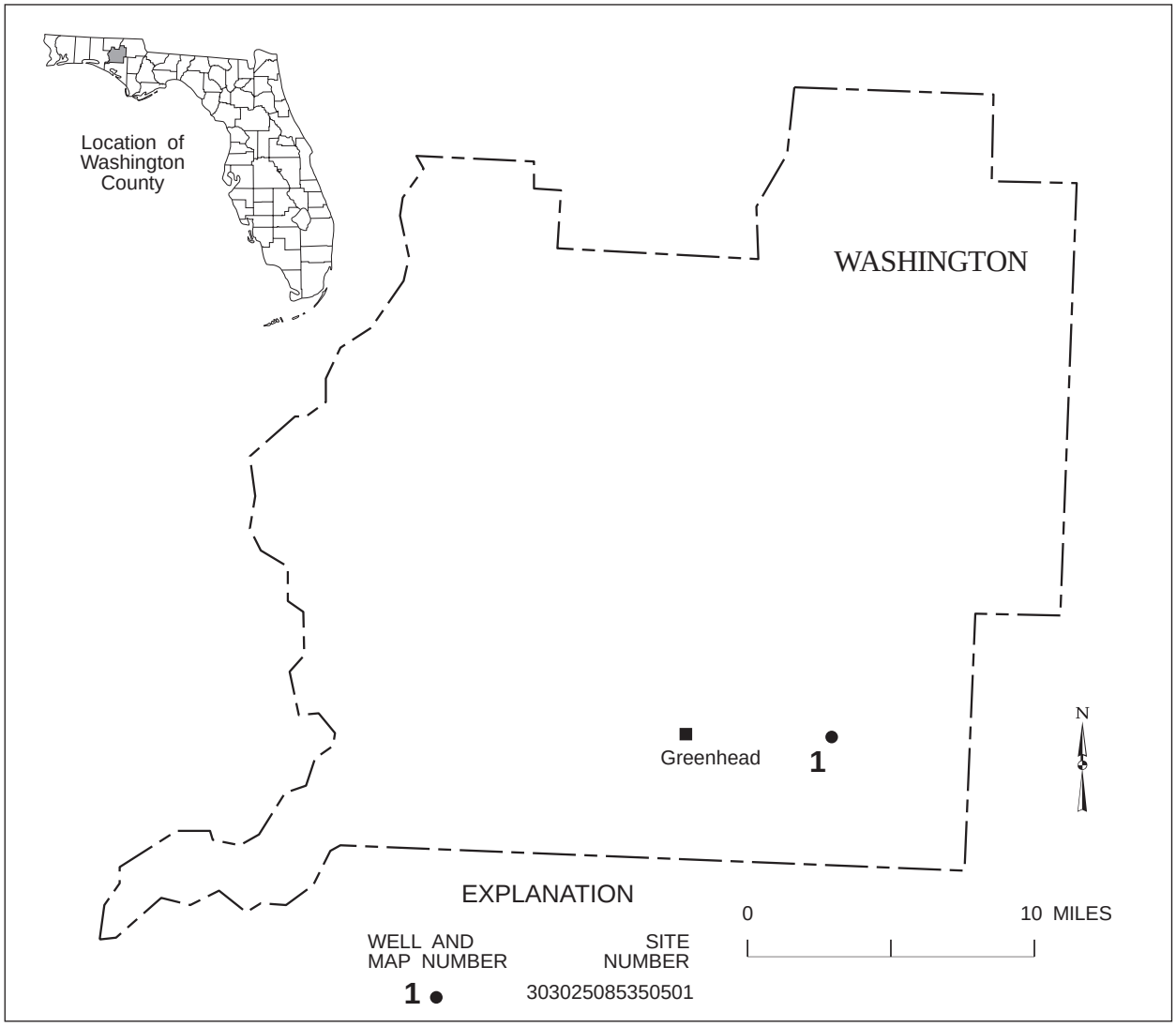

Figure 14. Location of wells in Washington County.

WELL NUMBER.--303025085350501. Local Number 422A. U.S. Geological Survey Observation Well near Wausau, Fl.

LOCATION.--Lat 30°30′25″, long 85°35′05″, in SE¼NW¼NW¼ sec. 7, T. 1 N., R. 13 W., Hydrologic Unit 03140101, 0.6 mi east of road to Deadening Cemetery, 4.2 mi east of State Highway 77, and 8.6 mi south of Wausau.

AQUIFER.--Floridan aquifer of the Tertiary system;, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled,, observation, artesian well, diameter 4 in., depth 150 ft, cased to 110 ft.

INSTRUMENTATION.--Water-level recorder. Measuring point: Top of casing, 2.90 ft above land-surface datum.

DATUM.--Land-surface datum is 66.11 ft above National Geodetic Vertical Datum of 1929.

PERIOD OF RECORD.--October 1962 to September 1989. October 1997 to September 1998.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 65.75 ft NGVD, Oct. 1,2, 1979; lowest, 48.19 ft NGVD, Feb. 13, 14, 1969

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61.34	---	---	---	60.06	59.51	59.34	58.60	59.09	59.41	59.61	59.37
2	61.37	---	---	---	60.03	59.47	59.29	58.56	59.09	59.41	59.59	59.33
3	61.40	---	---	---	60.01	59.55	59.26	58.51	59.09	59.38	59.56	59.29
4	61.42	---	---	---	60.00	59.47	59.24	58.52	59.05	59.33	59.52	59.24
5	61.42	---	---	---	59.94	59.45	59.21	58.52	59.02	59.28	59.49	59.19
6	61.46	---	---	---	59.94	59.48	59.18	58.66	59.04	59.25	59.44	59.17
7	61.53	---	---	---	59.92	59.48	59.15	59.18	59.05	59.31	59.54	59.17
8	61.54	---	---	---	59.92	59.44	59.13	---	59.04	59.30	59.59	59.15
9	61.54	---	---	---	59.90	59.71	59.11	---	59.05	59.29	59.58	59.11
10	61.53	---	---	---	59.88	59.74	59.05	---	59.03	59.37	59.55	59.05
11	61.51	---	---	---	59.84	59.74	59.00	59.16	59.14	59.36	59.49	59.01
12	61.50	---	---	---	59.79	59.74	58.97	59.13	59.38	59.47	59.44	58.96
13	---	---	---	---	59.75	59.80	58.93	59.13	59.45	59.56	59.41	58.93
14	---	---	---	---	59.72	59.88	58.91	59.13	59.45	59.60	59.38	58.89
15	---	---	60.19	---	59.70	59.85	58.90	59.06	59.45	59.59	59.34	58.85
16	---	---	60.17	---	59.69	59.79	58.80	58.99	59.45	59.63	59.30	58.79
17	---	---	60.15	---	59.74	59.78	58.78	58.95	59.43	59.86	59.28	58.73
18	---	---	60.10	---	59.82	59.75	58.73	58.88	59.38	59.93	59.35	58.71
19	---	---	60.08	---	59.81	59.72	58.72	58.83	59.32	59.95	59.33	58.69
20	---	---	60.04	---	59.74	59.69	58.71	58.79	59.27	59.96	59.29	58.69
21	---	---	60.02	---	59.73	59.68	58.69	58.75	59.23	59.96	59.28	58.67
22	---	---	60.01	---	59.67	59.64	58.65	58.71	59.19	59.93	59.35	58.62
23	---	---	59.96	---	59.66	59.59	58.61	58.68	59.23	59.89	59.43	58.58
24	---	---	59.95	---	59.63	59.57	58.57	58.64	59.26	59.89	59.49	58.55
25	---	---	59.97	---	59.60	59.52	58.57	58.59	59.29	59.86	59.52	58.51
26	---	---	60.03	---	59.57	59.47	58.61	58.65	59.33	59.85	59.51	58.49
27	---	---	60.02	60.06	59.52	59.42	58.59	58.79	59.45	59.80	59.49	58.47
28	---	---	60.08	60.05	59.58	59.38	58.62	58.77	59.45	59.75	59.47	58.46
29	---	---	60.07	60.03	---	59.36	58.63	58.75	59.44	59.72	59.49	58.44
30	---	---	60.01	59.98	---	59.33	58.62	58.85	59.42	59.69	59.48	58.44
31	---	---	---	60.03	---	59.35	---	59.04	---	59.65	59.42	---
TOTAL	---	---	---	---	1674.16	1847.35	1766.57	---	1777.56	1848.23	1843.01	1765.55
MEAN	---	---	---	---	59.79	59.59	58.89	---	59.25	59.62	59.45	58.85
MAX	---	---	---	---	60.06	59.88	59.34	---	59.45	59.96	59.61	59.37
MIN	---	---	---	---	59.52	59.33	58.57	---	59.02	59.25	59.28	58.44

MISCELLANEOUS WATER LEVEL MEASUREMENTS

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STATION NUMBER	STATION NAME	DATE OF SAMPLE	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
	CLINCH, GA		
304738082265001	Perimeter Road Well near Fargo	03-18-99	6.09
		04-28-99	7.99
		05-25-99	9.09
		06-08-99	9.61
		06-23-99	9.70
		07-13-99	7.74
		08-24-99	9.72
304741082263101	Bay Creek Well near Fargo	03-18-99	1.62
		04-28-99	3.38
		05-25-99	4.53
		06-08-99	5.07
		06-23-99	4.89
		07-13-99	3.49
		08-24-99	5.02
304825082290401	Steedley Field Well near Fargo	03-18-99	2.47
		04-28-99	4.40
		05-25-99	5.69
		06-08-99	7.12
		06-23-99	7.64
		07-13-99	.85
		08-24-99	4.45

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PROJECT DATA

FL-61500 -- Evaluation of Ground-Water and Surface-Water Interactions in the Lower Suwannee River Basin

There are many unknowns concerning the interaction between ground and surface water in the lower Suwannee River basin, especially how ground water contributes to flow in the Suwannee River and its tributaries. The objective of the project is to develop an improved, quantitative understanding of the hydraulics of the Floridan aquifer system in the entire Suwannee River Water Management District and the dynamics of water exchanges between the lower Suwannee and Santa Fe Rivers and the Floridan aquifer system. This will be accomplished, in part, by developing digital models of the ground- and surface-water systems. In support of the modeling effort, the data below were collected.

SURFACE WATER MEASUREMENTS

Station Name: Santa Fe River at Mouth near Branford, FL

Station Number: 02322823

Location: Lat 29°53′12″, long 82°52′46″, in SE¼ sec. 11, T. 7 S., R. 14 E., Gilchrist County, Hydrologic Unit 03110206, on Santa Fe River approximately 1000 feet upstream from mouth of Santa Fe River, just downstream from boat ramp on left bank, 5.2 miles southeast of Branford, FL.

Drainage Area: Not Determined

Measured Previously (water years): 1996-98

Date-time (EDT)	Discharge, in ft^3/s
08/25/99 16:16	1510
08/25/99 16:19	1606
08/25/99 16:23	1570
08/25/99 16:26	1496
08/25/99 16:30	1416
08/25/99 16:33	1455
09/28/99 11:17	1719
09/28/99 11:24	1675
09/28/99 11:30	1779
09/28/99 11:32	1726

Station Name: Suwannee River below the mouth of the Santa Fe River

Station Number: 295309082523801

Location: Lat 29°53′09″, long 82°52′38″, in SE¼ sec. 11, T. 7 S., R. 14 E., Gilchrist County, Hydrologic Unit 03110205, on Suwannee River approximately 1,000 feet downstream from mouth of Santa Fe River, 65.7 miles upstream from mouth of Suwannee River, 5.2 miles southeast of Branford, FL.

Drainage Area: Not determined

Measured Previously (water years): 1997, 1998

Date-time (EDT)	Discharge, in ft^3/s
08/25/99 16:54	3519
08/25/99 16:57	3487
08/25/99 17:01	3428
08/25/99 17:06	3605
08/25/99 17:11	3404
08/25/99 17:15	3514
08/25/99 17:18	3744
09/28/99 11:58	3829
09/28/99 12:05	3654
09/28/99 12:12	3681
09/28/99 12:20	3764

Station Name: Suwannee River upstream from Rock Bluff Springs Run near Bell, FL

Station Number: 294743082551201

Location: Lat 29°47′43″, long 82°55′12″, in SW¼ sec. 9, T. 8 S., R. 14 E., Gilchrist County, Hydrologic Unit 03110205, on Suwannee River upstream from mouth of Rock Bluff Springs Run, 56.5 miles upstream from mouth of Suwannee River, 4.4 mi (7.1 km) northwest of Bell, FL.

Drainage Area: Not Determined

Measured previously (water years): 1997, 1998

Date-time (EDT)	Discharge, in ft^3/s
08/25/99 14:12	3820
08/25/99 14:18	3890
08/25/99 14:24	3561
08/25/99 14:29	3805
08/25/99 14:34	3667
08/25/99 14:39	3339
08/25/99 14:51	3582
08/25/99 18:50	3764
08/25/99 18:55	3597
08/25/99 19:00	3568
08/25/99 19:05	3503
08/25/99 19:11	3560
09/28/99 10:13	3485
09/28/99 10:20	3468
09/28/99 10:28	3471
09/28/99 10:37	3562
09/28/99 12:53	3766
09/28/99 13:00	3690
09/28/99 13:07	3826
09/28/99 13:13	3623
09/28/99 16:43	3803
09/28/99 16:52	3713
09/28/99 17:02	3875
09/28/99 17:12	3809
09/28/99 17:21	3913
09/28/99 17:30	3920
09/28/99 18:10	3696
09/28/99 18:16	3593
09/28/99 18:23	4128
09/28/99 18:33	3960
09/28/99 18:43	3953
09/28/99 18:54	3943
09/28/99 19:30	4104
09/28/99 19:37	3772
09/28/99 19:44	3864
09/28/99 19:51	3596
09/28/99 19:57	3867

Station Name: Suwannee River upstream from Hart Springs Run near Wilcox, FL

Station Number: 294041082571701

Location: Lat 29°40′41″, long 82°57′17″, in NW¼ sec. 30, T. 9 S., R. 14 E., Gilchrist County, Hydrologic Unit 03110205, on Suwannee River approximately 1000 feet upstream from mouth of Hart Springs Run, 42.9 mi upstream from mouth of Suwannee River, 6.2 mi (10.0 km) north of Wilcox, FL

Drainage Area: Not determined

Measured Previously (water years): 1997, 1998

Date-time (EDT)	Discharge, in ft^3/s
08/24/99 20:49	3818
08/24/99 20:54	3896
08/24/99 20:58	3755
08/24/99 21:08	3879
08/24/99 21:13	3903
09/28/99 09:26	3500
09/28/99 09:33	3560
09/28/99 11:27	3870
09/28/99 11:34	3833
09/28/99 12:05	3947
09/28/99 12:13	3821
09/28/99 12:23	3947
09/28/99 12:33	3964
09/28/99 12:40	3970
09/28/99 12:48	3959
09/28/99 13:22	3925
09/28/99 13:30	4093
09/28/99 13:38	4011
09/28/99 13:47	4121
09/28/99 14:39	4125
09/28/99 14:48	4232
09/28/99 14:54	4046
09/28/99 15:01	4086
09/28/99 15:56	4077
09/28/99 16:02	4127
09/28/99 16:09	4035
09/28/99 16:18	4235
09/28/99 16:27	4342
09/28/99 16:36	4223
09/28/99 17:19	4256
09/28/99 17:26	4391
09/28/99 17:33	4416
09/28/99 17:41	4396
09/28/99 17:48	4286
09/28/99 17:55	4421
09/27/99 20:19	3625
09/27/99 20:26	3709
09/27/99 20:35	3663
09/27/99 20:43	3649
09/27/99 20:51	3779
09/27/99 20:59	3740
09/27/99 21:07	3770
09/27/99 21:15	3705
09/27/99 21:23	3555
09/27/99 21:30	3563

Station Name: Suwannee River above Manatee Springs near Chiefland, FL

Station Number: 292940082590301

Location: Lat 29°29′40″, long 82°59′03″, in SW¼ sec. 26, T. 11 S., R. 13 E., Levy County, Hydrologic Unit 03110205, on Suwannee River approximately 0.4 mi upstream from mouth of Manatee Springs Run, 24.7 miles upstream from mouth of Suwannee River, 8 miles east of Chiefland, FL

Drainage Area: Not determined

Measured Previously (water years): 1997, 1998

Date-time (EDT)	Discharge, in ft^3/s
08/26/99 10:31	5997
08/26/99 10:42	5958
08/26/99 10:55	6088
08/26/99 11:02	5955
08/26/99 12:21	5576
08/26/99 12:31	5488
08/26/99 12:41	5002
08/26/99 12:53	4704
08/26/99 13:03	3898
08/26/99 13:12	3440
08/26/99 13:22	3220
08/26/99 13:31	2794
08/26/99 13:40	2289
08/26/99 13:49	2092
08/26/99 13:57	1981
08/26/99 14:06	1907
08/26/99 14:16	1546
08/26/99 14:24	1577
08/26/99 14:33	1263
08/26/99 14:44	1544
08/26/99 14:53	942
08/26/99 15:04	1278
08/26/99 15:11	582
08/26/99 15:18	1412
08/26/99 15:29	555
08/26/99 15:38	1100
08/26/99 15:45	92
08/26/99 15:53	904
08/26/99 16:01	504
08/26/99 16:09	1122
08/26/99 17:31	1806
08/26/99 17:40	1277
08/26/99 17:47	2209
08/26/99 17:56	1638
08/26/99 18:04	3318
08/26/99 18:13	1677
08/26/99 18:22	3584
08/26/99 18:30	2818
08/26/99 18:40	4153
08/26/99 18:48	3290
08/26/99 18:56	4803
08/26/99 19:05	3860
08/26/99 19:13	4954

Suwannee River above Manatee Springs near Chiefland, FL--Continued

Date-time (EDT)	Discharge, in ft^3/s
08/26/99 19:21	4522
08/26/99 19:29	4797
08/26/99 19:37	4588
08/26/99 19:45	4740
08/26/99 19:53	5040
08/26/99 20:00	5268
08/26/99 20:08	5273
08/26/99 21:05	5902
08/26/99 21:11	5598
08/26/99 21:19	5653
08/26/99 21:24	6002
08/26/99 21:32	5974
08/26/99 21:38	5830
08/26/99 21:56	5986
08/26/99 22:03	5937
08/26/99 22:10	6211
08/26/99 22:16	6130
08/26/99 22:22	6272
09/29/99 09:37	4108
09/29/99 09:49	4336
09/29/99 10:00	4516
09/29/99 10:13	4497
09/29/99 10:59	5283
09/29/99 11:11	5015
09/29/99 11:26	5090
09/29/99 11:44	5374
09/29/99 12:27	5892
09/29/99 12:39	6025
09/29/99 12:51	5907
09/29/99 13:02	6189
09/29/99 13:43	6396
09/29/99 13:57	6542
09/29/99 14:13	6581
09/29/99 14:28	6306
09/29/99 15:01	7010
09/29/99 15:12	6283
09/29/99 15:23	6438
09/29/99 15:34	6289
09/29/99 16:14	5865
09/29/99 16:26	5341
09/29/99 16:37	5474
09/29/99 16:48	4437
09/29/99 17:14	3601
09/29/99 17:25	3258
09/29/99 17:36	2592
09/29/99 17:46	2552

Suwannee River above Manatee Springs near Chiefland, FL--Continued

Date-time (EDT)	Discharge, in ft^3/s
09/29/99 18:26	2305
09/29/99 18:35	1924
09/29/99 18:45	2144
09/29/99 18:55	2103
09/29/99 19:16	2008
09/29/99 19:26	2116
09/29/99 19:36	1919
09/29/99 19:45	1968
09/29/99 20:24	2153
09/29/99 20:33	2286
09/29/99 20:42	2409
09/29/99 20:52	2591
09/29/99 21:08	2856
09/29/99 21:19	3035

Station Name: Suwannnee River at Fowlers Bluff, FL

Station Number: 02323590

Location: Lat 29°23′50″, long 83°01′40″, in NW¼ sec. 32, T. 12 S., R. 13 E., Levy County, Hydrologic Unit 03110205, 15.2 miles upstream from mouth of Suwannee River, approximately 100 feet downstream from public boat ramp

Drainage Area: Not determined

Measured Previously (water years): 1997, 1998

Date-time (EDT)	Discharge, in ft^3/s
08/27/99 12:41	3824
08/27/99 12:48	3106
08/27/99 12:53	2448
08/27/99 13:00	1626
08/27/99 13:06	1249
08/27/99 13:13	706
08/27/99 14:12	1754
08/27/99 14:17	1766
08/27/99 14:23	1454
08/27/99 14:29	1680
08/27/99 14:34	1940
08/27/99 15:02	2948
08/27/99 15:07	2154
08/27/99 15:13	2533
08/27/99 15:19	1888
08/27/99 15:24	2387
08/27/99 15:30	2040
08/27/99 15:36	2418
08/27/99 15:42	2416
08/27/99 15:48	1325
08/27/99 15:56	2162
08/27/99 16:02	2394
08/27/99 16:09	1162
08/27/99 16:15	1820
08/27/99 16:21	783
08/27/99 16:29	1598
08/27/99 16:34	1874
08/27/99 16:41	1735
08/27/99 16:49	1314
08/27/99 17:16	1072
08/27/99 17:24	1958
08/27/99 17:30	1004
08/27/99 17:35	545
08/27/99 17:40	440
08/27/99 17:46	88
08/27/99 18:04	1099
08/27/99 18:09	1747
08/27/99 18:15	1772
08/27/99 18:22	3131

Suwannnee River at Fowlers Bluff, FL--Continued

Date-time (EDT)	Discharge, in ft^3/s
08/27/99 18:28	2890
08/27/99 18:34	3933
08/27/99 18:41	4102
08/27/99 18:46	4495
08/27/99 18:52	4686
08/27/99 18:55	5438
08/27/99 19:04	5726
08/27/99 19:11	6248
08/27/99 19:17	6152
08/27/99 19:23	6608
08/27/99 19:30	6399
08/27/99 19:36	6836
08/27/99 19:42	7344
08/27/99 19:49	7052
08/27/99 19:55	7286
08/27/99 20:00	7193
08/27/99 20:07	7762
08/27/99 20:12	7456
08/27/99 20:18	7540
08/27/99 20:24	7590
08/27/99 20:30	7860
08/27/99 20:36	7396
08/27/99 20:42	7674
08/27/99 20:48	7907
08/27/99 20:53	8019
08/27/99 20:58	8342
08/27/99 21:04	8252
08/27/99 21:10	8036
09/29/99 09:48	6754
09/29/99 09:57	6447
09/29/99 10:14	7050
09/29/99 10:21	6939
09/29/99 10:38	7482
09/29/99 10:46	7669
09/29/99 10:54	7496
09/29/99 11:03	7797
09/29/99 11:42	8347
09/29/99 11:50	8407
09/29/99 11:58	8522
09/29/99 12:09	8631
09/29/99 12:43	8349
09/29/99 12:50	9083
09/29/99 12:57	9194
09/29/99 13:06	9119
09/29/99 13:36	9358
09/29/99 13:45	9107
09/29/99 13:51	8301
09/29/99 14:00	9027
09/29/99 14:32	8902
09/29/99 14:41	9468
09/29/99 14:48	8360
09/29/99 14:54	8381

Suwannnee River at Fowlers Bluff, FL--Continued

Date-time (EDT)	Discharge, in ft^3/s
09/29/99 15:33	5615
09/29/99 15:42	4774
09/29/99 15:51	3785
09/29/99 15:59	2972
09/29/99 16:37	581
09/29/99 16:45	197
09/29/99 16:52	405
09/29/99 16:59	211
09/29/99 17:34	-212
09/29/99 17:43	-68
09/29/99 17:51	177
09/29/99 17:59	191
09/29/99 18:36	111
09/29/99 18:44	278
09/29/99 18:53	383
09/29/99 19:01	223
09/29/99 19:44	643
09/29/99 19:51	572
09/29/99 19:58	590
09/29/99 20:06	1552
09/29/99 20:33	2128
09/29/99 20:42	3028
09/29/99 20:50	2909
09/29/99 20:58	3794
09/29/99 21:07	3672

SPRING MEASUREMENTS

Station Number: 02323566

Station Name: Manatee Springs near Chiefland, FL

Location: Lat 29°29′20″, long 82°58′41″, in SE¼ sec. 26, T. 11 S., R. 13 E., Levy County, Hydrologic Unit 03110205, in Manatee Springs State Park, 7 miles west of Chiefland, FL.

Drainage Area: Indeterminate

Previously measured (water year):

Date-time (EDT)	Discharge, in ft^3/s
09/28/1999 09:40	149
09/28/1999 14:47	157
09/28/1999 19:10	122

Station Number: 02323502

Station Name: Fanning Springs near Wilcox, FL

Location: Lat 29°35′14″, long 82°56′12″, in NW¼ sec. 29, T. 10 S., R. 14 E., Levy County, Hydrologic Unit 03110205, 0.2 mi south of U. S. Highway 98 Bridge over the Suwanee River at the town of Fanning Springs.

Drainage Area: Indeterminate

Previously measured (water year):

Note: Measurements made near mouth of spring run

Date-time (EDT)	Discharge, in ft^3/s
09/29/1999 09:46	69.9
09/29/1999 11:35	76.1
09/29/1999 13:43	78.1
09/29/1999 16:08	74.3
09/29/1999 17:58	68.4
09/29/1999 19:13	64.8

Station Number: 02322700

Station Name: Ichetucknee River nr Hildreth, FL

Location: Lat 29°57′09″, long 82°47′10″, in NW¼ sec. 23, T. 6 S., R. 15 E., Suwannee County, Hydrologic Unit 03110206, at bridge on U. S. Highway 27, 1.0 mi east of Hildreth, 1.5 mi upstream from mouth, and 3.0 mi downstream from head of Ichetucknee Springs Group.

Drainage Area: Indeterminate

Previously measured (water year): 1917, 1929-1983, 1989, 1991, 1995-1998

Time of measurement (EDT): 09/27/1999 13:15

Discharge, in cubic feet per second: 363

Station Number: 295225082353000

Spring Name: Santa Fe River Rise above US Hwy 441 near High Springs, FL

Location: Lat 29°52′25″, long 82°35′30 in SW 1/4 sec. 14, T. 7 S., R. 17. E., Alachua County, Hydrologic Unit 03110206, at emergence of river from limestone formation, 1.0 mi east of U.S. Highway 41-441, 2.4 mi upstream from gaging station at US Highway 41-441, and 3.2 mi north of High Springs, FL.

Drainage Area: Indeterminate

Previously measured (water year): 1998

Time of measurement (EDT): 09/27/1999 16:15

Discharge, in cubic feet per second: 160

Station Number: 295047082533401

Station Name: Fletcher Spring near Hatchbend, FL

Location: Lat 29°50′47″, long 82°53′34″, in SE¼ sec. 26, T. 7 S., R. 14 E., Lafayette County, Hydrologic Unit 03110205, approximately 750 feet east of Suwannee River, 0.2 mi southeast of Turtle Spring and 1.5 mi east of Hatchbend, FL.

Drainage Area: Indeterminate

Previously measured (water year): 1973, 1999

Time of measurement (EDT): 09/28/1999 14:45

Discharge, in cubic feet per second: 10.4
Station Number: 02322880

Station Name: Turtle Spring near Hatchbend, FL

Location: Lat 29°50′55″, long 82°53′24″, in NW¼ sec. 26, T. 7 S., R. 14 E., Lafayette County, Hydrologic Unit 03110205, on right bank of the Suwannee River, 0.2 mi (0.3 km) northeast of Fletcher Spring and 1.7 mi (2.7 km) east of Hatchbend, FL.

Drainage Area: Indeterminate

Previously measured (water year): 1973, 1977, 1995-96

Time of measurement (EDT): 09/28/1999 16:06

Discharge, in cubic feet per second: 23.7

Station Number: 294838082560800

Station Name: Pot Hole Spring near Little Lake City

Location: Lat 29°48′38″, long 82°56′08″, in SW¼ sec. 5, T. 8 S., R. 14 E., Dixie County, Hydrologic Unit 03110205, on right bank 0.6 mi north of State Highway S340, 1.75 mi upstream from Rock Bluff Landing, and 2.9 mi southwest of Little Lake City.

Drainage Area: Indeterminate

Previously measured (water year):

Time of measurement (EDT): 09/28/1999 17:40

Discharge, in cubic feet per second: 16.0

Station Number: 02323010

Station Name: Guaranto Spring near Bell, FL

Location: Lat 29°46′50″, long 82°56′30″, in NW¼ sec. 20, T. 8 S., R. 14 E., Dixie County, Hydrologic Unit 03110205, on right bank of Suwannee River, 12.6 miles north of Oldtown.

Drainage Area: Indeterminate

Previously measured (water year): 1932, 1962

Time of measurement (EDT): 09/28/1999 18:24

Discharge, in cubic feet per second: 7.2

Station Number: 02322997

Station Name: Rock Bluff Springs Run near Bell, FL

Location: Lat 29°47′50″, long 82°55′10″, in SW¼ sec. 9, T. 8 S., R. 14 E., Gilchrist County, Hydrologic Unit 03110205, on left bank of Suwannee River, 4.4 mi (7.1 km) northwest of Bell, FL.

Drainage Area: Indeterminate

Measured Previously (water years): 1943, 1956, 1961, 1973, 1977, 1990-91, 1993, 1995-96, 1998

Time of measurement (EDT): 09/28/1999 19:10

Discharge, in cubic feet per second: 31.4

Station Number: 02323150

Station Name: Hart Springs Run near Wilcox, FL

Location: Lat 29°40′30″, long 82°57′07″, in NW¼ sec. 30, T. 9 S., R. 14 E., Gilchrist County, Hydrologic Unit 03110205, on left bank of Suwannee River, 4.8 mi (7,7 km) north of Wilcox, FL.

Drainage Area: Indeterminate

Previously measured (water year): 1932, 1946, 1956, 1961, 1973, 1977, 1995-96, 1998

Time of measurement (EDT): 09/29/1999 12:33

Discharge, in cubic feet per second: 53.8

Station Number: 02323095

Station Name: Sun Springs Run near Wannee, FL

Location: Lat 29°42′16″, long 82°56′01″, in NW¼ sec. 17, T. 9 S., R. 14 E., Gilchrist County, Hydrologic Unit 03110205, on left bank of the Suwannee River, 1.1 mi (1.8 km) northeast of Wanee, FL.

Drainage Area: Indeterminate

Previously measured (water year): 1973, 1995-1996

Time of measurement (EDT): 09/29/1999 16:45

Discharge, in cubic feet per second: 27.2

Station Number: 02323200

Station Name: Otter Springs near Wilcox, FL

Location: Lat 29°38′40″, long 82°56′36″, in NE¼ sec. 6, T. 10 S., R. 14. E., Gilchrist County, Hydrologic Unit 03110205, on left bank of Suwannee River, 2.6 mi (4.2 km) northwest of Wilcox, FL.

Drainage Area: Indeterminate

Previously measured (water year): 1932, 1973

Time of measurement (EDT): 09/29/1999 19:15

Discharge, in cubic feet per second: 16.9

Note: measurement represents combined flow of both runs

Station Number: 02323490

Station Name: Copper Springs near Oldtown, FL

Location: Lat 29°36′50″, long 82°58′26″, in NW¼ sec. 13, T. 10 S., R. 13 E., Dixie County, on right bank of Suwannee River, 1.0 mi north of Junction of U. S. Highway 98 and State Hwy 349 at Oldtown, FL.

Drainage Area: Indeterminate

Previously measured (water year): 1932, 1961, 1976

Time of measurement (EDT): 09/30/1999 12:24

Discharge, in cubic feet per second: 17.8

Station Number: 293550082563000

Station Name: Bell Spring near Oldtown, FL

Location: Lat 29°35′50″, long 82°56′30″, in SE¼ sec. 19, T. 10 S., R. 14 E., Gilchrist County, Hydrologic Unit 03110205, on left bank of the Suwannee River.

Drainage Area: Indeterminate

Previously measured (water year): 1973

Time of measurement (EDT): 09/30/1999 14:03

Discharge, in cubic feet per second: 10.7

STATION ID	STATION NAME	DATE	ELEVATION OF WATER (FEET)	LAND SURFACE ELEVATION (FEET)	GEOLOGIC UNIT
		ALACHUA			
292909082095101	92920901 11S21E36 YEARLING RESTAURANT	8-10-15	58.31	64.30	120FLRD
293542082253801	U.S.G.S./HOWELL WELL AT KANAPAHA	8-10-15	54.37	77.05	120FLRD
		8-11-20	52.95	77.05	
		8-12-15	51.25	77.05	
		9-01-21	50.35	77.05	
		9-02-18	50.46	77.05	
		9-03-25	48.95	77.05	
		9-04-15	48.76	77.05	
		9-05-27	46.77	77.05	
		9-06-24	46.80	77.05	
		9-07-22	47.17	77.05	
		9-08-26	46.25	77.05	
		9-09-30	44.46	77.05	
		CITRUS			
285421082361601	USGS-CRYSTAL RIVER SHALLOW WELL SITE 6.	98-10-13	1.66	7.18	120FLRD
285421082361602	USGS-CRYSTAL RIVER DEEP SITE 6A.	98-10-13	-0.94	--	120FLRD
285737082400601	USGS-FLORIDA POWER CORP., WELL 3.	98-10-13	4.26	--	120FLRD
285812082360901	USGS-SR488 NORTH OF CRYSTAL RIVER.	98-10-13	14.11	--	120FLRD
285930082283702	CITRUS SPRINGS GOLF CLUB	98-10-13	11.14	--	120FLRD
285951082350901	USGS-CE 6.	98-10-13	21.89	--	120FLRD
290132082324201	90123202 17S17E01 EMORY COWART HOUSE WE	98-10-13	17.96	34.02	120FLRD
290216082292001	90222901 16S18E33 CE 77 U S GEOL SURVEY	98-10-13	18.01	56.23	120FLRD
		CLAY			
295835081515001	St. Marys Craft Corp, Clay 17.	98-10-15	72.67	--	120FLRD
		COLUMBIA			
295707082393701	C. S. PATRICK	98-10-14	77.80	100.00	120FLRD
295907082423501	DOT-SR 47	98-10-14	27.92	--	120FLRD
		98-11-23	27.45	--	
		98-12-16	27.07	--	
		99-01-22	26.60	--	
		99-02-19	26.23	--	
		99-03-26	25.91	--	
		99-04-16	25.58	--	
		99-05-28	25.03	--	
		99-06-25	24.64	--	
		99-07-23	24.58	--	
		99-08-27	24.84	--	

STATION ID	STATION NAME	DATE	ELEVATION OF WATER (FEET)	LAND SURFACE ELEVATION (FEET)	GEOLOGIC UNIT
		DIXIE			
292957082593901	DOF - SUNNYVALE TOWER	98-10-16	15.35	--	120FLRD
		98-11-19	13.57	--	
		98-12-14	12.76	--	
		99-01-21	12.90	--	
		99-02-18	13.00	--	
		99-03-25	12.25	--	
		99-04-15	11.66	--	
		99-05-27	11.00	--	
		99-06-24	11.34	--	
		99-07-22	11.00	--	
		99-08-26	12.70	--	
		99-09-30	11.48	--	
293525082585301	OLD TOWN ELEMENTARY SCHOOL	98-10-16	8.50	23.70	120FLRD
		98-11-19	10.65	23.70	
		98-12-14	13.44	23.70	
		99-01-21	12.95	23.70	
		99-02-18	11.85	23.70	
		99-03-25	12.51	23.70	
		99-04-15	12.68	23.70	
		99-05-27	14.00	23.70	
		99-06-24	13.64	23.70	
		99-07-22	14.86	23.70	
		99-08-26	13.80	23.70	
		99-09-30	14.60	23.70	
294656082594701	BRADLEY	98-10-14	51.36	--	120FLRD
		98-11-19	49.73	--	
		98-12-14	48.88	--	
		99-01-21	48.00	--	
		99-02-18	48.77	--	
		99-03-25	47.85	--	
		99-04-15	47.24	--	
		99-05-27	45.80	--	
		99-06-24	46.70	--	
		99-07-22	46.27	--	
		99-08-26	45.17	--	
		99-09-30	43.95	--	
		GILCHRIST			
293827082395401	DOT-SR 26	98-10-15	50.14	--	120FLRD
		98-11-20	50.97	--	
		98-12-15	50.15	--	
		99-01-21	48.74	--	
		99-02-18	48.82	--	
		99-03-25	44.66	--	
		99-04-15	46.14	--	
		99-05-27	44.64	--	
		99-08-26	42.88	--	
		99-09-30	42.34	--	
294043082512501	DOT-SR 129 & 344	98-10-16	18.56	--	120FLRD
		98-11-20	18.11	--	
		98-12-15	17.19	--	
		99-01-22	15.73	--	
		99-02-19	14.89	--	
		99-03-26	13.79	--	
		99-04-16	13.29	--	
		99-05-28	11.70	--	
		99-06-25	10.93	--	
		99-07-23	10.42	--	
		99-08-27	9.81	--	

STATION ID	STATION NAME	DATE	ELEVATION OF WATER (FEET)	LAND SURFACE ELEVATION (FEET)	GEOLOGIC UNIT
		GILCHRIST--Continued			
294456082442901	DOT - SR 47 & 232	98-10-16	59.46	--	120FLRD
		98-11-20	57.93	--	
		98-12-15	57.08	--	
		99-01-22	55.69	--	
		99-02-19	54.85	--	
		99-03-26	54.62	--	
		99-04-16	53.89	--	
		99-05-28	52.33	--	
		99-06-25	53.03	--	
		99-06-25	53.03	--	
		99-07-23	49.93	--	
		99-08-27	49.77	--	
		99-08-27	49.77	--	
294721082443001	ALT.SITE NO 4 SOUTH WEST OF HIGH SPRINGS	98-10-16	40.94	61.08	120FLRD
		98-11-20	40.81	61.08	
		98-12-15	40.69	61.08	
		99-01-22	39.90	61.08	
		99-02-19	39.68	61.08	
		99-03-26	39.02	61.08	
		99-04-16	38.68	61.08	
		99-05-28	37.78	61.08	
		99-06-25	37.21	61.08	
		99-07-23	36.79	61.08	
		99-08-27	36.66	61.08	
294743082543901	EDGAR L SMITH	98-10-16	12.76	36.84	120FLRD
		98-12-15	10.64	36.84	
		99-01-22	9.74	36.84	
		99-02-19	11.17	36.84	
		99-03-26	10.40	36.84	
		99-04-16	9.16	36.84	
		99-05-28	8.54	36.84	
		99-06-25	8.05	36.84	
		99-07-23	7.89	36.84	
		99-08-27	8.34	36.84	
294813082520501	DOF-BELL TOWER	98-10-14	48.78	--	120FLRD
		98-11-23	51.45	--	
		98-12-16	50.46	--	
		99-01-22	48.99	--	
		99-02-19	48.42	--	
		99-03-26	47.98	--	
		99-04-16	47.93	--	
		99-05-28	44.82	--	
		99-06-25	44.68	--	
		99-07-23	45.20	--	
		99-08-27	44.81	--	
295105082443301	DOT-SR 47 & 138	98-10-14	39.35	--	120FLRD
		98-11-20	39.15	--	
		98-12-15	39.37	--	
		99-01-22	38.88	--	
		99-02-19	39.14	--	
		99-03-26	39.09	--	
		99-04-16	39.09	--	
		99-05-28	39.20	--	
		99-06-25	39.07	--	
		99-07-23	39.03	--	
		99-08-27	39.03	--	

STATION ID	STATION NAME	DATE	ELEVATION OF WATER (FEET)	LAND SURFACE ELEVATION (FEET)	GEOLOGIC UNIT
	GILCHRIST--Continued				
295214082482501	ALBERT BERRY	98-10-14	71.55	65.00	120FLRD
		98-11-23	70.44	65.00	
		98-12-16	70.06	65.00	
		99-01-22	68.91	65.00	
		99-02-19	69.29	65.00	
		99-03-26	68.65	65.00	
		99-04-16	67.85	65.00	
		99-05-28	67.56	65.00	
		99-06-25	67.45	65.00	
		99-07-23	69.22	65.00	
		99-08-27	69.50	65.00	
295354082513801	DOT-SR 49 & 138	98-10-14	27.03	--	120FLRD
		98-11-23	26.79	--	
		98-12-16	26.88	--	
		99-01-22	26.79	--	
		99-02-19	26.62	--	
		99-03-26	26.61	--	
		99-04-16	26.60	--	
295354082513801	DOT-SR 49 & 138	99-05-28	26.49	--	120FLRD
		99-06-25	26.45	--	
		99-07-23	26.45	--	
		99-08-27	26.86	--	
	LEVY				
290301082335601	90323301 16S17E35 DEL WRIGHT CORRAL	98-10-13	52.77	60.60	120FLRD
290503082323101	90523201 16S17E13 SCE 108 T & J RANCH	98-10-13	72.54	81.23	120FLRD
291048083011801	910301212	98-10-15	3.01	8.00	120FLRD
291806082545601	918254331 13S14E33 TEST 2 USGS	98-10-15	21.03	24.00	120FLRD
		98-11-19	19.43	24.00	
		98-12-14	18.87	24.00	
		99-01-21	17.87	24.00	
		99-02-18	19.20	24.00	
		99-03-25	18.57	24.00	
		99-04-15	17.64	24.00	
		99-05-27	16.59	24.00	
		99-06-24	18.09	24.00	
		99-07-22	18.17	24.00	
		99-08-26	21.03	24.00	
		99-09-30	19.86	24.00	
291947082384401	DOF-WEKIVA TOWER WELL	98-10-15	47.66	--	120FLRD
		98-11-19	46.93	--	
		98-12-14	47.03	--	
		99-01-21	46.81	--	
		99-02-18	46.06	--	
		99-03-25	45.50	--	
		99-04-15	43.40	--	
		99-05-27	44.81	--	
		99-06-24	46.96	--	
		99-07-22	45.85	--	
		99-08-26	47.40	--	
		99-09-30	47.12	--	

STATION ID	STATION NAME	DATE	ELEVATION OF WATER (FEET)	LAND SURFACE ELEVATION (FEET)	GEOLOGIC UNIT
		LEVY--Continued			
292507082560201	AJ MIMS	98-10-15	18.06	33.00	120FLRD
		98-11-19	15.90	33.00	
		98-12-14	14.85	33.00	
292831082445101	DOT-27A	98-10-15	40.29	--	120FLRD
		98-11-19	42.93	--	
		98-12-14	42.97	--	
		99-01-21	42.88	--	
		99-02-18	42.67	--	
		99-03-25	42.60	--	
		99-04-15	42.63	--	
		99-05-27	42.46	--	
		99-06-24	42.38	--	
		99-07-22	41.93	--	
		99-08-26	42.26	--	
		99-09-30	42.19	--	
		MARION			
285900082072001	USGS CE 36	98-10-13	52.04	--	120FLRD
290106082191001	USGS OBSER WELL CE 23 NR DUNNELLON, FL.	98-10-13	49.23	62.64	120FLRD
290215082152401	902215431OBSER WELL CE 74 NEAR OCALA, FL	98-10-13	48.69	76.97	120FLRD
290614082274801	90622701 16S18E11 SCE 170 RAINBOWS END	98-10-14	35.11	110.62	120FLRD
291056082263201	91022601 15S18E13 HERSHEL KYPER ROMEO	98-10-14	43.85	56.96	120FLRD
291110082060001	USGS OBSER WELL CE44 AT OCALA, FL.	98-10-14	37.79	102.73	120FLRD
291115082102901	GOLDEN FLAKE POTATO CHIP FACTORY	98-10-14	46.99	--	120FLRD
291241082300101	91223001 15S18E04 PETTYJOHN-BOOM IRR.	98-10-14	48.24	81.56	120FLRD
292101082233601	92122301 13S19E15 HOMESTEADER NURSERY	98-10-14	54.41	92.61	120FLRD
		PUTNAM			
293633081594601	Drainage Well Cowpen Lake	98-10-15	82.35	--	120FLRD
		SUWANNEE			
295615082475401	ROGER WIGHAM/FORBES DAVIS	98-10-14	9.60	--	120FLRD
		98-12-16	9.03	--	
		99-01-22	8.59	--	
		99-02-19	9.37	--	
		99-03-26	8.63	--	
		99-04-16	7.65	--	
		99-05-28	7.85	--	
		99-06-25	7.90	--	
		99-07-23	8.40	--	
		99-08-27	8.51	--	

FL-64200 Nitrate in Ground Water and Spring Waters, Suwannee River Basin, Florida

Nitrate contamination of ground water is prevalent in parts of the Suwannee River Basin in Florida, based on numerous samples collected over the past 10-15 years. However, little information exists regarding the monthly and seasonal variability of nitrate concentrations in ground water beneath various land-use types. Information on short-term natural fluctuations of nitrate in ground water is critical for evaluating changes in nitrate concentrations resulting from the implementation of best management practices in the basin. One of the objectives of this study is to relate monthly nitrate concentrations in water from 14 wells in Lafayette and Suwannee Counties to hydrologic, geochemical, and land-use factors. In support of this effort, the data below were collected.

300310083065001. Local number, W-051216011.

LOCATION.--Lat 30°03′10″, long 83°06′50″, Hydrologic Unit 03110205, Lafayette County.

AQUIFER.--Floridan.

WELL CHARACTERISTICS.--Drilled, domestic well, diameter 4 in., depth 105 ft.

PERIOD OF RECORD.--Miscellaneous data 1997, 1998. July 1998 to June 1999.

REMARKS.--Other data may be available from Suwannee River Water Management and Florida Department of Environmental Protection.

DATE	TIME	ELEVATION ABOVE NGVD (FEET) (72020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
JUL 1998											
07...	1330	38.81	22.4	--	558	4.2	7.2	.024	<.20	21.0	--
SEP											
29...	1050	38.64	22.6	759	553	4.0	7.3	.026	<.20	21.0	--
NOV											
02...	1040	39.69	22.6	760	555	4.1	7.2	.020	<.20	20.0	--
20...	1305	38.39	22.5	765	554	4.2	7.4	<.010	<.20	20.0	.030
DEC											
30...	0905	35.79	22.1	760	--	3.5	7.1	.030	<.20	20.0	--
JAN 1999											
29...	1145	31.69	23.0	767	556	4.7	7.2	.015	<.20	20.0	--
FEB											
24...	1230	31.29	22.7	767	558	4.4	7.2	.020	<.20	21.0	--
MAR											
24...	1515	31.49	22.8	763	559	4.5	7.5	.010	<.20	21.0	--
APR											
29...	1650	29.83	22.6	758	556	4.2	7.4	<.010	<.20	21.0	--
MAY											
25...	1400	28.77	22.8	764	560	4.4	7.5	<.010	<.20	21.0	--
JUN											
30...	1150	27.76	22.7	760	562	4.6	7.4	.030	<.20	21.0	--

300310083065001. Local number, W-051216011--Continued

DATE	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)
JUL 1998										
07...	--	--	--	--	--	--	--	--	--	--
SEP										
29...	--	--	--	--	--	--	--	--	--	--
NOV										
02...	--	--	--	--	--	--	--	--	--	--
20...	<.10	70	16	7.7	7.0	14	21	<.10	6.3	160
DEC										
30...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
29...	--	--	--	--	--	--	--	--	--	--
FEB										
24...	--	--	--	--	--	--	--	--	--	--
MAR										
24...	--	--	--	--	--	--	--	--	--	--
APR										
29...	--	--	--	--	--	--	--	--	--	--
MAY										
25...	--	--	--	--	--	--	--	--	--	--
JUN										
30...	--	--	--	--	--	--	--	--	--	--

302017083111201. Local number, DE-02.

LOCATION.--Lat 30°20′17″, long 83°11′12″, Hydrologic Unit 03110205, Suwannee County.

AQUIFER.--Floridan.

WELL CHARACTERISTICS.--Drilled, domestic well, diameter 2 in., depth 64 ft.

PERIOD OF RECORD.--Miscellaneous data 1992, 1993. July 1998 to June 1999.

REMARKS.--Other data may be available from Suwannee River Water Management and Florida Department of Environmental Protection.

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET) (72020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
JUL 1998											
22...	1320	33.38	21.7	765	472	4.8	7.5	.046	<.20	20.0	--
AUG											
20...	1356	32.77	22.0	765	476	6.3	7.5	<.010	<.20	11.0	--
SEP											
24...	1150	32.63	21.9	762	484	6.2	7.6	<.010	<.20	12.0	--
OCT											
19...	1230	38.74	22.3	767	486	6.0	7.4	<.010	<.20	12.0	--
NOV											
18...	1210	34.37	22.1	765	459	6.1	7.4	<.010	<.20	9.90	.010
DEC											
28...	1215	32.76	21.5	762	478	4.8	7.4	<.010	<.20	11.0	--
JAN 1999											
27...	1200	32.33	21.8	768	484	6.3	7.7	<.010	<.20	12.0	--
FEB											
23...	0930	30.93	21.2	768	487	6.6	7.3	.020	<.20	12.0	--
MAR											
23...	1055	32.07	22.2	764	488	6.4	7.4	<.010	<.20	12.0	--
APR											
29...	1050	31.18	21.8	758	501	6.5	7.5	<.010	<.20	13.0	--
MAY											
24...	1010	30.53	22.0	760	504	7.0	6.8	<.010	<.20	13.0	--
JUN											
28...	1110	29.85	22.3	762	520	7.0	7.2	.030	<.20	16.0	--

302017083111201. Local number, DE-02--Continued

DATE	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)
JUL 1998										
22...	--	--	--	--	--	--	--	--	--	--
AUG										
20...	--	--	--	--	--	--	--	--	--	--
SEP										
24...	--	--	--	--	--	--	--	--	--	--
OCT										
19...	--	--	--	--	--	--	--	--	--	--
NOV										
18...	<.10	55	19	5.9	1.0	9.0	17	.19	5.4	170
DEC										
28...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
27...	--	--	--	--	--	--	--	--	--	--
FEB										
23...	--	--	--	--	--	--	--	--	--	--
MAR										
23...	--	--	--	--	--	--	--	--	--	--
APR										
29...	--	--	--	--	--	--	--	--	--	--
MAY										
24...	--	--	--	--	--	--	--	--	--	--
JUN										
28...	--	--	--	--	--	--	--	--	--	--

300455083051501. Local number, W-051202002.

LOCATION.--Lat 30°04′55″, long 83°05′15″, Hydrologic Unit 03110205, Lafayette County.

AQUIFER.--Floridan.

WELL CHARACTERISTICS.--Drilled, domestic well, diameter 4 in., depth 65 ft.

PERIOD OF RECORD.--Miscellaneous data 1998. July 1998 to June 1999.

REMARKS.--Other data may be available from Suwannee River Water Management and Florida Department of Environmental Protection.

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET) (72020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
JUL 1998											
07...	1100	17.19	21.1	--	348	1.7	7.1	.036	<.20	.450	--
AUG											
19...	1450	17.10	21.3	765	337	1.9	7.4	<.010	<.20	.460	--
SEP											
21...	1230	17.58	21.1	761	323	3.6	7.1	<.010	<.20	.300	--
OCT											
20...	1040	24.74	22.7	765	296	.4	7.3	.014	<.20	.250	--
NOV											
19...	1155	17.81	22.5	765	343	2.3	7.2	<.010	.29	.390	.020
DEC											
29...	1025	16.69	21.7	755	--	1.4	7.2	.026	<.20	.530	--
JAN 1999											
28...	1035	--	22.3	767	344	1.3	7.0	.010	<.20	.500	--
FEB											
24...	1020	18.14	22.3	767	369	2.6	6.9	.010	<.20	.740	--
MAR											
24...	1010	17.04	22.1	763	364	1.8	7.5	<.010	<.20	.570	--
APR											
30...	1100	15.93	21.8	757	354	1.4	7.6	<.010	<.20	.450	--
MAY											
25...	1600	15.71	21.9	764	356	1.2	7.2	.010	<.20	.330	--
JUN											
29...	0950	15.47	21.7	765	358	1.0	7.1	.030	<.20	.350	--

300455083051501. Local number, W-051202002--Continued

DATE	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	ALKA-LINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)
JUL 1998										
07...	--	--	--	--	--	--	--	--	--	--
AUG										
19...	--	--	--	--	--	--	--	--	--	--
SEP										
21...	--	--	--	--	--	--	--	--	--	--
OCT										
20...	--	--	--	--	--	--	--	--	--	--
NOV										
19...	<.10	49	12	2.6	.50	4.9	6.9	.15	6.9	170
DEC										
29...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
28...	--	--	--	--	--	--	--	--	--	--
FEB										
24...	--	--	--	--	--	--	--	--	--	--
MAR										
24...	--	--	--	--	--	--	--	--	--	--
APR										
30...	--	--	--	--	--	--	--	--	--	--
MAY										
25...	--	--	--	--	--	--	--	--	--	--
JUN										
29...	--	--	--	--	--	--	--	--	--	--

300220083033601. Local number, W-051319001.

LOCATION.--Lat 30°02′20″, long 83°03′36″, Hydrologic Unit 03110205, Lafayette County.

AQUIFER.--Floridan.

WELL CHARACTERISTICS.--Drilled, domestic well, diameter 4 in., depth 76 ft.

PERIOD OF RECORD.--Miscellaneous data 1991, 1998. July 1998 to June 1999.

REMARKS.--Other data may be available from Suwannee River Water Management and Florida Department of Environmental Protection.

DATE	TIME	ELEVATION ABOVE NGVD (FEET) (72020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
JUL 1998											
08...	1140	26.46	21.9	--	502	4.8	7.4	.028	<.20	10.0	--
AUG											
17...	1535	24.33	21.1	765	502	4.9	7.5	.010	<.20	9.80	--
SEP											
23...	1450	23.46	22.1	758	497	4.8	7.3	.012	<.20	10.0	--
OCT											
21...	1035	27.75	21.8	765	495	4.9	7.5	<.010	<.20	9.90	--
NOV											
20...	1105	--	21.8	765	493	5.1	7.4	<.010	<.20	9.90	.040
DEC											
30...	1050	--	21.6	760	--	4.1	7.3	.030	<.20	9.80	--
JAN 1999											
28...	1530	--	21.7	767	490	4.8	7.1	<.010	<.20	10.0	--
FEB											
23...	1320	--	21.7	768	490	5.1	7.4	.010	<.20	10.0	--
MAR											
23...	1610	--	21.9	764	49	4.9	7.5	.010	<.20	10.0	--
APR											
30...	1425	--	21.6	757	492	4.7	7.7	<.010	<.20	10.0	--
MAY											
25...	1120	--	21.9	764	489	4.8	7.2	<.010	<.20	10.0	--
JUN											
29...	1425	16.17	21.8	760	489	5.1	7.1	.020	<.20	9.80	--

DATE	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	ALKALINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)
JUL 1998										
08...	--	--	--	--	--	--	--	--	--	--
AUG										
17...	--	--	--	--	--	--	--	--	--	--
SEP										
23...	--	--	--	--	--	--	--	--	--	--
OCT										
21...	--	--	--	--	--	--	--	--	--	--
NOV										
20...	<.10	60	17	7.5	5.0	15	15	.12	4.7	180
DEC										
30...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
28...	--	--	--	--	--	--	--	--	--	--
FEB										
23...	--	--	--	--	--	--	--	--	--	--
MAR										
23...	--	--	--	--	--	--	--	--	--	--
APR										
30...	--	--	--	--	--	--	--	--	--	--
MAY										
25...	--	--	--	--	--	--	--	--	--	--
JUN										
29...	--	--	--	--	--	--	--	--	--	--

300412083070301. Local number, W-051216006.

LOCATION.--Lat 30°03′19″, long 83°07′03″, Hydrologic Unit 03110205, Lafayette County.

AQUIFER.--Floridan.

WELL CHARACTERISTICS.--Drilled, domestic well, diameter 4 in., depth 53ft.

PERIOD OF RECORD.--Miscellaneous data 1991. July 1998 to June 1999.

REMARKS.--Other data may be available from Suwannee River Water Management and Florida Department of Environmental Protection.

DATE	TIME	ELEVATION ABOVE NGVD (FEET) (72020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
JUL 1998											
07...	1230	22.36	21.5	--	346	5.8	7.4	.022	<.20	5.50	--
AUG											
17...	1320	22.36	20.7	760	333	4.8	7.4	<.010	<.20	5.20	--
SEP											
22...	1235	21.64	21.5	765	333	4.9	7.4	.010	<.20	5.20	--
OCT											
20...	1230	25.50	21.6	765	340	5.2	7.6	<.010	<.20	5.60	--
NOV											
19...	1440	24.49	21.7	765	338	5.3	7.6	<.010	.33	5.40	.030
DEC											
29...	1220	22.10	21.7	755	--	4.8	7.4	.014	<.20	5.20	--
JAN 1999											
28...	1305	20.36	21.8	767	336	4.9	7.5	<.010	<.20	5.50	--
FEB											
24...	1145	20.99	21.7	767	336	4.9	7.2	.010	<.20	5.60	--
MAR											
24...	1205	17.74	21.9	763	335	5.3	7.8	.010	<.20	5.30	--
APR											
30...	1233	26.70	21.7	757	334	5.5	7.8	.010	<.20	5.20	--
MAY											
25...	1435	16.04	21.9	764	327	5.5	7.4	<.010	<.20	5.00	--
JUN											
29...	1200	15.49	21.8	765	328	5.3	7.4	.030	<.20	5.10	--

DATE	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	ALKALINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)
JUL 1998										
07...	--	--	--	--	--	--	--	--	--	--
AUG										
17...	--	--	--	--	--	--	--	--	--	--
SEP										
22...	--	--	--	--	--	--	--	--	--	--
OCT										
20...	--	--	--	--	--	--	--	--	--	--
NOV										
19...	<.10	46	11	3.9	.90	8.0	8.5	.10	6.0	130
DEC										
29...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
28...	--	--	--	--	--	--	--	--	--	--
FEB										
24...	--	--	--	--	--	--	--	--	--	--
MAR										
24...	--	--	--	--	--	--	--	--	--	--
APR										
30...	--	--	--	--	--	--	--	--	--	--
MAY										
25...	--	--	--	--	--	--	--	--	--	--
JUN										
29...	--	--	--	--	--	--	--	--	--	--

301157083111301. Local number, TM-03.

LOCATION.--Lat 30°11′57″, long 83°11′13″, Hydrologic Unit 03110205, Suwannee County.

AQUIFER.--Floridan.

WELL CHARACTERISTICS.--Drilled, domestic well, diameter 2 in., depth 61 ft.

PERIOD OF RECORD.--Miscellaneous data 1992, 1993. July 1998 to June 1999.

REMARKS.--Other data may be available from Suwannee River Water Management and Florida Department of Environmental Protection.

DATE	TIME	ELEVATION ABOVE NGVD (FEET) (72020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
JUL 1998											
22...	1130	37.97	21.5	765	329	7.4	7.7	.190	<.20	16.0	--
AUG											
20...	1106	36.30	21.5	765	327	8.3	7.9	<.010	<.20	15.0	--
SEP											
24...	1045	34.74	22.3	762	320	7.6	8.1	.012	<.20	16.0	--
OCT											
19...	1350	38.33	22.2	767	321	8.2	8.0	<.010	<.20	15.0	--
NOV											
18...	1355	38.15	22.0	765	324	8.6	7.9	<.010	<.20	16.0	.040
DEC											
28...	1320	36.15	25.0	762	324	6.2	7.9	<.010	<.20	16.0	--
JAN 1999											
27...	1330	34.62	22.0	768	320	8.1	7.5	<.010	<.20	15.0	--
FEB											
23...	1025	31.85	21.8	768	318	8.0	7.9	.020	<.20	16.0	--
MAR											
23...	1205	32.55	22.3	764	317	7.8	8.0	<.010	<.20	18.0	--
MAY											
24...	1145	30.53	22.4	760	323	8.0	7.2	<.010	<.20	17.0	--
JUN											
28...	1210	29.88	22.2	762	311	7.7	7.9	.030	<.20	16.0	--

DATE	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	ALKALINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)
JUL 1998										
22...	--	--	--	--	--	--	--	--	--	--
AUG										
20...	--	--	--	--	--	--	--	--	--	--
SEP										
24...	--	--	--	--	--	--	--	--	--	--
OCT										
19...	--	--	--	--	--	--	--	--	--	--
NOV										
18...	<.10	36	13	4.6	.50	6.8	3.8	.14	5.5	87
DEC										
28...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
27...	--	--	--	--	--	--	--	--	--	--
FEB										
23...	--	--	--	--	--	--	--	--	--	--
MAR										
23...	--	--	--	--	--	--	--	--	--	--
MAY										
24...	--	--	--	--	--	--	--	--	--	--
JUN										
28...	--	--	--	--	--	--	--	--	--	--

301154083111901. Local number, TM-05.

LOCATION.--Lat 30°11′54″, long 83°11′19″, Hydrologic Unit 03110205, Suwannee County.

AQUIFER.--Floridan.

WELL CHARACTERISTICS.--Drilled, domestic well, diameter 2 in., depth 64 ft.

PERIOD OF RECORD.--Miscellaneous data 1992, 1993. July 1998 to June 1999.

REMARKS.--Other data may be available from Suwannee River Water Management and Florida Department of Environmental Protection.

DATE	TIME	ELEVATION ABOVE NGVD (FEET) (72020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
JUL 1998											
21...	1430	38.90	21.9	765	284	7.9	7.8	.030	<.20	15.0	--
AUG											
20...	1235	37.16	21.4	765	263	8.2	8.0	<.010	<.20	14.0	--
SEP											
24...	0950	35.60	22.7	762	265	7.9	8.2	<.010	.29	14.0	--
OCT											
19...	1430	39.14	22.4	767	285	8.4	8.1	<.010	<.20	15.0	--
NOV											
18...	1510	38.99	22.1	765	282	8.5	8.1	<.010	<.20	15.0	.030
DEC											
28...	1425	36.98	21.7	762	277	6.3	8.1	<.010	<.20	14.0	--
JAN 1999											
27...	1440	35.50	22.3	768	273	7.6	8.3	.010	<.20	14.0	--
FEB											
23...	1055	32.81	21.7	768	271	8.2	8.0	.020	<.20	14.0	--
MAR											
23...	1235	33.41	22.5	764	281	--	8.0	<.010	<.20	15.0	--
APR											
29...	1240	32.15	22.1	758	276	7.9	8.1	<.010	<.20	14.0	--
MAY											
24...	1220	31.43	22.7	760	285	7.9	7.3	<.010	<.20	14.0	--
JUN											
28...	1240	30.71	22.0	762	289	8.0	8.0	.020	<.20	15.0	--

DATE	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	ALKALINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)
JUL 1998										
21...	--	--	--	--	--	--	--	--	--	--
AUG										
20...	--	--	--	--	--	--	--	--	--	--
SEP										
24...	--	--	--	--	--	--	--	--	--	--
OCT										
19...	--	--	--	--	--	--	--	--	--	--
NOV										
18...	<.10	30	11	4.1	.20	6.6	3.0	.14	5.4	67
DEC										
28...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
27...	--	--	--	--	--	--	--	--	--	--
FEB										
23...	--	--	--	--	--	--	--	--	--	--
MAR										
23...	--	--	--	--	--	--	--	--	--	--
APR										
29...	--	--	--	--	--	--	--	--	--	--
MAY										
24...	--	--	--	--	--	--	--	--	--	--
JUN										
28...	--	--	--	--	--	--	--	--	--	--

300143082565903. Local number, W-17269.

LOCATION.--Lat 30°01′45″, long 82°56′45″, Hydrologic Unit 03110205, Suwannee County.

AQUIFER.--Floridan.

WELL CHARACTERISTICS.--Drilled, domestic well, diameter 4 in., depth 43 ft.

PERIOD OF RECORD.--Miscellaneous data 1995, 1996, 1998. July 1998 to June 1999.

REMARKS.--Other data may be available from Suwannee River Water Management and Florida Department of Environmental Protection.

DATE	TIME	ELEVATION ABOVE NGVD (FEET) (72020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
JUL 1998											
22...	0950	28.92	21.0	765	567	4.6	7.1	.032	<.20	11.0	--
AUG											
19...	1230	27.13	25.0	765	558	5.4	7.5	<.010	<.20	10.0	--
SEP											
23...	0945	25.62	22.1	758	550	5.0	7.1	<.010	<.20	9.30	--
OCT											
19...	1555	27.41	22.3	767	547	5.0	7.2	<.010	.22	7.70	--
NOV											
18...	1655	26.99	22.2	765	540	5.3	7.2	<.010	<.20	8.70	.020
DEC											
28...	1555	25.13	22.0	762	555	4.1	7.2	<.010	<.20	9.10	--
JAN 1999											
27...	1605	23.98	22.4	768	544	5.2	7.3	<.010	<.20	9.50	--
FEB											
23...	1225	21.86	22.1	768	520	6.0	7.1	.100	.40	12.0	--
MAR											
23...	1405	22.94	22.9	764	534	6.1	7.3	<.010	<.20	13.0	--
APR											
29...	1400	21.91	22.5	758	541	5.8	7.1	<.010	<.20	12.0	--
MAY											
25...	1015	20.19	22.6	760	539	5.6	7.1	<.010	<.20	12.0	--
JUN											

DATE	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	ALKALINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)
JUL 1998										
22...	--	--	--	--	--	--	--	--	--	--
AUG										
19...	--	--	--	--	--	--	--	--	--	--
SEP										
23...	--	--	--	--	--	--	--	--	--	--
OCT										
19...	--	--	--	--	--	--	--	--	--	--
NOV										
18...	<.10	97	4.1	4.8	3.0	12	26	<.10	6.3	200
DEC										
28...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
27...	--	--	--	--	--	--	--	--	--	--
FEB										
23...	--	--	--	--	--	--	--	--	--	--
MAR										
23...	--	--	--	--	--	--	--	--	--	--
APR										
29...	--	--	--	--	--	--	--	--	--	--
MAY										
25...	--	--	--	--	--	--	--	--	--	--
JUN										
30...	--	--	--	--	--	--	--	--	--	--

300819083150007. Local number, L2-6A.

LOCATION.--Lat 30°08′19″, long 83°15′00″, Hydrologic Unit 03110205, Lafayette County.

AQUIFER.--Floridan.

WELL CHARACTERISTICS.--Drilled, domestic well, diameter 4 in., depth 48 ft.

PERIOD OF RECORD.--Miscellaneous data 1991 to 1993. July 1998 to June 1999.

REMARKS.--Other data may be available from Suwannee River Water Management and Florida Department of Environmental Protection.

DATE	TIME	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
JUL 1998										
21...	1200	21.7	765	507	4.3	7.3	.031	<.20	21.0	--
AUG										
19...	1656	21.6	765	488	3.5	7.9	--	--	--	--
SEP										
23...	1600	22.4	758	474	2.3	7.6	.010	<.20	15.0	--
OCT										
21...	1230	22.5	765	473	2.1	7.5	.012	<.20	14.0	--
NOV										
20...	1550	22.5	765	472	2.1	7.6	<.010	<.20	14.0	.030
DEC										
30...	1430	22.0	760	500	2.8	7.2	<.010	<.20	19.0	--
JAN 1999										
29...	1255	22.5	767	496	3.1	7.2	<.010	<.20	19.0	--
FEB										
23...	1525	22.3	768	485	2.8	7.6	.020	<.20	17.0	--
MAR										
25...	1115	22.5	760	468	2.0	7.6	<.010	<.20	14.0	--
APR										
30...	1523	22.2	758	466	2.1	7.7	<.010	<.20	12.0	--
MAY										
24...	1425	22.9	760	469	2.5	7.2	<.010	<.20	13.0	--
JUN										
30...	1400	22.9	760	466	2.4	7.6	.020	<.20	11.0	--

DATE	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	ALKALINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)
JUL 1998										
21...	--	--	--	--	--	--	--	--	--	--
AUG										
19...	--	--	--	--	--	--	--	--	--	--
SEP										
23...	--	--	--	--	--	--	--	--	--	--
OCT										
21...	--	--	--	--	--	--	--	--	--	--
NOV										
20...	<.10	63	14	5.5	1.9	10	11	.15	5.0	160
DEC										
30...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
29...	--	--	--	--	--	--	--	--	--	--
FEB										
23...	--	--	--	--	--	--	--	--	--	--
MAR										
25...	--	--	--	--	--	--	--	--	--	--
APR										
30...	--	--	--	--	--	--	--	--	--	--
MAY										
24...	--	--	--	--	--	--	--	--	--	--
JUN										
30...	--	--	--	--	--	--	--	--	--	--

300450083094401. Local number, W-051206001.

LOCATION.--Lat 30°04′50″, long 83°09′44″, Hydrologic Unit 03110205, Lafayette County.

AQUIFER.--Floridan.

WELL CHARACTERISTICS.--Drilled, domestic well, diameter 4 in., depth 60 ft.

PERIOD OF RECORD.--Miscellaneous data 1998. July 1998 to June 1999.

REMARKS.--Other data may be available from Suwannee River Water Management and Florida Department of Environmental Protection.

DATE	TIME	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
JUL 1998										
08...	1015	21.9	--	337	3.9	7.2	.028	<.20	4.20	--
AUG										
17...	1440	21.6	765	264	5.0	7.7	.010	<.20	4.60	--
SEP										
22...	1100	22.0	760	324	4.0	6.5	.012	<.20	5.30	--
OCT										
20...	1350	22.2	765	261	1.7	7.6	<.010	<.20	3.70	--
NOV										
19...	1555	22.1	765	332	2.0	7.5	<.010	.25	5.10	.040
DEC										
29...	1530	21.9	755	--	4.2	7.2	.024	<.20	5.40	--
JAN 1999										
28...	1350	21.8	767	282	4.8	7.5	<.010	<.20	3.30	--
FEB										
24...	1315	21.8	767	311	3.5	7.3	.010	<.20	4.30	--
MAR										
24...	1415	22.0	763	276	3.9	7.7	.010	<.20	4.70	--
APR										
30...	1343	21.8	757	367	4.5	7.7	<.010	<.20	5.60	--
MAY										
24...	1530	22.0	760	362	4.8	7.0	<.010	<.20	5.70	--
JUN										
29...	1330	21.9	765	333	4.7	7.4	.030	<.20	5.20	--

DATE	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	ALKALINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)
JUL 1998										
08...	--	--	--	--	--	--	--	--	--	--
AUG										
17...	--	--	--	--	--	--	--	--	--	--
SEP										
22...	--	--	--	--	--	--	--	--	--	--
OCT										
20...	--	--	--	--	--	--	--	--	--	--
NOV										
19...	<.10	54	4.2	6.6	.80	10	14	<.10	6.6	120
DEC										
29...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
28...	--	--	--	--	--	--	--	--	--	--
FEB										
24...	--	--	--	--	--	--	--	--	--	--
MAR										
24...	--	--	--	--	--	--	--	--	--	--
APR										
30...	--	--	--	--	--	--	--	--	--	--
MAY										
24...	--	--	--	--	--	--	--	--	--	--
JUN										
29...	--	--	--	--	--	--	--	--	--	--

300443083055701. Local number, VISA Well # 2 W-051203002.

LOCATION.--Lat 30°04′43″, long 83°05′57″, Hydrologic Unit 03110205, Lafayette County.

AQUIFER.--Floridan.

WELL CHARACTERISTICS.--Drilled, monitor well, diameter 4 in., depth 55 ft.

PERIOD OF RECORD.--July 1998 to June 1999.

REMARKS.--Other data may be available from Suwannee River Water Management and Florida Department of Environmental Protection.

DATE	TIME	ELEVATION ABOVE NGVD (FEET) (72020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
JUL 1998											
06...	1130	18.12	23.8	--	334	.2	7.3	.140	<.20	.020	--
AUG											
18...	1320	17.74	25.0	767	333	.1	7.9	.120	<.20	.290	--
SEP											
22...	1345	18.41	23.2	765	346	---	7.3	.120	<.20	1.20	--
OCT											
20...	1000	25.59	23.0	765	341	.3	7.4	.094	<.20	.740	--
NOV											
19...	1030	19.12	23.2	765	338	.1	7.3	.100	.26	.510	.040
DEC											
29...	0940	16.28	22.9	755	--	.1	7.3	.110	E.22	<.020	--
JAN 1999											
28...	0950	18.04	23.1	767	344	.2	7.4	.100	<.20	.930	--
FEB											
24...	0945	16.92	23.0	767	338	.1	7.3	.100	<.20	.490	--
MAR											
24...	0925	17.34	23.2	763	334	.2	7.5	.100	<.20	.280	--
APR											
30...	1018	16.57	23.0	757	330	.2	7.6	.100	<.20	<.020	--
MAY											
26...	1055	16.20	23.4	763	330	.2	7.2	.090	<.20	<.020	--
JUN											
29...	0920	15.92	23.3	760	329	.2	7.2	.090	<.20	<.020	--

DATE	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	ALKALINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)
JUL 1998										
06...	--	--	--	--	--	--	--	--	--	--
AUG										
18...	--	--	--	--	--	--	--	--	--	--
SEP										
22...	--	--	--	--	--	--	--	--	--	--
OCT										
20...	--	--	--	--	--	--	--	--	--	--
NOV										
19...	.20	47	13	3.0	.40	4.7	1.8	.15	7.2	170
DEC										
29...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
28...	--	--	--	--	--	--	--	--	--	--
FEB										
24...	--	--	--	--	--	--	--	--	--	--
MAR										
24...	--	--	--	--	--	--	--	--	--	--
APR										
30...	--	--	--	--	--	--	--	--	--	--
MAY										
26...	--	--	--	--	--	--	--	--	--	--
JUN										
29...	--	--	--	--	--	--	--	--	--	--

300114083025901. Local number, VISA Well # 4 W-051330005.

LOCATION.--Lat 30°01′14″, long 83°02′59″, Hydrologic Unit 03110205, Lafayette County.

AQUIFER.--Floridan.

WELL CHARACTERISTICS.--Drilled, monitor well, diameter 4 in., depth 47 ft.

PERIOD OF RECORD.--Miscellaneous data 1998. July 1998 to June 1999.

REMARKS.--Other data may be available from Suwannee River Water Management and Florida Department of Environmental Protection.

DATE	TIME	ELEVATION ABOVE NGVD (FEET) (72020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
JUL 1998											
06...	1315	32.08	22.6	--	362	3.8	7.2	.028	<.20	3.70	--
AUG											
18...	1115	29.25	21.4	767	364	3.3	7.6	<.010	.22	3.90	--
SEP											
23...	1150	28.91	22.4	758	364	3.3	7.4	.010	<.20	4.10	--
OCT											
20...	1135	30.89	22.5	765	370	3.0	7.5	<.010	<.20	4.30	--
NOV											
19...	1330	29.42	22.5	765	370	3.1	7.4	<.010	<.20	4.20	.050
DEC											
29...	1135	26.80	22.5	755	--	2.7	7.3	<.010	<.20	4.60	--
JAN 1999											
28...	1130	23.45	22.7	767	376	2.9	7.6	<.010	<.20	4.70	--
FEB											
24...	1100	22.65	22.5	767	381	2.9	7.1	.010	<.20	5.10	--
MAR											
24...	1110	23.40	22.8	763	383	3.1	7.6	.010	<.20	5.40	--
APR											
30...	1144	22.09	22.1	757	386	3.2	7.6	<.010	<.20	4.70	--
MAY											
26...	1020	21.10	22.7	763	384	3.6	7.1	<.010	<.20	5.00	--
JUN											
29...	1045	19.98	22.6	765	330	6.2	7.3	.030	<.20	3.50	--

DATE	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	ALKALINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)
JUL 1998										
06...	--	--	--	--	--	--	--	--	--	--
AUG										
18...	--	--	--	--	--	--	--	--	--	--
SEP										
23...	--	--	--	--	--	--	--	--	--	--
OCT										
20...	--	--	--	--	--	--	--	--	--	--
NOV										
19...	<.10	62	4.3	4.9	1.9	9.8	18	<.10	5.3	140
DEC										
29...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
28...	--	--	--	--	--	--	--	--	--	--
FEB										
24...	--	--	--	--	--	--	--	--	--	--
MAR										
24...	--	--	--	--	--	--	--	--	--	--
APR										
30...	--	--	--	--	--	--	--	--	--	--
MAY										
26...	--	--	--	--	--	--	--	--	--	--
JUN										
29...	--	--	--	--	--	--	--	--	--	--

300351083074801. Local number, VISA Well # 7 W-051209001.

LOCATION.--Lat 30°03′51″, long 83°07′48″, Hydrologic Unit 03110205, Lafayette County.

AQUIFER.--Floridan.

WELL CHARACTERISTICS.--Drilled, monitor well, diameter 4 in., depth 44 ft.

PERIOD OF RECORD.--Miscellaneous data 1997, 1998. July 1998 to June 1999.

REMARKS.--Other data may be available from Suwannee River Water Management and Florida Department of Environmental Protection.

DATE	TIME	ELEVATION ABOVE NGVD (FEET) (72020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
JUL 1998											
07...	0935	37.48	22.6	--	549	4.8	7.2	.031	<.20	14.0	--
AUG											
18...	1450	35.55	21.8	767	535	5.0	7.8	<.010	<.20	17.0	--
SEP											
22...	1500	35.53	22.5	765	529	4.7	7.3	.012	<.20	17.0	--
OCT											
21...	1130	39.61	22.6	765	522	4.6	7.3	<.010	<.20	15.0	--
NOV											
20...	1450	37.82	23.0	765	542	4.4	7.3	<.010	.34	17.0	.350
DEC											
30...	1140	35.01	22.2	760	579	3.4	6.9	<.010	E.22	20.0	--
JAN 1999											
28...	1445	31.79	23.0	767	584	3.9	7.1	<.010	<.20	19.0	--
FEB											
23...	1440	30.74	22.7	768	594	3.9	7.2	.010	<.20	22.0	--
MAR											
24...	1605	31.30	23.0	763	600	3.7	7.4	.010	<.20	21.0	--
APR											
29...	1550	29.98	22.8	758	560	3.7	7.3	<.010	<.20	18.0	--
MAY											
25...	1255	29.11	23.1	764	504	3.5	7.4	<.010	<.20	16.0	--
JUN											
30...	1235	28.17	22.9	760	452	3.9	7.5	.030	<.20	12.0	--

DATE	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	ALKALINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)
JUL 1998										
07...	--	--	--	--	--	--	--	--	--	--
AUG										
18...	--	--	--	--	--	--	--	--	--	--
SEP										
22...	--	--	--	--	--	--	--	--	--	--
OCT										
21...	--	--	--	--	--	--	--	--	--	--
NOV										
20...	<.10	57	22	10	6.2	12	15	.13	7.2	180
DEC										
30...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
28...	--	--	--	--	--	--	--	--	--	--
FEB										
23...	--	--	--	--	--	--	--	--	--	--
MAR										
24...	--	--	--	--	--	--	--	--	--	--
APR										
29...	--	--	--	--	--	--	--	--	--	--
MAY										
25...	--	--	--	--	--	--	--	--	--	--
JUN										
30...	--	--	--	--	--	--	--	--	--	--

300249083045301. Local number, VISA Well # 8 W-051214008.

LOCATION.--Lat 30°02′49″, long 83°04′53″, Hydrologic Unit 03110205, Lafayette County.

AQUIFER.--Floridan.

WELL CHARACTERISTICS.--Drilled, monitor well, diameter 4 in., depth 52 ft.

PERIOD OF RECORD.--Miscellaneous data 1998. July 1998 to June 1999.

REMARKS.--Other data may be available from Suwannee River Water Management and Florida Department of Environmental Protection.

DATE	TIME	ELEVATION ABOVE NGVD (FEET) (72020)	TEMPERATURE WATER (DEG C) (00010)	BAROMETRIC PRESSURE (MM OF HG) (00025)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)
JUL 1998											
06...	1440	29.22	22.4	--	315	1.4	7.4	.030	<.20	3.80	--
AUG											
18...	1220	26.21	20.8	767	315	1.1	8.1	<.010	<.20	3.70	--
SEP											
23...	1315	25.56	21.6	758	318	1.1	7.7	<.010	<.20	3.80	--
OCT											
21...	0945	29.21	21.6	765	320	1.1	7.6	<.010	<.20	3.80	--
NOV											
20...	1010	26.47	21.7	765	324	1.2	7.6	<.010	<.20	3.70	.040
DEC											
29...	1425	23.57	21.6	755	--	1.1	7.4	.024	<.20	3.10	--
JAN 1999											
29...	1035	20.72	25.0	767	326	1.4	7.5	<.010	<.20	2.90	--
FEB											
23...	1400	20.37	21.8	768	325	1.4	7.6	.010	<.20	3.00	--
MAR											
25...	1010	21.57	21.9	760	330	1.9	7.7	.020	<.20	3.10	--
APR											
29...	1508	21.11	22.4	758	334	2.3	7.6	<.010	<.20	2.90	--
MAY											
25...	1200	20.85	22.4	764	335	2.3	7.5	<.010	<.20	2.90	--
JUN											
29...	1500	20.71	22.2	765	338	2.4	7.3	.020	<.20	2.80	--

DATE	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	ALKALINITY WAT.DIS FET LAB CACO3 (MG/L) (29801)
JUL 1998										
06...	--	--	--	--	--	--	--	--	--	--
AUG										
18...	--	--	--	--	--	--	--	--	--	--
SEP										
23...	--	--	--	--	--	--	--	--	--	--
OCT										
21...	--	--	--	--	--	--	--	--	--	--
NOV										
20...	<.10	45	10	3.7	.80	6.0	12	.10	4.4	130
DEC										
29...	--	--	--	--	--	--	--	--	--	--
JAN 1999										
29...	--	--	--	--	--	--	--	--	--	--
FEB										
23...	--	--	--	--	--	--	--	--	--	--
MAR										
25...	--	--	--	--	--	--	--	--	--	--
APR										
29...	--	--	--	--	--	--	--	--	--	--
MAY										
25...	--	--	--	--	--	--	--	--	--	--
JUN										
29...	--	--	--	--	--	--	--	--	--	--

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
	Length	
inch (in.)	2.54×10^{1}	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^{0}	kilometer
	Area	
acre	4.047×10^{3}	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi^2)	2.590×10^{0}	square kilometer
	Volume	
gallon (gal)	3.785×10^{0}	liter
	3.785×10^{0}	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^{3}	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft^3)	2.832×10^{1}	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft^3/s) d]	2.447×10^{3}	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^{3}	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
	Flow	
cubic foot per second (ft^3/s)	2.832×10^{1}	liter per second
	2.832×10^{1}	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^{1}	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
	Mass	
ton (short)	9.072×10^{-1}	megagram or metric ton

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