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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1999

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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13. ABSTRACT *(Maximum 200 words)*

Water resources data for the 1998 water year in Florida consists of records for continuous or daily discharge for 307 streams, periodic discharge for 30 streams, continuous or daily stage for 89 streams, periodic stage for 4 streams, peak stage and discharge for 38 streams; continuous or daily elevations for 27 lakes, and periodic elevations for 51 lakes; continuous ground-water levels for 439 wells, and periodic ground-water levels for 1,958 wells; quality-of-water data for 118 surface-water sites and 267 wells.

The data for northwest Florida include continuous or daily discharge for 39 streams, periodic discharge for 0 streams, continuous or daily stage for 4 streams, periodic stage for 0 streams, peak stage and discharge for 30 streams; continuous or daily elevations for 1 lake, periodic elevations for 1 lake; continuous ground-water levels for 2 wells, periodic ground-water levels for 0 wells; quality-of-water for 4 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.

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*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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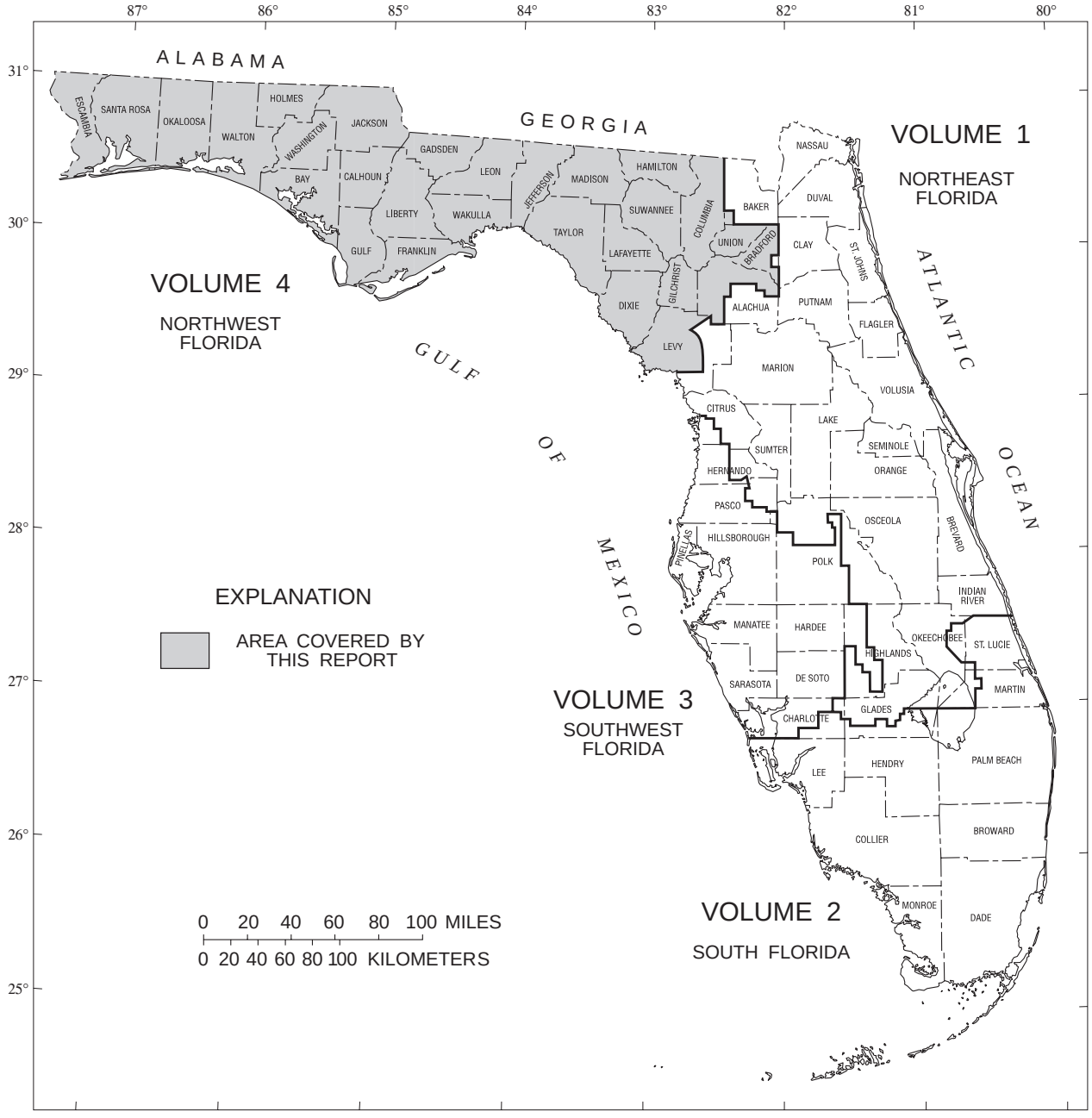

Figure 1. Geographic area covered by this report.

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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]

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
Waccasassa River near Gulf Hammock, FL	02313700	480†	1963-78
			1980-92
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
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
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
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
Econfina Creek near Bennett, FL	02359500	122	1935-94
Bear Creek near Youngstown, FL	02359550	67.2	1962-65
Choctawhatchee River near Pittman, FL	02365200	3209	1976-81
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
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
Bayou Marcus Creek near Pensacola, FL	02376100	10.8	1958-60
			1987-91
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 1998 water year for the state of Florida consists of records for continuous or daily discharge for 307 streams, periodic discharge for 30 streams, continuous or daily stage for 89 streams, periodic stage for 4 streams, peak stage and discharge for 38 streams; continuous or daily elevations for 27 lakes, and periodic elevations for 51 lakes; continuous ground-water levels for 439 wells, and periodic ground-water levels for 1,958 wells; quality-of-water for 118 surface-water sites and 267 wells.

This volume (Volume 4, Northwest Florida) contains records of continuous or daily discharge for 39 streams, periodic discharge for 0 streams, continuous or daily stage for 4 streams, periodic stage for 0 streams, peak stage and discharge for 30 streams; continuous or daily elevations for 1 lake, periodic elevations for 1 lake; continuous ground-water levels for 2 wells, periodic ground-water levels for 0 wells; and quality-of-water for 4 surface-water sites and 0 wells.

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, P.O. Box 25286, MS 517, 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-98-4." For archiving and general distribution, the reports for l971-74 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 about 5 to above 27 in. above normal for the 1998 water year. Based on rainfall data at six National Oceanic and Atmospheric Administration stations, (Perry, Lake City, Tallahassee, Chipley, De Funiak Springs, and Pensacola), total rainfall for the 12-month period ranged from 69.01 in. at Lake City to 91.45 in. at De Funiak Springs. The cumulative monthly departures for the water year ranged from +5.02 in. at Tallahassee to +27.15 in. at De Funiak Springs. The distribution of rainfall generally did not differ geographically but did differ seasonally. The fall quarter (October-December), usually one of the dryer periods, ranged from 3.04 to 11.92 in. above normal across northwest Florida. The winter quarter (January-March), normally the wet period in northwest Florida, ranged from +2.04 in. at Tallahassee to +10.75 in. at Perry. The spring quarter (April-June) was below average for the area ranging from -6.48 in. at Chipley to -11.88 in. at Tallahassee. The summer quarter (July-September) was above normal and ranged from 7.73 in. at Lake City to 19.89 in. at De Funiak Springs. Much of the excess rainfall, especially in the panhandle for the summer quarter, was the result of heavy rainfall associated with Hurricane Georges which passed over the area in late September 1998. The following summary lists the cumulative rainfall and departure from the 30-year (1961-90) normal 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	12.84	+4.13	24.03	+10.75	3.65	-10.00	32.57	+10.06	73.09	+14.94
Lake City	12.80	+4.55	21.05	+8.00	7.48	-6.76	27.68	+7.73	69.01	+13.52
Tallahassee	14.86	+3.04	18.58	+2.04	3.54	-11.88	33.48	+11.82	70.46	+5.02
Chipley	22.79	+11.92	23.53	+7.43	6.64	-6.48	27.34	+10.77	80.30	+23.64
De Funiak Springs	19.99	+7.38	25.98	+9.21	5.33	-9.33	40.15	+19.89	91.45	+27.15
Pensacola	17.68	+5.64	23.78	+8.07	4.15	-10.22	32.21	+12.08	77.82	+15.57

Surface Water

Annual mean streamflow for the 1998 water year in Northwest Florida ranged from 100 to 215 percent of the long-term average. The upper Suwannee and Santa Fe River, with about 200 percent of normal, were the highest and the St. Marks River basin with 100 percent of normal the lowest. Generally, flows were about 140 to 175 percent of normal over the area for the water year. The above normal fall and winter rains resulted in maximum or near maximum monthly flows from January through March. The deficiency in rainfall during the late spring resulted in a steady decline in flows from March to May and June setting some new record monthly lows in June and July. Summer rains resulted in some recovery of flows in July and August. Record or near record floods the last of September was the result of excessive rainfall associated with Hurricane Georges.

Discharge hydrographs for some representative streams in northwest Florida are shown in figures 2 through 8. The upper graph (A) shows the 1998 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for all years. The lower graph (B) shows the monthly mean discharge for the period 1989-98.

Ground Water

A water level hydrograph for the USGS well at Crawfordville is shown in figure 9. The upper graph (A) shows the 1998 monthly maximum water level compared to the maximum, minimum, and mean monthly maximum water level for the period of record. The lower graph (B) shows the monthly maximum water levels for the period 1989-98. Water levels were below average for October, near average from November through February, above normal in March, but declined to a new record low in June and recovered to a record high in September.

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

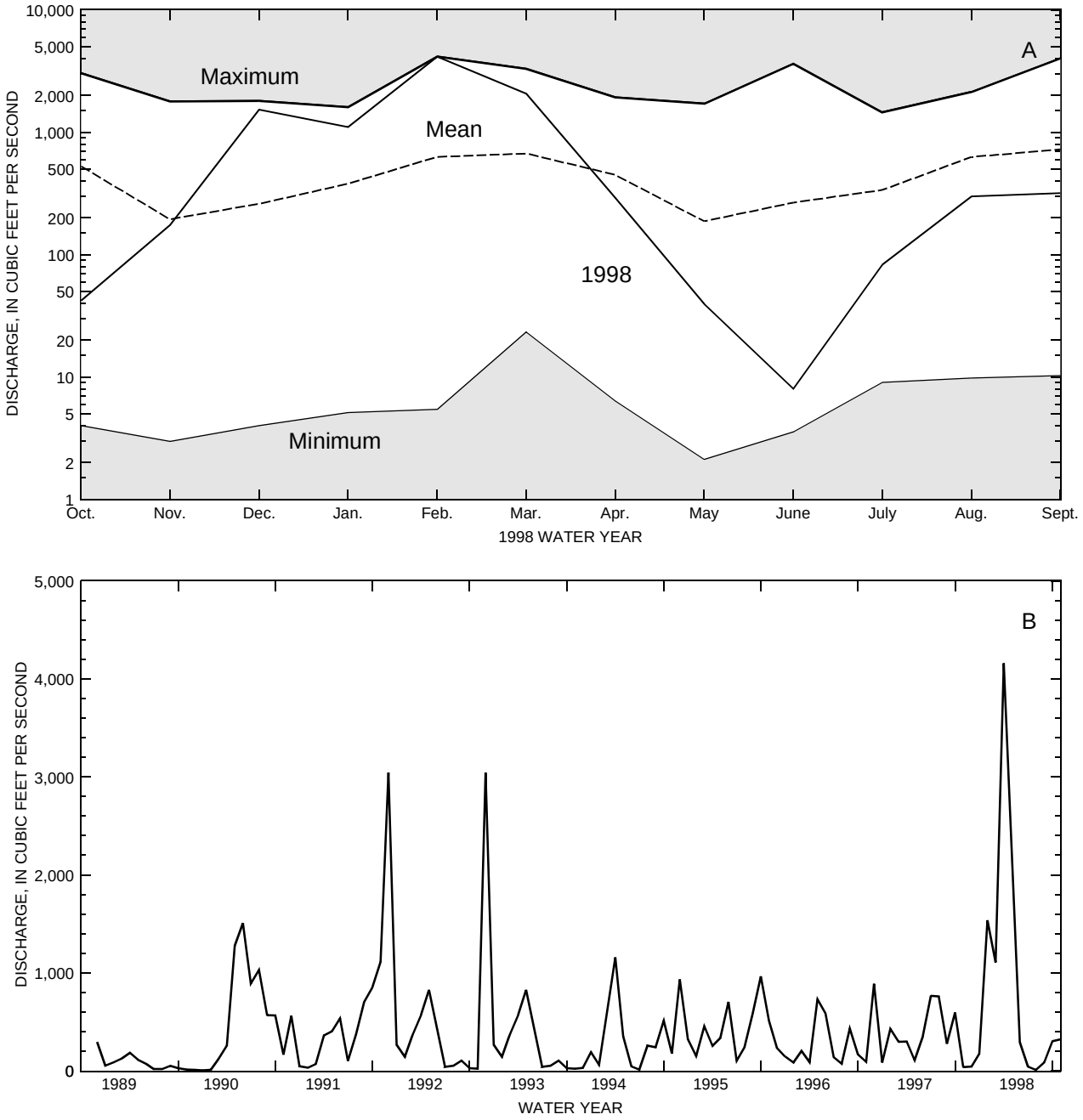

Figure 2. Santa Fe River near Worthington Springs (A) 1998 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period 1932-1998, and (B) the monthly mean discharge for the period 1989-98.

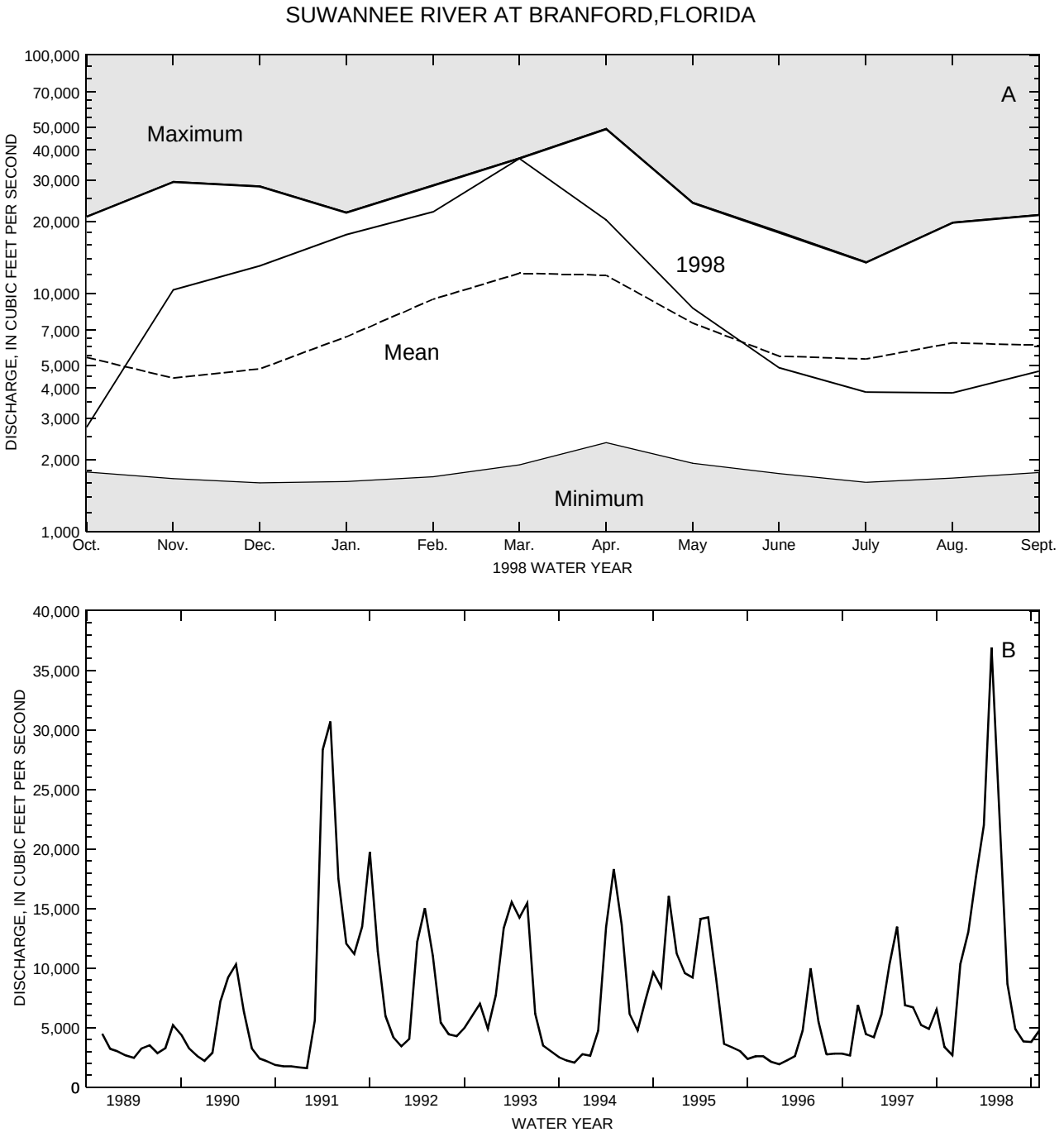

Figure 3. Suwannee River at Branford (A) 1998 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period 1931-98, and (B) the monthly mean discharge for the period 1989-98.

STEINHATCHEE RIVER NEAR CROSS CITY, FLORIDA

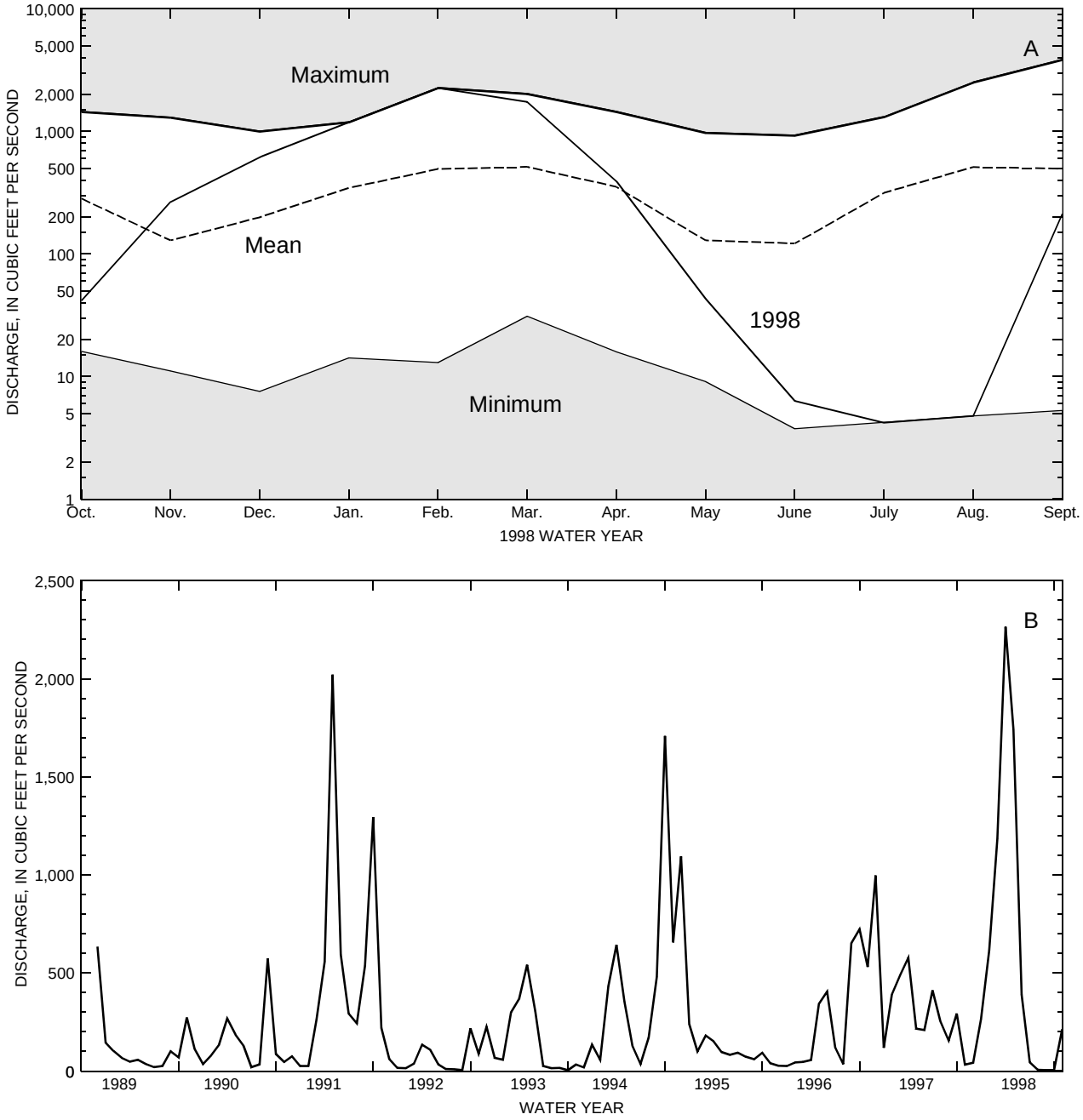

Figure 4. Steinhatchee River near Cross City (A) 1998 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period 1950-98, and (B) the monthly mean discharge for the period 1989-98.

OCHLOCKONEE RIVER NEAR HAVANA, FLORIDA

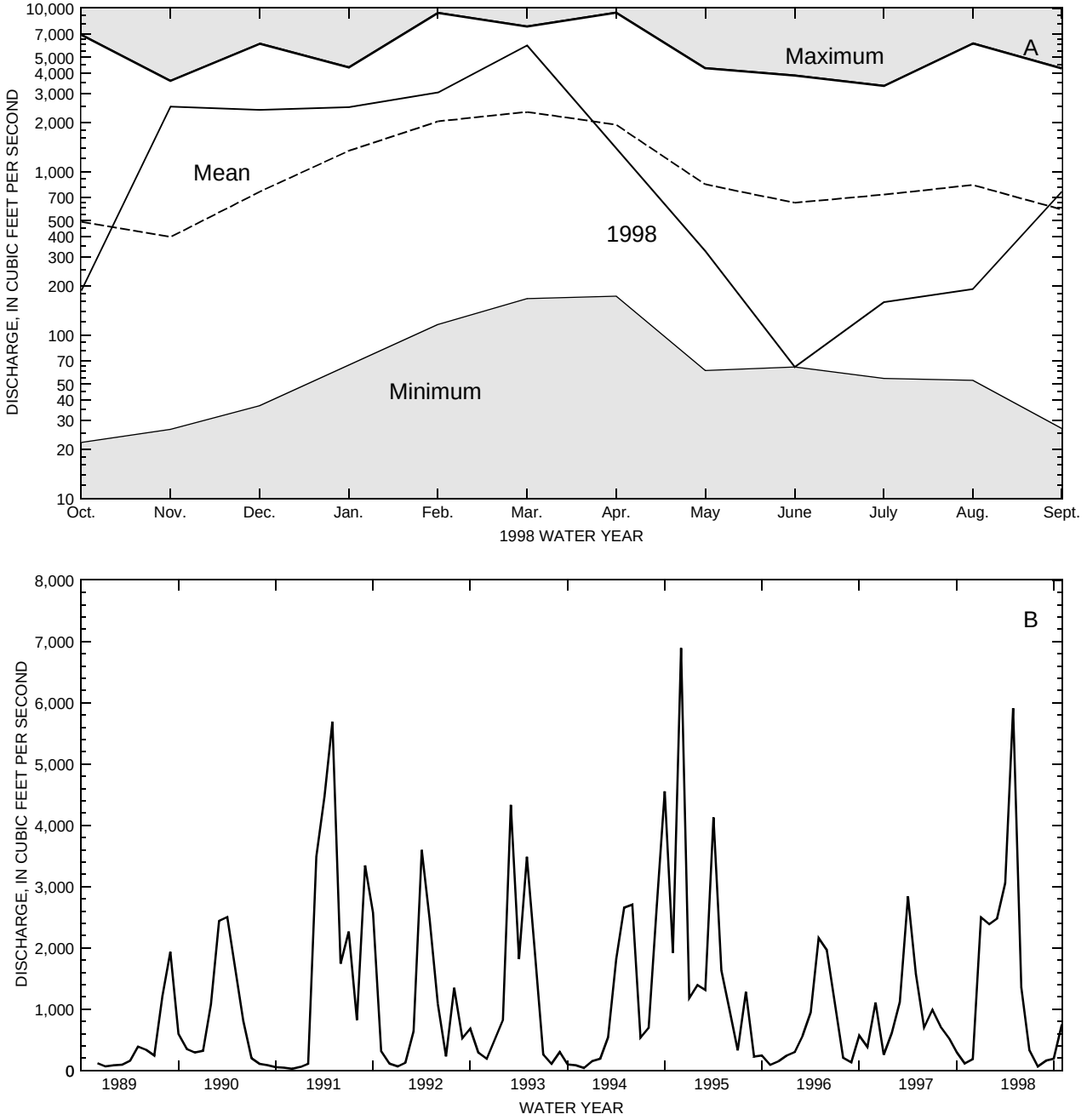

Figure 5. Ochlockonee River near Havana (A) 1998 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period 1926-98, and (B) the monthly mean discharge for the period 1989-98.

CHIPOLA RIVER NEAR ALTHA,FLORIDA

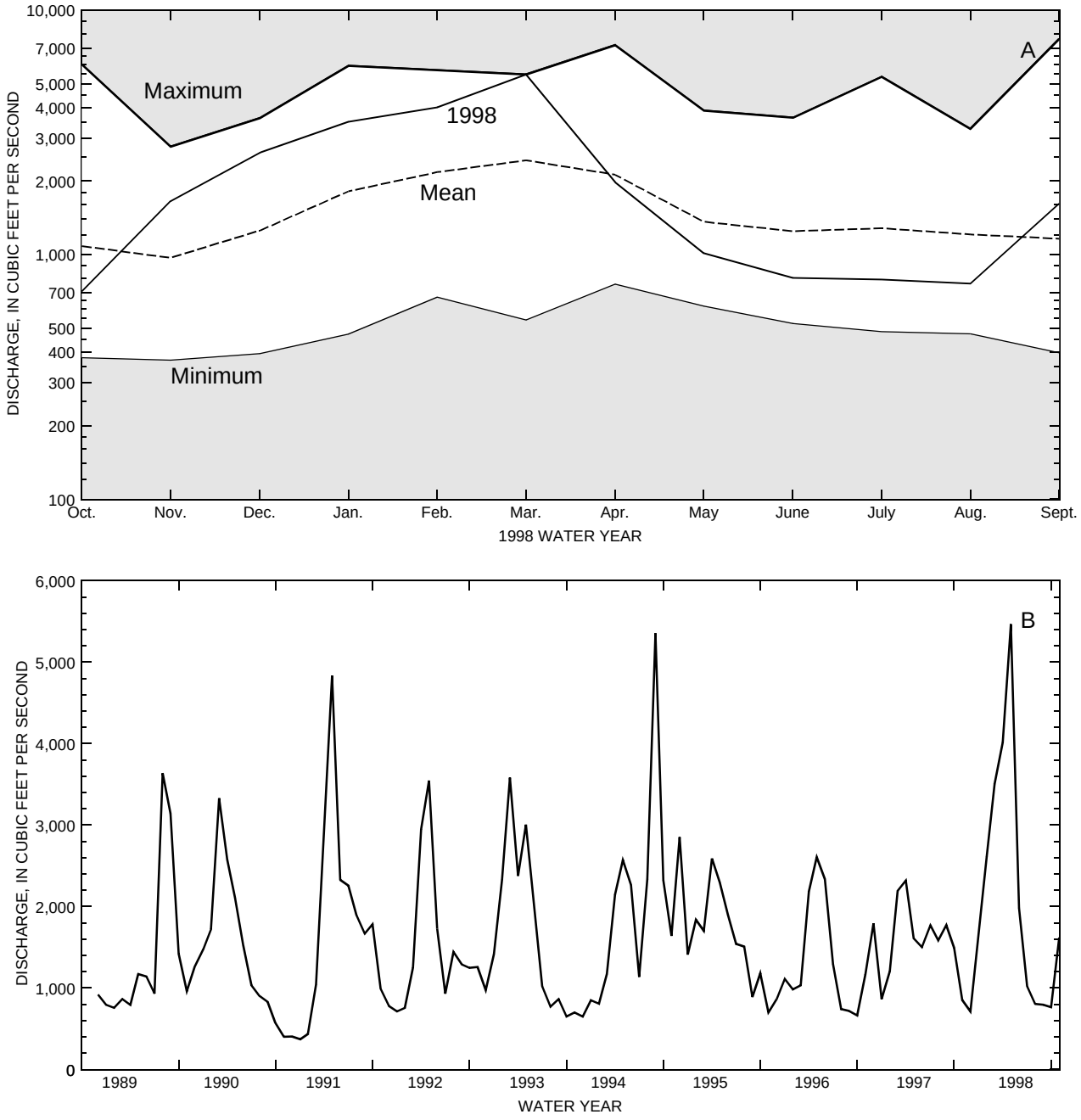

Figure 6. Chipola River near Altha (A) 1998 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period 1943-98, and (B) the monthly mean discharge for the period 1989-98.

SHOAL RIVER NEAR CRESTVIEW, FLORIDA

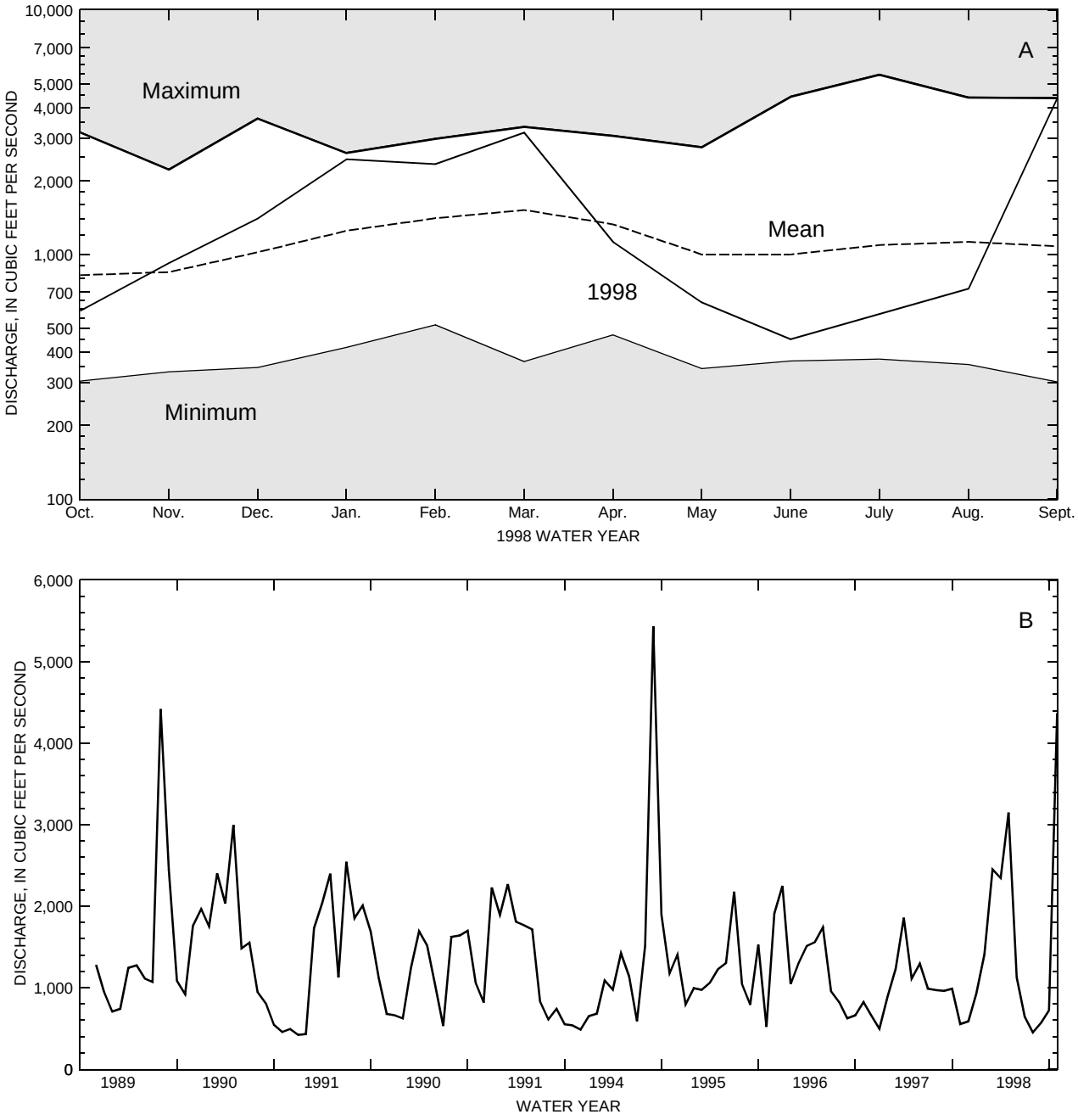

Figure 7. Shoal River near Crestview (A) 1998 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period 1938-98, and (B) the monthly mean discharge for the period 1989-98.

ESCAMBIA RIVER NEAR CENTURY, FLORIDA

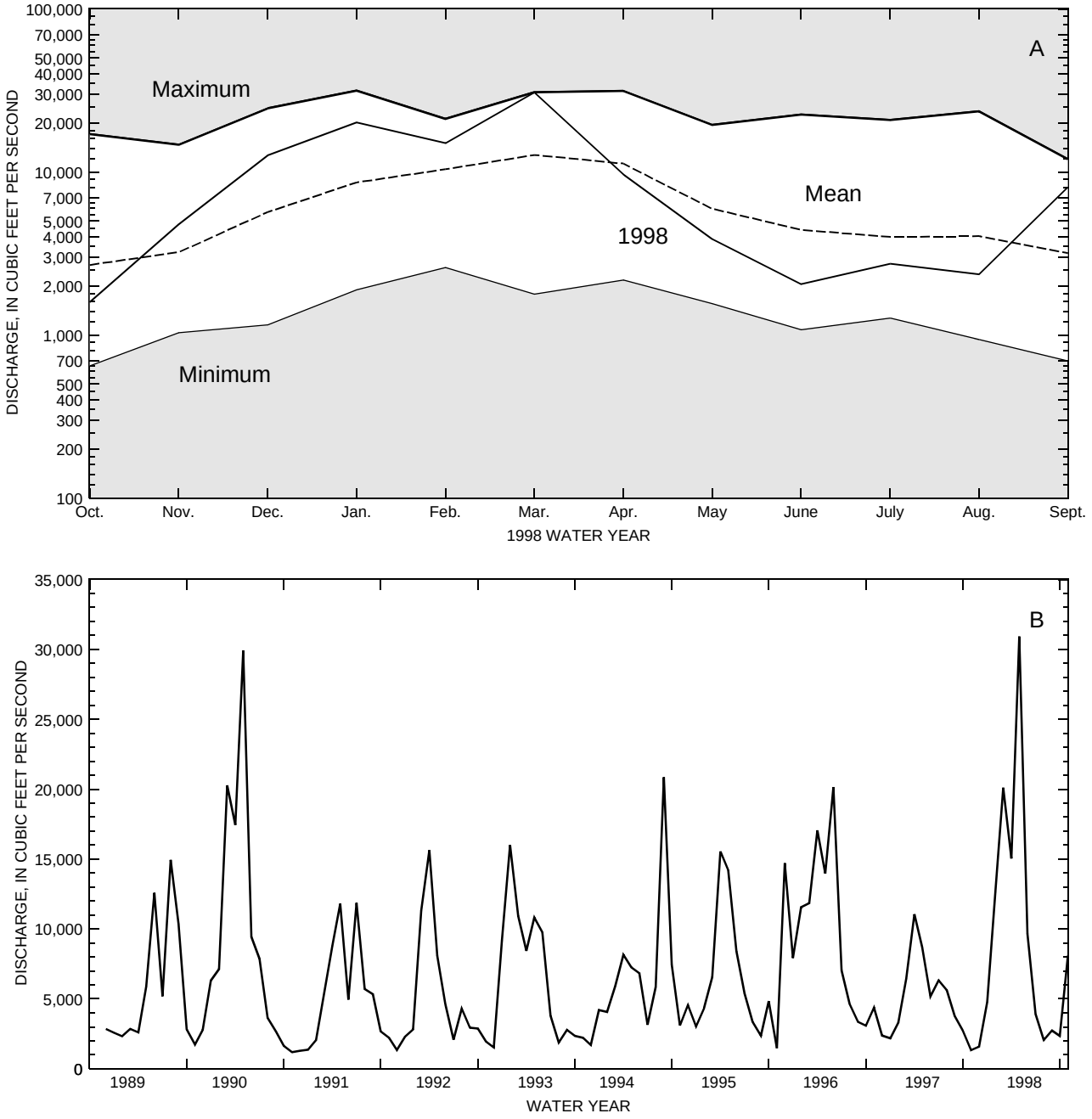

Figure 8. Escambia River near Century (A) 1998 monthly mean discharge compared to the maximum, minimum, and mean monthly mean discharge for the period 1934-98, and (B) the monthly mean discharge for the period 1989-98.

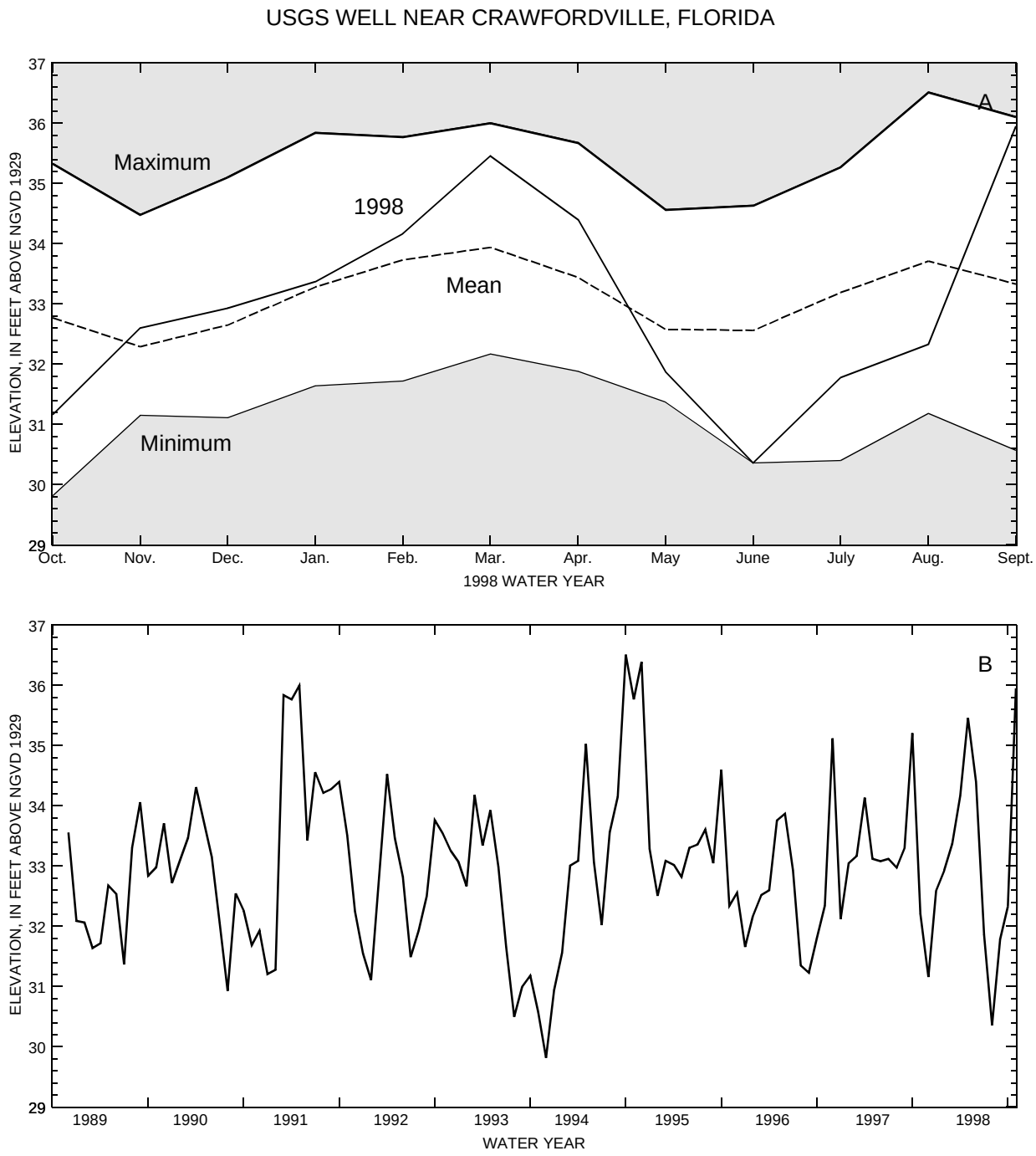

Figure 9. USGS well near Crawfordville (A) monthly maximum water level for the 1998 water year compared to maximum, minimum, and mean monthly maximum water levels for the period 1965-98 and (B) the monthly maximum water level for the period 1989-98.

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/nawqa_home.html

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1998 water year that began October 1, 1997, and ended September 30, 1998. 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.

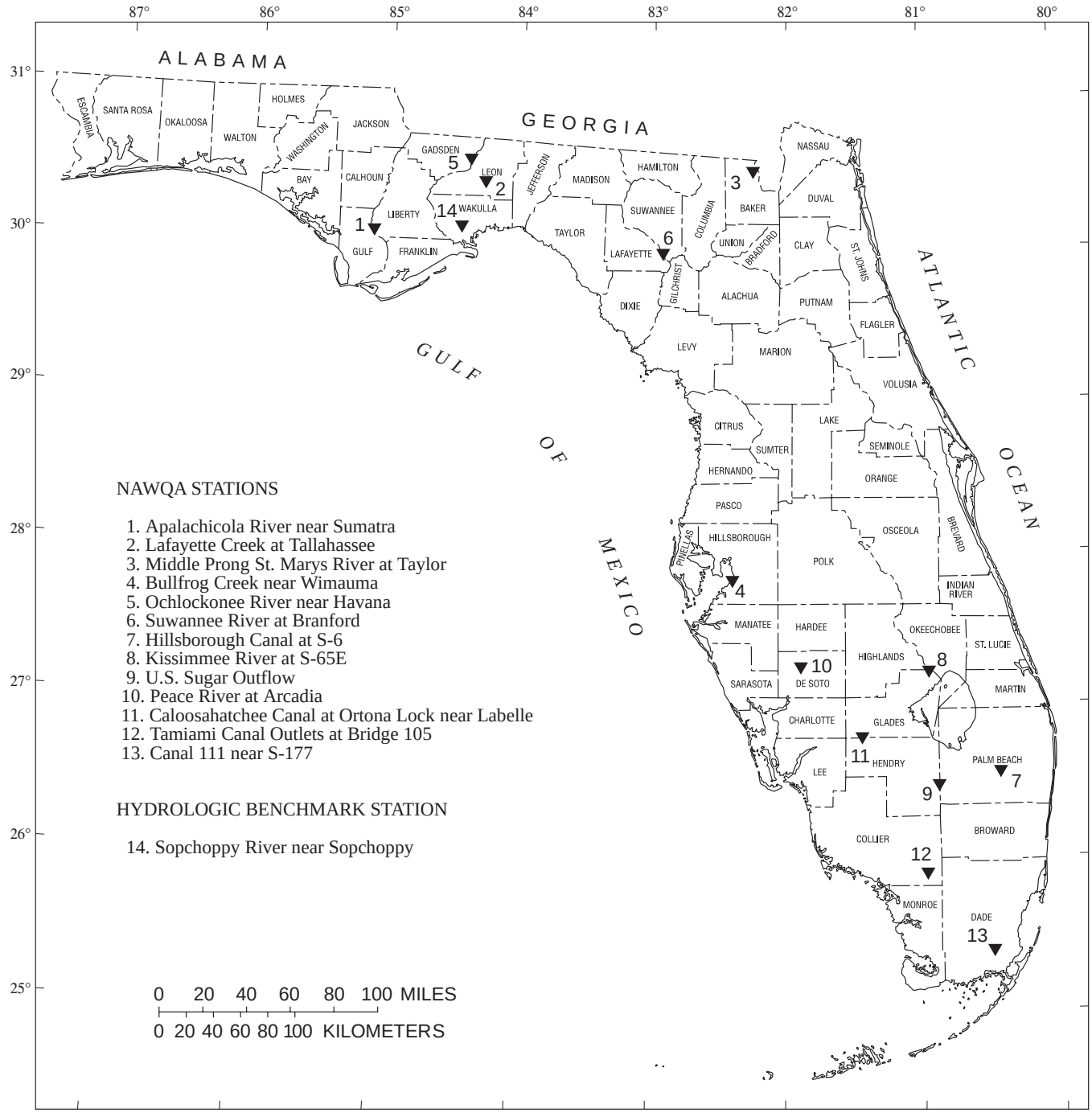

Figure 10. NAWQA stations in the State of Florida.

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.)

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."

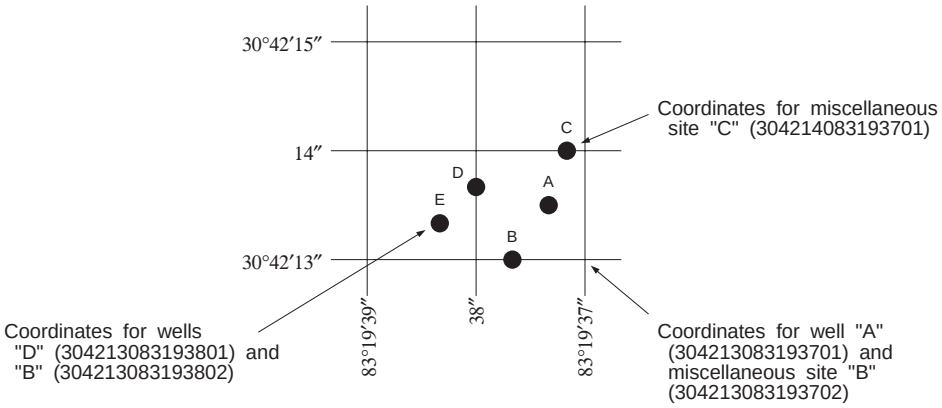

Figure 11. System for numbering wells and miscellaneous sites (latitude and longitude).

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 glossary), 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.

On-site 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 definitions) 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, Book1, 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 machine-readable formats on magnetic tape or 3½-inch floppy disk. 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 DistrictOffices (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.

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

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in

organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

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

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary 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.

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 which ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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 which 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.

Bedload is the sediment which moves along in essentially continuous contact with the streambed by rolling, sliding, and making brief excursions into the flow a few diameters above the bed.

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

Benthic invertebrates are invertebrate animals inhabiting the bottoms of lakes, streams, and other water bodies. 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 micro-organisms, such as bacteria.

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

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square mile (g/m^2).

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

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

*Wet mass i*s the mass of living matter plus contained water.

Bottom material: See Bed material.

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

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

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with 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.

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

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

Continuing-record station is a specified site which meets one or all conditions listed:

1. When chemical samples are collected daily or monthly for 10 or more months during the water year.
2. When water temperature records include observations taken one or more times daily.
3. When sediment discharge records include periods for which sediment loads are computed and are considered to be representative of the runoff for the water year.

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

Cubic foot per second (FT3/S, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute.

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

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

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

Annual 7-day minimum is the lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-

March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

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

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

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

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

Extractable organic halides (EOX) are organic compounds which contain halogen atoms such a chlorine. These organic compounds are semi-volatile and extractable by ethyl acetate from air-dried stream bottom sediments. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the stream bottom sediments.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

High tide is the maximum height reached by each rising tide.

Hydrologic Benchmark 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.

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

Low tide is the minimum height reached by each falling tide.

Mean high tide is the average of all high tides over a specified period.

Mean low tide is the average of all low tides over a specified period.

Mean water level is the average of all tides over a specified period.

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 (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 liter (µG/L, µg/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

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

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. It 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.

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

National Stream-Quality Accounting Network (NASQAN) 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.

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.

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.

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. The codes used in NWIS are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

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

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

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

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

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

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

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

Picocurie (PC, pCi) is one trillionth (1 x 10-12) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7 x 1010 radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

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

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

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

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

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

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

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.

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

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

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

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

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

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

River mile as used herein, is the distance above the mouth of Delaware Bay, measured along the center line of the navigation channel or the main stem of the Delaware River. River mile data were furnished by the Delaware River Basin Commission.

Runoff in inches (IN., in.) shows the depth to which the drainage area would be covered if all the runoff for a given

time period were uniformly distributed on it.

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 of the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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

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

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

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

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

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

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027.

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

Suspended total residue at 105 Deg. C concentration is the concentration of suspended sediment in the sampled zone expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). A small aliquot of the sample is used for the analysis.

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

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

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 i*s 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.

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

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

Substrate is the physical surface upon which an organism lives.

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

Artificial substrate is a device which is purposely placed in a stream or lake for colonization or 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.

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

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

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

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

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

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

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

Synoptic Studies 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 contami*nant 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 indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligramsper liter, by 0.00136.

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

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

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

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

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

Volatile Organic Compounds (VOCs) 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 VOCs are man-made 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 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, 1985, is called the "1985 water year."

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

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

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

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-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

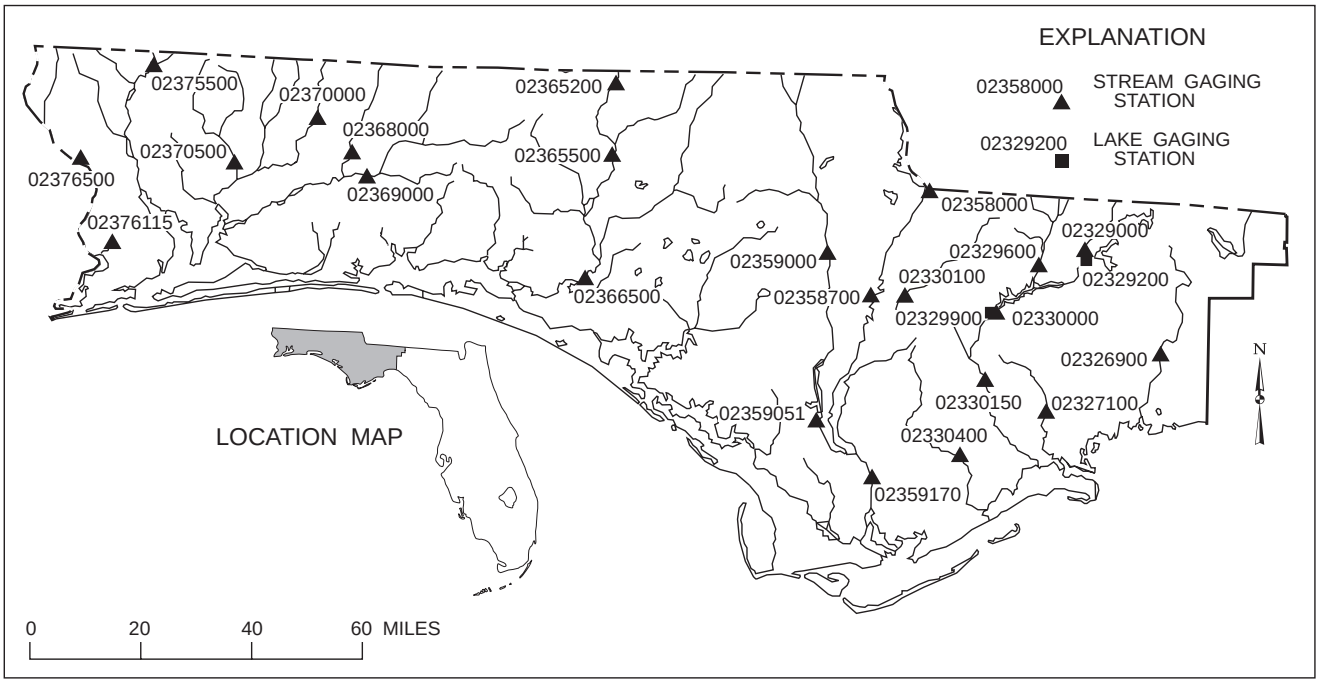

Figure 12. Location of stream gaging and lake gaging stations in Northwest Florida Water Management District.

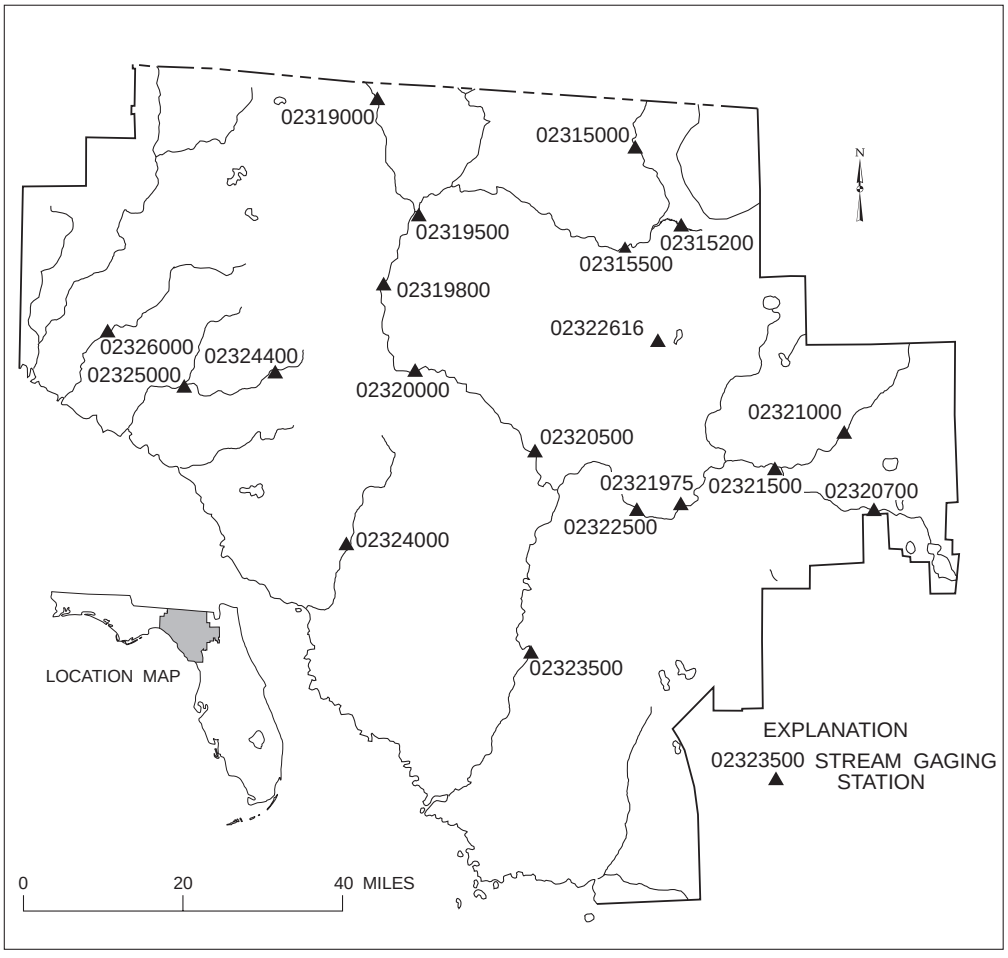

Figure 13. Location of stream gaging stations in Suwannee River Water Management District.

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.--Records good, except for estimated daily discharges, and period Oct. 1-9, which are fair.

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	105	1310	2630	5150	e8800	15000	6590	1460	197	17	166	349
2	100	1660	2630	5070	e8900	14700	6280	1460	181	15	163	343
3	100	1960	2630	4970	e9000	14300	5940	1450	168	14	218	358
4	100	2150	2660	4850	e9000	13900	5710	1420	153	14	252	449
5	92	2300	2680	4700	e8800	13400	5470	1370	136	16	213	556
6	88	2460	2680	4490	e8600	12800	5130	1310	121	15	171	574
7	83	2640	2650	4270	e8400	12400	4730	1260	106	13	150	566
8	81	2800	2610	4160	e8200	12100	4290	1200	98	12	145	560
9	71	2940	2570	4090	e8000	12200	3940	1140	91	13	176	564
10	67	3050	2680	3970	e7800	12100	3760	1080	84	10	374	553
11	67	3140	2840	3860	e7500	12000	3750	1020	80	9.3	443	535
12	68	3220	2920	3760	e7200	11800	3840	951	74	12	446	516
13	69	3320	3130	3660	e6900	11400	3900	879	70	17	428	494
14	69	3420	3350	3560	e6500	11000	3890	808	66	16	419	471
15	69	3460	3640	3600	e6600	10600	3800	740	62	16	461	447
16	81	3480	3900	3930	e7500	10100	3660	675	60	27	503	421
17	97	3480	4170	4060	8600	9660	3490	616	56	33	514	397
18	98	3460	4410	e4100	9650	9380	3300	572	53	41	509	380
19	92	3420	4590	e4150	11200	9280	3110	530	49	58	513	397
20	90	3340	4690	e4200	12200	9210	2920	484	45	78	503	421
21	87	3240	4730	e4300	12800	9090	2730	446	46	90	497	471
22	82	3130	4730	e4600	13200	8930	2560	412	40	88	496	610
23	80	3010	4710	e5000	14300	8760	2400	380	37	86	500	675
24	81	2900	4690	e5500	14900	8550	2250	354	35	80	502	684
25	82	2790	4750	e5600	15300	8330	2100	328	33	85	488	653
26	86	2680	4830	e6000	15400	8100	1960	304	36	86	465	614
27	187	2570	4970	e7000	15300	7870	1820	287	30	72	443	589
28	616	2470	5090	e7500	15100	7630	1690	265	28	75	421	565
29	860	2400	5170	e8000	---	7390	1560	247	22	107	402	543
30	954	2530	5200	e8400	---	7130	1490	232	19	161	381	1040
31	1030	---	5190	e8700	---	6860	---	212	---	168	364	---
MEAN	188	2824	3810	5006	10200	10520	3602	771	75.9	49.8	378	527
MAX	1030	3480	5200	8700	15400	15000	6590	1460	197	168	514	1040
MIN	67	1310	2570	3560	6500	6860	1490	212	19	9.3	145	343
IN.	.10	1.51	2.10	2.76	5.08	5.80	1.92	.43	.04	.03	.21	.28

e Estimated

D02315000 SUWANNEE RIVER NEAR BENTON, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1998, BY WATER YEAR (WY)

MEAN	746	550	1209	1882	3480	4015	2518	809	596	695	1049	756
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	215	92.8	18.9	22.5	14.0	13.3
(WY)	1979	1979	1979	1979	1989	1989	1989	1989	1990	1990	1990	1990

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1976 - 1998	
ANNUAL MEAN	1740		3120		1515	
HIGHEST ANNUAL MEAN					3297	1984
LOWEST ANNUAL MEAN					254	1989
HIGHEST DAILY MEAN	5200	Dec 30	15400	Feb 26	18200	Apr 6 1984
LOWEST DAILY MEAN	67	Oct 10	9.3	Jul 11	1.3	Oct 9 1990
ANNUAL SEVEN-DAY MINIMUM	69	Oct 9	12	Jul 6	3.3	Oct 3 1990
INSTANTANEOUS PEAK FLOW			15400	Feb 26	18300	Apr 6 1984
INSTANTANEOUS PEAK STAGE			99.37	Feb 26	99.90	Apr 6 1984
INSTANTANEOUS LOW FLOW			8.9	Jul 11	1.3	Oct 9 1990
ANNUAL RUNOFF (INCHES)	11.31		20.27		9.85	
10 PERCENT EXCEEDS	3480		8840		4020	
50 PERCENT EXCEEDS	1500		1450		621	
90 PERCENT EXCEEDS	177		67		44	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74.83	79.75	84.13	91.00	---	99.20	94.23	80.30	75.36	74.32	75.24	76.01
2	74.81	80.98	84.12	90.74	---	99.11	93.91	80.27	75.30	74.30	75.23	75.97
3	74.80	81.97	84.14	90.39	---	98.97	93.51	80.24	75.25	74.28	75.43	76.05
4	74.80	82.59	84.22	89.97	---	98.79	93.00	80.13	75.19	74.29	75.54	76.49
5	74.75	83.07	84.29	89.50	---	98.60	92.33	79.96	75.11	74.30	75.42	77.00
6	74.72	83.59	84.28	88.99	---	98.39	91.40	79.76	75.05	74.29	75.26	77.08
7	74.69	84.15	84.19	88.46	---	98.20	90.30	79.57	74.97	74.27	75.18	77.04
8	74.67	84.65	84.05	88.19	---	98.07	89.06	79.37	74.93	74.26	75.15	77.02
9	74.60	85.08	83.94	88.01	---	98.12	88.07	79.16	74.89	74.27	75.27	77.04
10	74.56	85.42	84.29	87.73	---	98.11	87.54	78.94	74.85	74.22	76.13	76.98
11	74.57	85.67	84.78	87.46	---	98.05	87.52	78.70	74.82	74.21	76.47	76.90
12	74.57	85.86	85.03	87.22	---	97.95	87.76	78.44	74.79	74.24	76.48	76.81
13	74.58	86.12	85.63	86.96	---	97.80	87.93	78.17	74.77	74.32	76.39	76.71
14	74.58	86.37	86.19	86.71	---	97.61	87.90	77.89	74.74	74.30	76.35	76.60
15	74.58	86.47	86.92	86.83	---	97.39	87.66	77.62	74.71	74.31	76.55	76.48
16	74.68	86.51	87.55	87.62	---	97.17	87.25	77.36	74.69	74.43	76.75	76.36
17	74.78	86.51	88.20	87.93	96.09	96.93	86.74	77.12	74.67	74.48	76.80	76.25
18	74.79	86.47	88.78	---	96.89	96.72	86.17	76.94	74.65	74.55	76.78	76.16
19	74.75	86.36	89.20	---	97.67	96.64	85.59	76.76	74.61	74.68	76.80	76.24
20	74.74	86.18	89.46	---	98.13	96.58	85.03	76.57	74.58	74.81	76.75	76.36
21	74.72	85.93	89.57	---	98.36	96.49	84.45	76.40	74.59	74.89	76.72	76.60
22	74.68	85.63	89.56	---	98.53	96.36	83.92	76.25	74.54	74.87	76.72	77.24
23	74.66	85.31	89.50	---	98.98	96.22	83.41	76.11	74.52	74.86	76.74	77.54
24	74.67	84.96	89.45	---	99.20	96.05	82.93	75.99	74.50	74.83	76.75	77.58
25	74.68	84.61	89.62	---	99.31	95.86	82.45	75.87	74.48	74.85	76.68	77.44
26	74.71	84.28	89.92	---	99.35	95.66	81.99	75.76	74.50	74.86	76.57	77.26
27	75.25	83.94	90.37	---	99.33	95.46	81.52	75.68	74.46	74.77	76.47	77.15
28	77.11	83.64	90.78	---	99.27	95.24	81.06	75.59	74.43	74.80	76.36	77.04
29	78.09	83.39	91.05	---	---	95.02	80.64	75.53	74.38	74.98	76.27	76.94
30	78.45	83.81	91.16	---	---	94.77	80.39	75.48	74.34	75.22	76.17	78.92
31	78.74	---	91.15	---	---	94.50	---	75.41	---	75.25	76.08	---
TOTAL	2329.61	2539.27	2705.52	---	---	3010.03	2605.66	2407.34	2242.67	2311.31	2361.50	2305.26
MEAN	75.15	84.64	87.27	---	---	97.10	86.86	77.66	74.76	74.56	76.18	76.84
MAX	78.74	86.51	91.16	---	---	99.20	94.23	80.30	75.36	75.25	76.80	78.92
MIN	74.56	79.75	83.94	---	---	94.50	80.39	75.41	74.34	74.21	75.15	75.97

CAL YR 1997 TOTAL 29528.96 MEAN 80.90 MAX 91.39 MIN 74.56

02315200 DEEP CREEK NEAR SUWANNEE VALLEY, FL

LOCATION.--Lat 30°21''55", long 82°37'13", in NW¼ sec.33, T.1 N., R.17 E., Columbia County, Hydrologic Unit 03110201, near left bank on upstream side of bridge on U.S. Highway 441, 4.0 mi upstream from mouth, 7.2 mi northeast of Suwannee Valley, 12.2 mi north of Lake City.

DRAINAGE AREA.--88.6 mi^2.

PERIOD OF RECORD.--April 1976 to September 1981, October 1990 to September 1998 (discontinued). Miscellaneous discharge measurements for some periods prior to April 1976.

GAGE.--Water-stage recorder. Datum of gage is 82.56 ft National Geodetic Vertical Datum of 1929 (levels by L. L. Lee and Associates).

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	27	32	156	279	488	119	9.3	.30	.26	e.17	e3.5
2	3.7	33	32	141	247	440	109	8.2	.29	.26	e.50	e2.5
3	3.1	34	31	128	264	394	100	7.2	.28	e.27	e2.2	e3.0
4	2.7	32	31	118	272	355	93	6.3	.28	e.28	e1.5	e4.0
5	2.3	31	32	110	255	324	84	5.4	e.27	e.30	.60	e4.5
6	2.0	31	30	102	227	298	76	4.6	e.27	e.35	e.55	e4.0
7	1.7	32	29	95	203	285	68	4.0	e.27	e.50	e1.0	e3.5
8	1.5	33	27	116	183	293	63	3.9	e.27	e.40	e2.0	e5.0
9	1.4	33	27	131	166	401	66	3.3	e.26	e.35	e10	e7.0
10	1.3	32	54	122	151	408	69	2.7	e.26	e.30	e8.0	e8.0
11	1.1	31	94	111	138	360	63	2.2	e.26	e.28	e6.0	e6.0
12	.78	31	104	101	127	323	57	1.7	e.26	e.25	5.3	e5.0
13	.60	40	132	94	118	295	52	1.3	e.26	e.30	e5.0	e4.0
14	.58	45	183	91	112	271	47	1.0	e.25	e.40	e4.5	e3.0
15	.49	42	265	116	107	248	43	.80	e.25	e.60	e6.0	e2.5
16	.41	39	303	174	280	225	40	.70	e.25	e.90	e6.5	e2.0
17	.30	37	288	174	2630	203	36	.65	e.25	e1.5	e5.5	e1.8
18	.28	34	260	155	2310	189	33	.65	e.25	e1.0	e6.0	e1.7
19	.29	33	235	140	1620	418	31	.62	e.24	e.70	e8.0	e2.5
20	.30	31	212	132	1260	573	29	.58	e.24	e.50	e9.0	e5.0
21	.28	29	192	124	980	525	26	.55	e.24	e.40	e8.0	e7.0
22	.27	27	174	118	818	454	23	.50	e.24	e.30	e7.5	e9.0
23	.26	26	161	302	1680	395	21	.47	e.24	.25	e9.0	e20
24	.29	24	157	554	1410	342	18	.42	.23	e.20	e10	e25
25	.31	22	193	505	1050	293	16	.42	e.30	e.19	e9.0	e30
26	.53	21	226	430	769	250	15	.40	e.40	e.18	e7.0	e28
27	11	20	230	433	576	215	13	.41	e.35	e.17	e6.0	e25
28	20	19	230	466	528	187	12	.43	.30	e.19	e4.0	e20
29	18	18	214	417	---	164	11	.34	.27	e.22	e3.0	e15
30	17	28	193	364	---	146	10	.31	.26	e.20	e2.5	e20
31	19	---	173	319	---	130	---	.33	---	e.18	e3.0	---
MEAN	3.75	30.5	147	211	670	319	48.1	2.25	.27	.39	5.07	9.25
MAX	20	45	303	554	2630	573	119	9.3	.40	1.5	10	30
MIN	.26	18	27	91	107	130	10	.31	.23	.17	.17	1.7
IN.	.05	.38	1.91	2.75	7.88	4.15	.61	.03	.00	.01	.07	.12

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1998, BY WATER YEAR (WY)

MEAN	79.6	22.5	36.6	91.2	143	144	74.4	48.9	29.0	32.1	43.5	35.4
MAX	381	82.7	147	218	670	319	211	154	179	200	176	167
(WY)	1995	1994	1998	1978	1998	1998	1980	1976	1991	1991	1991	1979
MIN	.16	.17	.35	1.63	5.13	23.3	4.78	1.01	.27	.31	1.64	.55
(WY)	1991	1991	1991	1979	1996	1997	1976	1993	1998	1981	1977	1993

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1976 - 1998	
ANNUAL MEAN	64.6		117		64.4	
HIGHEST ANNUAL MEAN					117	1998
LOWEST ANNUAL MEAN					24.1	1992
HIGHEST DAILY MEAN	674	Apr 29	2630	Feb 17	2630	Feb 17 1998
LOWEST DAILY MEAN	.26	Oct 23	.17	Jul 27	.09	Dec 22 1990
ANNUAL SEVEN-DAY MINIMUM	.28	Oct 18	.19	Jul 26	.09	Dec 21 1990
INSTANTANEOUS PEAK FLOW			3300	Feb 17	3300	Feb 17 1998
INSTANTANEOUS PEAK STAGE			16.26	Feb 17	16.70	Oct 8 1996
INSTANTANEOUS LOW FLOW			.17	Jul 27	.09	Dec 22 1990
ANNUAL RUNOFF (INCHES)	9.90		17.94		9.87	
10 PERCENT EXCEEDS	174		302		173	
50 PERCENT EXCEEDS	31		18		20	
90 PERCENT EXCEEDS	2.3		.27		.44	

302556082433800 OCCIDENTAL POND SOUTH CLAY SETTLING AREA OUTFALL NEAR WHITE SPRINGS, FL

LOCATION.--Lat 30°25'56", long 82°43'38", in SE$^1/_4$ sec.5, T.1 S., R.16 E., Hamilton County, Hydrologic Unit 03110201, on right bank of dyke, 5.8 mi northeast of intersection U.S. Highway 41 and County Road 137, and 6.9 mi north of White Springs.

DRAINAGE AREA.--0.18 mi^2, approximately.

PERIOD OF RECORD.--July 1996 to September 1998 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (BCI reference mark).

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.00	.00	.00	.05	.14	.49	.01	.00	.00	e.00	.00	.00
2	e.00	.00	.00	.04	.15	.37	.01	.00	.00	e.00	.00	.00
3	e.00	.00	.00	.03	.46	.30	.01	.00	.00	e.00	.00	.00
4	e.00	.00	.00	.03	.39	.24	.00	.00	.00	e.00	.00	.00
5	e.00	.00	.00	.03	.27	.22	.00	.00	.00	e.00	.00	.00
6	e.00	.00	.00	.02	.18	.20	.00	.00	.00	e.00	.00	.00
7	e.00	.00	.00	.02	.14	.44	.00	.00	.00	e.00	.00	.00
8	e.00	.00	.00	.21	.12	.93	.00	.00	.00	e.00	.00	.00
9	e.00	.00	.00	.18	.10	2.5	.01	.00	.00	e.00	.00	.00
10	e.00	.00	.43	.12	.09	.86	.01	.00	.00	e.00	.00	.00
11	e.00	.00	.38	.08	.08	.47	.01	.00	.00	e.00	.00	.00
12	e.00	.00	.42	.05	.08	.34	.00	.00	.00	e.00	.00	.00
13	e.00	.00	.47	.04	.08	.27	.00	.00	.00	e.00	.00	.00
14	e.00	.00	.56	.04	.08	.22	.00	.00	.00	e.00	.00	.00
15	e.00	.00	.43	.55	.09	.19	.00	.00	.00	e.00	.00	.00
16	e.00	.00	.26	.61	3.0	.16	.00	.00	.00	.00	.00	.00
17	e.00	.00	.16	.32	13	.13	.00	.00	.00	.00	.00	.00
18	e.00	.00	.11	.19	2.6	.22	.00	.00	.00	.00	.00	.00
19	e.00	.00	.08	.13	1.3	1.3	.00	.00	.00	.00	.00	.00
20	e.00	.00	.06	.09	1.2	1.1	.00	.00	.00	e.00	.00	.00
21	e.00	.00	.05	.07	.82	.51	.00	.00	.00	e.00	.00	.00
22	e.00	.00	.04	.10	2.4	.31	.00	.00	.00	e.00	.00	.00
23	e.00	.00	.06	3.8	3.8	.21	.00	.00	.00	e.00	.00	.00
24	e.00	.00	.24	1.5	1.3	.14	.00	.00	.00	e.00	.00	.00
25	e.00	.00	.40	.57	.82	.10	.00	.00	.00	.00	.00	.00
26	e.00	.00	.25	.35	.62	.08	.00	.00	.00	.00	.00	.00
27	e.00	.00	.29	.70	.50	.06	.00	.00	.00	.00	.00	.00
28	e.00	.00	.23	.61	.56	.04	.00	.00	e.00	.00	.00	.00
29	e.00	.00	.15	.36	---	.03	.00	.00	e.00	.00	.00	.00
30	e.00	.00	.10	.24	---	.02	.00	.00	e.00	.00	.00	2.3
31	.00	---	.07	.18	---	.01	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	5.24	11.31	34.37	12.46	0.06	0.00	0.00	0.00	0.00	2.30
MEAN	.000	.000	.17	.36	1.23	.40	.002	.000	.000	.000	.000	.077
MAX	.00	.00	.56	3.8	13	2.5	.01	.00	.00	.00	.00	2.3
MIN	.00	.00	.00	.02	.08	.01	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	10	22	68	25	.1	.00	.00	.00	.00	4.6
CFSM	.00	.00	.94	2.03	6.82	2.23	.01	.00	.00	.00	.00	.43
IN.	.00	.00	1.08	2.34	7.10	2.58	.01	.00	.00	.00	.00	.48

e Estimated

302556082433800 OCCIDENTAL POND SOUTH CLAY SETTLING AREA OUTFALL NEAR WHITE SPRINGS, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

MEAN	.11	.000	.091	.29	.65	.23	.031	.000	.021	.000	.000	.026
MAX	.23	.000	.17	.36	1.23	.40	.059	.001	.042	.000	.000	.077
(WY)	1997	1997	1998	1998	1998	1998	1997	1997	1997	1996	1996	1998
MIN	.000	.000	.013	.22	.075	.066	.002	.000	.000	.000	.000	.000
(WY)	1998	1997	1997	1997	1997	1997	1998	1998	1998	1996	1996	1996

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1996 - 1998	
ANNUAL TOTAL	19.21		65.74			
ANNUAL MEAN	.053		.18		.12	
HIGHEST ANNUAL MEAN					.18	1998
LOWEST ANNUAL MEAN					.059	1997
HIGHEST DAILY MEAN	1.7	Jan 9	13	Feb 17	13	Feb 17 1998
LOWEST DAILY MEAN	.00	Many Days	.00	Many Days	.00	Many Days
ANNUAL SEVEN-DAY MINIMUM	.00	Mar 6	.00	Oct 1	.00	Jul 1 1996
INSTANTANEOUS PEAK FLOW			52	Feb 17	52	Feb 17 1998
INSTANTANEOUS PEAK STAGE			138.87	Feb 17	138.87	Feb 17 1998
ANNUAL RUNOFF (AC-FT)	38		130		86	
ANNUAL RUNOFF (CFSM)	.29		1.00		.66	
ANNUAL RUNOFF (INCHES)	3.97		13.59		9.01	
10 PERCENT EXCEEDS	.16		.41		.21	
50 PERCENT EXCEEDS	.00		.00		.00	
90 PERCENT EXCEEDS	.00		.00		.00	

SUWANNEE RIVER BASIN

302623082434200 OCCIDENTAL POND NORTH CLAY SETTLING AREA OUTFALL NEAR WHITE SPRINGS, FL

LOCATION.--Lat 30°26'23", long 82°43'42", in SE$^1/_4$ sec.32, T.1 S., R.16 E., Hamilton County, Hydrologic Unit 03110201, on left bank of dyke, 6.4 mi northeast of intersection U.S. Highway 41 and County Road 137, and 7.7 mi north of White Springs.

DRAINAGE AREA.--0.71 mi^2, approximately.

PERIOD OF RECORD.--July 1996 to September 1998 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (BCI reference mark).

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.30	.46	1.1	1.8	3.4	.20	.00	.00	.00	.00	.00
2	.00	.61	.36	.93	1.6	2.5	.16	.00	.00	.01	.00	.00
3	.00	.50	.30	.83	2.4	1.9	.12	.00	.00	.00	.00	.00
4	.00	.36	.29	.76	2.3	1.5	.09	.00	.00	.00	.00	.00
5	.00	.26	.27	.71	1.8	1.2	.07	.00	.00	.00	.00	.00
6	.00	.20	.23	.67	1.5	.98	.05	.00	.00	.00	.00	.00
7	.00	.16	.20	.64	1.3	1.6	.04	.00	.00	.00	.00	.00
8	.00	.12	.17	1.2	1.1	3.3	.03	.00	.00	.00	.00	.00
9	.00	.08	.18	1.1	.93	8.6	.14	.00	.00	.00	.00	.00
10	.00	.06	1.7	1.0	.81	6.6	.15	.00	.00	e.00	.00	.00
11	.00	.04	2.1	.84	.72	5.3	.09	.00	.00	e.00	.00	.00
12	.00	.06	2.3	.73	.65	3.9	.05	.00	.00	e.00	.00	.00
13	.00	.28	2.9	.66	.59	2.9	.03	.00	.00	e.00	.00	.00
14	.00	.25	4.0	.68	.57	2.2	.01	.00	.00	e.00	.00	.00
15	.00	.19	4.2	2.0	.57	1.7	.01	.00	.00	.00	.00	.00
16	.00	.15	3.4	3.8	6.9	1.3	.01	.00	.00	.00	.00	.00
17	.00	.11	2.6	3.2	75	1.1	.00	.00	.00	.00	.00	.00
18	.00	.09	2.0	2.5	27	1.2	.00	.00	.00	.00	.00	.00
19	.00	.07	1.7	1.9	13	4.9	.00	.00	.00	.00	.00	.00
20	.00	.06	1.4	1.6	9.2	5.9	.00	.00	.00	.00	.00	.00
21	.00	.04	1.2	1.3	6.6	4.5	.00	.00	.00	.00	.00	.00
22	.00	.04	1.2	1.3	10	3.5	.00	.00	.00	.00	.00	.00
23	.00	.03	1.6	15	16	2.6	.00	.00	.00	.00	.00	.00
24	.00	.02	2.4	13	9.8	2.0	.00	.00	.00	.00	.00	.00
25	.00	.02	3.0	8.5	7.0	1.5	.00	.00	.00	.00	.00	.00
26	.00	.01	2.5	6.5	5.5	1.0	.00	.00	.00	.00	.00	.00
27	.00	.01	2.6	6.7	4.1	.73	.00	.00	.00	.00	.00	.00
28	.00	.01	2.4	6.1	4.0	.56	.00	.00	.00	.00	.00	.00
29	.00	.06	1.9	4.5	---	.43	.00	.00	.00	.00	.00	.00
30	.00	.57	1.5	3.2	---	.32	.00	.00	.00	.00	.00	.65
31	.05	---	1.3	2.4	---	.24	---	.00	---	.00	.00	---
TOTAL	0.05	4.76	52.36	95.35	212.74	79.36	1.25	0.00	0.00	0.01	0.00	0.65
MEAN	.002	.16	1.69	3.08	7.60	2.56	.042	.000	.000	.000	.000	.022
MAX	.05	.61	4.2	15	75	8.6	.20	.00	.00	.01	.00	.65
MIN	.00	.01	.17	.64	.57	.24	.00	.00	.00	.00	.00	.00
AC-FT	.1	9.4	104	189	422	157	2.5	.00	.00	.02	.00	1.3
CFSM	.00	.22	2.38	4.33	10.7	3.61	.06	.00	.00	.00	.00	.03
IN.	.00	.25	2.74	5.00	11.15	4.16	.07	.00	.00	.00	.00	.03

e Estimated

SUWANNEE RIVER BASIN

302623082434200 OCCIDENTAL POND NORTH CLAY SETTLING AREA OUTFALL
NEAR WHITE SPRINGS, FL

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

MEAN	1.13	.086	.92	2.32	4.16	1.47	.15	.026	.14	.085	.009	.008
MAX	2.27	.16	1.69	3.08	7.60	2.56	.26	.052	.28	.17	.018	.022
(WY)	1997	1998	1998	1998	1998	1998	1997	1997	1997	1996	1997	1998
MIN	.002	.012	.15	1.57	.73	.38	.042	.000	.000	.000	.000	.000
(WY)	1998	1997	1997	1997	1997	1997	1998	1998	1998	1998	1998	1997

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1996 - 1998	
ANNUAL TOTAL	158.95		446.53			
ANNUAL MEAN	.44		1.22		.85	
HIGHEST ANNUAL MEAN					1.22	1998
LOWEST ANNUAL MEAN					.49	1997
HIGHEST DAILY MEAN	5.6	Jan 10	75	Feb 17	75	Feb 17 1998
LOWEST DAILY MEAN	.00	Many Days	.00	Many Days	.00	Many Days
ANNUAL SEVEN-DAY MINIMUM	.00	May 10	.00	Oct 1	.00	Jul 1 1996
INSTANTANEOUS PEAK FLOW			139	Feb 17	139	Feb 17 1998
INSTANTANEOUS PEAK STAGE			139.30	Feb 17	139.30	Feb 17 1998
ANNUAL RUNOFF (AC-FT)	315		886		619	
ANNUAL RUNOFF (CFSM)	.61		1.72		1.20	
ANNUAL RUNOFF (INCHES)	8.33		23.40		16.35	
10 PERCENT EXCEEDS	1.4		3.1		1.8	
50 PERCENT EXCEEDS	.05		.00		.01	
90 PERCENT EXCEEDS	.00		.00		.00	

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.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	135	1370	2760	5500	10800	18700	9740	1510	213	40	221	417
2	126	1780	2770	5450	10900	18400	9260	1490	201	40	331	399
3	117	2060	2760	5400	11000	18100	8730	1470	190	34	263	542
4	111	2250	2780	5300	11000	17700	8170	1440	178	28	287	667
5	106	2380	2800	5150	11000	17300	7580	1400	166	24	276	758
6	101	2520	2800	4970	10900	16800	6930	1330	156	23	240	782
7	96	2670	2770	4770	10900	16400	6270	1270	147	20	205	769
8	89	2820	2740	4750	10700	16000	5610	1220	135	18	256	748
9	83	2960	2710	4680	10500	15900	5060	1160	127	17	254	731
10	78	3070	2870	4490	10300	15700	4680	1100	124	23	332	710
11	73	3160	3110	4300	10100	15600	4460	1040	116	16	489	679
12	70	3230	3160	4140	9810	15300	4420	967	109	13	519	648
13	66	3360	3370	3990	9510	15000	4440	891	103	40	520	617
14	63	3460	3640	3860	9210	14600	4420	817	98	37	485	583
15	61	3470	3960	4030	8890	14300	4340	746	92	38	502	548
16	71	3470	4180	4620	9060	13800	4190	678	87	62	562	512
17	95	3470	4360	4650	11400	13400	4000	618	83	63	591	482
18	114	3460	4510	4630	13500	13000	3780	569	78	72	592	470
19	114	e3430	4630	4690	14300	13000	3550	530	73	79	604	523
20	106	e3350	4710	4790	15000	13200	3330	480	67	103	666	706
21	103	e3280	4760	4870	15500	13200	3100	443	63	126	630	1090
22	99	e3200	4770	4950	16100	12900	2880	408	60	133	630	1400
23	96	e3130	4770	5910	17400	12500	2670	377	53	127	699	1400
24	94	3040	4810	7390	18600	12100	2470	347	50	137	671	1310
25	107	2940	4990	7880	19000	11800	2290	322	47	147	632	1190
26	104	2840	5070	8020	19200	11600	2130	297	49	193	591	1070
27	305	2730	5220	8460	19100	11300	1970	279	53	151	550	992
28	506	2630	5380	9170	19000	11100	1810	263	61	122	513	922
29	876	2550	5480	9790	---	10800	1670	247	62	134	496	857
30	1010	2650	5540	10300	---	10500	1570	237	55	172	464	1820
31	1110	---	5540	10600	---	10200	---	227	---	211	431	---
MEAN	203	2891	3991	5855	12950	14200	4517	780	103	78.8	468	811
MAX	1110	3470	5540	10600	19200	18700	9740	1510	213	211	699	1820
MIN	61	1370	2710	3860	8890	10200	1570	227	47	13	205	399
IN.	.10	1.33	1.89	2.78	5.55	6.74	2.07	.37	.05	.04	.22	.37

e Estimated

02315500 SUWANNEE RIVER AT WHITE SPRINGS, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 1998, BY WATER YEAR (WY)

MEAN	1735	888	1079	1875	2846	3417	3155	1152	862	1269	1982	1927
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

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1906 - 1998	
ANNUAL MEAN	1981		3850		1850	
HIGHEST ANNUAL MEAN					6806	1948
LOWEST ANNUAL MEAN					155	1955
HIGHEST DAILY MEAN	5670	Aug 10	19200	Feb 26	38000	Apr 10 1973
LOWEST DAILY MEAN	61	Oct 15	13	Jul 12	2.8	Sep 26 1990
ANNUAL SEVEN-DAY MINIMUM	69	Oct 10	19	Jul 6	3.4	Sep 26 1990
INSTANTANEOUS PEAK FLOW			19300	Feb 26	38100	Apr 10 1973
INSTANTANEOUS PEAK STAGE			84.73	Feb 26	88.56	Apr 10 1973
INSTANTANEOUS LOW FLOW			11	Jul 12	2.8	Sep 26 1990
ANNUAL RUNOFF (INCHES)	11.07		21.51		10.35	
10 PERCENT EXCEEDS	3710		11700		5040	
50 PERCENT EXCEEDS	1920		1490		742	
90 PERCENT EXCEEDS	194		76		61	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50.93	55.45	59.48	66.81	77.81	84.41	75.70	56.45	51.50	50.38	51.36	52.20
2	50.88	56.63	59.49	66.70	78.01	84.24	74.75	56.37	51.44	50.38	51.85	52.13
3	50.84	57.42	59.47	66.58	78.16	84.04	73.69	56.31	51.38	50.33	51.55	52.68
4	50.81	57.95	59.52	66.36	78.20	83.83	72.55	56.22	51.32	50.27	51.66	53.15
5	50.78	58.34	59.59	66.02	78.13	83.56	71.32	56.07	51.25	50.23	51.61	53.47
6	50.75	58.75	59.58	65.58	78.02	83.28	69.97	55.87	51.18	50.22	51.45	53.55
7	50.72	59.21	59.51	65.12	77.85	83.01	68.52	55.68	51.12	50.18	51.28	53.51
8	50.68	59.64	59.41	65.07	77.57	82.79	67.06	55.50	51.05	50.15	51.52	53.43
9	50.65	60.04	59.33	64.92	77.24	82.71	65.80	55.30	50.99	50.13	51.51	53.37
10	50.61	60.38	59.78	64.45	76.83	82.61	64.92	55.08	50.97	50.22	51.85	53.30
11	50.58	60.64	60.50	64.00	76.36	82.50	64.38	54.87	50.92	50.12	52.49	53.19
12	50.57	60.84	60.64	63.61	75.83	82.33	64.29	54.62	50.88	50.06	52.60	53.08
13	50.54	61.21	61.24	63.24	75.25	82.13	64.33	54.35	50.83	50.36	52.60	52.97
14	50.52	61.47	61.98	62.92	74.65	81.90	64.29	54.08	50.80	50.35	52.47	52.84
15	50.51	61.50	62.87	63.35	74.00	81.64	64.09	53.81	50.76	50.36	52.54	52.71
16	50.57	61.51	63.46	64.76	74.34	81.35	63.74	53.55	50.72	50.52	52.76	52.58
17	50.71	61.51	63.92	64.84	78.81	81.03	63.26	53.32	50.69	50.52	52.87	52.46
18	50.82	61.49	64.33	64.79	81.07	80.74	62.72	53.12	50.66	50.58	52.88	52.41
19	50.82	---	64.64	64.94	81.69	80.75	62.15	52.96	50.62	50.62	52.92	52.62
20	50.78	---	64.87	65.16	82.10	80.90	61.58	52.75	50.58	50.76	53.14	53.28
21	50.76	---	64.97	65.36	82.45	80.89	60.98	52.59	50.55	50.88	53.01	54.56
22	50.74	---	65.01	65.54	82.82	80.67	60.40	52.44	50.53	50.92	53.01	55.52
23	50.72	---	65.02	67.72	83.66	80.37	59.82	52.30	50.47	50.89	53.26	55.52
24	50.71	60.28	65.12	70.94	84.33	80.02	59.29	52.16	50.45	50.94	53.16	55.26
25	50.78	59.98	65.57	71.96	84.57	79.64	58.78	52.04	50.43	51.00	53.02	54.90
26	50.77	59.70	65.78	72.24	84.66	79.22	58.30	51.92	50.45	51.23	52.87	54.51
27	51.73	59.39	66.15	73.14	84.62	78.76	57.83	51.84	50.47	51.02	52.72	54.26
28	52.54	59.10	66.53	74.57	84.54	78.28	57.38	51.76	50.54	50.87	52.58	54.03
29	53.87	58.83	66.77	75.78	---	77.77	56.95	51.68	50.54	50.93	52.51	53.81
30	54.33	59.15	66.90	76.73	---	77.19	56.63	51.63	50.49	51.12	52.39	57.03
31	54.64	---	66.90	77.41	---	76.52	---	51.58	---	51.31	52.26	---
TOTAL	1585.66	---	1948.33	2090.61	2223.57	2519.08	1925.47	1668.22	1524.58	1567.85	1623.70	1608.33
MEAN	51.15	---	62.85	67.44	79.41	81.26	64.18	53.81	50.82	50.58	52.38	53.61
MAX	54.64	---	66.90	77.41	84.66	84.41	75.70	56.45	51.50	51.31	53.26	57.03
MIN	50.51	---	59.33	62.92	74.00	76.52	56.63	51.58	50.43	50.06	51.28	52.13

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	422	6290	3280	13900	10000	8110	3340	975	419	196	261	193
2	484	6880	3540	13900	9390	7560	2840	931	519	195	287	199
3	532	7630	3870	12600	8660	7050	2560	897	554	202	344	409
4	525	8330	4410	11200	7340	6270	2400	840	458	205	311	1200
5	552	8960	5130	9480	7380	5470	2190	777	390	196	270	1530
6	516	9300	5870	7940	7060	4720	2110	734	346	189	248	1580
7	415	9180	6640	6420	6970	4250	2020	700	312	183	247	1820
8	331	8570	7290	5140	6950	4550	1910	863	274	179	272	2040
9	273	7570	7630	4780	6940	5860	2960	1210	268	177	320	2190
10	232	6140	7340	4750	6870	7560	3570	1370	249	200	324	2240
11	207	4520	6290	4790	6920	9590	3320	1560	240	187	329	2270
12	190	3490	4710	4910	6800	14100	3220	1560	230	184	333	2270
13	177	3220	3520	5200	6430	24400	3290	1390	235	201	301	2120
14	170	3810	3000	5590	5550	33700	3390	1200	232	271	260	1710
15	160	4480	2930	5930	4380	34400	3640	1060	226	353	248	1230
16	164	4580	3110	6430	3530	30000	4070	926	205	343	245	918
17	227	5480	3420	6560	4530	23000	4440	804	196	355	253	733
18	205	6750	3910	6470	6240	17600	4340	705	196	360	256	650
19	181	7030	4440	6290	6940	14600	3440	626	198	446	289	725
20	161	8770	5590	6150	7200	11800	2450	563	206	432	333	891
21	156	9650	6820	6040	7150	10200	2000	506	193	363	315	1020
22	156	9860	7200	5960	7190	9730	1800	479	188	327	279	1160
23	154	8880	7550	5990	7600	10500	1710	457	190	336	252	1420
24	156	7490	7580	6160	8050	12200	1690	424	198	323	233	1590
25	178	5930	6990	6420	8280	13500	1650	389	209	336	218	1610
26	238	3970	6280	6840	8420	13800	1540	363	243	297	209	1600
27	796	2990	6070	7340	8370	12700	1390	349	259	256	199	1600
28	2830	2610	6660	7930	8270	10900	1230	338	248	255	186	1510
29	4580	2490	8590	8610	---	9090	1110	365	213	268	177	1440
30	5460	2820	9570	9440	---	6730	1040	406	203	292	168	2080
31	5940	---	12400	10100	---	4490	---	480	---	277	162	---
MEAN	863	6256	5859	7395	7122	12530	2555	782	270	270	262	1398
MAX	5940	9860	12400	13900	10000	34400	4440	1560	554	446	344	2270
MIN	154	2490	2930	4750	3530	4250	1040	338	188	177	162	193
IN.	.47	3.29	3.19	4.02	3.50	6.82	1.35	.43	.14	.15	.14	.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1998, BY WATER YEAR (WY)

MEAN	676	598	1282	2202	3640	4195	3295	1374	996	1039	1169	792
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	214	161	88.3	89.7	96.5
(WY)	1955	1955	1955	1934	1934	1955	1968	1938	1954	1955	1955	1954

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1932 - 1998	
ANNUAL MEAN	2517		3783		1761	
HIGHEST ANNUAL MEAN					5364	1948
LOWEST ANNUAL MEAN					236	1955
HIGHEST DAILY MEAN	12400	Dec 31	34400	Mar 15	73600	Apr 5 1948
LOWEST DAILY MEAN	139	Sep 20	154	Oct 23	73	Aug 21 1955
ANNUAL SEVEN-DAY MINIMUM	150	Sep 19	163	Oct 19	77	Aug 17 1955
INSTANTANEOUS PEAK FLOW			35500	Mar 15	79400	Apr 5 1948
INSTANTANEOUS PEAK STAGE			36.17	Mar 15	38.64	Apr 5 1948
INSTANTANEOUS LOW FLOW			152	Oct 23	70	Aug 23 1955
ANNUAL RUNOFF (INCHES)	16.12		24.23		11.29	
10 PERCENT EXCEEDS	7240		8810		4690	
50 PERCENT EXCEEDS	1420		1910		635	
90 PERCENT EXCEEDS	195		201		151	

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.--No estimated daily discharges. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1540	7850	11200	19600	21700	36400	26100	9350	3820	2160	2090	2080
2	1590	8590	11200	20600	22200	36500	25000	9060	3720	2110	2170	2070
3	1610	9480	11200	21300	22600	36300	23800	8790	3710	2080	2230	2190
4	1620	10300	11200	21400	22800	36000	22700	8520	3600	2070	2220	2600
5	1620	11100	11300	21200	22900	35500	21500	8260	3460	2050	2190	3100
6	1610	11700	11500	20800	23000	34100	20200	8020	3340	2010	2150	3320
7	1550	12200	11800	20100	23000	32200	19000	7830	3230	1990	2080	3510
8	1530	12400	12200	19300	22900	31000	17800	7690	3140	1960	2050	3700
9	1500	12300	12600	18600	22700	31200	17100	7720	3050	1940	2080	3850
10	1460	12000	13000	18100	22500	31700	17000	7760	2970	1970	2180	3980
11	1410	11500	13200	17700	22300	33200	16700	7800	2910	1930	2210	4080
12	1370	10900	13200	17300	22000	35400	16300	7830	2850	1930	2310	4150
13	1340	10600	13000	16900	21800	36700	15900	7790	2810	1950	2350	4200
14	1310	10600	12900	16600	21500	38400	15500	7670	2770	1950	2320	4150
15	1300	10800	13000	16400	21000	41300	15200	7500	2720	2070	2270	3870
16	1440	11100	13200	16400	20500	44200	15100	7300	2660	2140	2240	3500
17	1510	11400	13300	16500	21200	46100	15200	7080	2590	2140	2250	3230
18	1540	11900	13500	16700	22400	46900	15200	6860	2540	2160	2280	3090
19	1530	12400	13600	16800	23500	46600	15000	6590	2500	2160	2310	3040
20	1510	12900	13800	16700	24500	44900	14500	6250	2480	2180	2350	3190
21	1490	13500	14200	16600	25300	42800	14000	5900	2440	2130	2380	3430
22	1480	13800	14700	16600	26100	40800	13600	5560	2400	2090	2350	3790
23	1460	13900	15100	16600	27100	38900	13100	5240	2360	2090	2330	4070
24	1450	13800	15500	17000	28000	37200	12600	4940	2320	2070	2350	4280
25	1460	13500	15800	17400	29300	35900	11900	4690	2300	2050	2350	4330
26	1500	12900	15900	17700	32500	34600	11400	4470	2300	2040	2310	4290
27	1800	12300	16200	18300	35100	33300	10800	4280	2280	2060	2270	4230
28	3220	11800	16500	18800	36000	31700	10400	4140	2270	2050	2250	4180
29	5170	11400	16900	19400	---	29600	9930	4030	2230	2050	2230	4110
30	6540	11300	17500	20300	---	28300	9630	3950	2200	2040	2200	4830
31	7310	---	18500	21100	---	27300	---	3910	---	2050	2140	---
MEAN	2025	11670	13760	18350	24510	36610	16070	6670	2799	2054	2242	3615
MAX	7310	13900	18500	21400	36000	46900	26100	9350	3820	2180	2380	4830
MIN	1300	7850	11200	16400	20500	27300	9630	3910	2200	1930	2050	2070
IN.	.34	1.87	2.28	3.04	3.66	6.06	2.57	1.10	.45	.34	.37	.58

02319500 SUWANNEE RIVER AT ELLAVILLE, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1998, BY WATER YEAR (WY)

MEAN	4894	3534	4289	6418	9574	12130	11420	6261	4291	4530	5837	5313
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1927 - 1998	
ANNUAL MEAN	6890		11630		6570	
HIGHEST ANNUAL MEAN					19710	1948
LOWEST ANNUAL MEAN					1296	1955
HIGHEST DAILY MEAN	18500	Dec 31	46900	Mar 18	94700	Apr 8 1948
LOWEST DAILY MEAN	1300	Oct 15	1300	Oct 15	835	Nov 8 1990
ANNUAL SEVEN-DAY MINIMUM	1380	Oct 10	1380	Oct 10	862	Nov 3 1990
INSTANTANEOUS PEAK FLOW			47300	Mar 18	95300	Apr 7 1948
INSTANTANEOUS PEAK STAGE			34.45	Mar 18	40.88	Apr 7 1948
INSTANTANEOUS LOW FLOW			1280	Oct 15	835	Nov 8 1990
ANNUAL RUNOFF (INCHES)	13.42		22.65		12.81	
10 PERCENT EXCEEDS	13500		27200		14900	
50 PERCENT EXCEEDS	5770		8590		3970	
90 PERCENT EXCEEDS	1630		2030		1550	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.38	8.25	11.85	20.29	21.85	29.29	27.07	10.80	4.43	2.94	2.89	2.88
2	2.42	9.04	11.80	21.01	22.20	29.35	25.95	10.39	4.33	2.90	2.96	2.87
3	2.45	9.98	11.78	21.51	22.51	29.27	24.84	10.01	4.33	2.88	3.01	2.97
4	2.45	10.87	11.84	21.64	22.66	29.08	23.71	9.63	4.23	2.87	3.00	3.33
5	2.45	11.67	11.94	21.47	22.73	28.79	22.57	9.26	4.11	2.85	2.98	3.82
6	2.44	12.37	12.14	21.12	22.77	28.42	21.37	8.92	4.00	2.82	2.94	4.06
7	2.40	12.85	12.43	20.62	22.78	28.04	20.18	8.65	3.90	2.80	2.88	4.27
8	2.38	13.06	12.85	20.06	22.73	27.78	19.07	8.45	3.81	2.77	2.85	4.48
9	2.35	13.01	13.33	19.54	22.59	27.82	18.34	8.49	3.74	2.75	2.88	4.65
10	2.31	12.69	13.74	19.15	22.40	27.93	18.26	8.56	3.67	2.78	2.97	4.80
11	2.27	12.13	13.95	18.81	22.25	28.25	17.99	8.60	3.61	2.74	2.99	4.91
12	2.24	11.54	13.92	18.44	22.09	28.77	17.60	8.65	3.56	2.74	3.08	4.98
13	2.21	11.18	13.74	18.03	21.92	29.45	17.20	8.59	3.52	2.76	3.11	5.03
14	2.18	11.17	13.68	17.64	21.66	30.34	16.84	8.42	3.49	2.76	3.09	4.98
15	2.18	11.36	13.76	17.42	21.29	31.82	16.58	8.19	3.45	2.87	3.04	4.67
16	2.30	11.66	13.94	17.44	20.92	33.25	16.50	7.90	3.39	2.93	3.02	4.26
17	2.36	12.02	14.12	17.60	21.46	34.09	16.56	7.59	3.33	2.92	3.02	3.97
18	2.39	12.56	14.25	17.76	22.38	34.35	16.59	7.29	3.28	2.94	3.05	3.81
19	2.38	13.13	14.39	17.84	23.21	34.28	16.41	6.97	3.25	2.95	3.07	3.76
20	2.36	13.68	14.67	17.77	23.93	33.93	15.92	6.66	3.23	2.96	3.11	3.92
21	2.34	14.25	15.08	17.68	24.55	33.47	15.43	6.33	3.19	2.92	3.14	4.18
22	2.33	14.65	15.55	17.61	25.17	32.99	15.04	6.02	3.15	2.88	3.11	4.58
23	2.31	14.78	16.03	17.69	25.91	32.53	14.61	5.72	3.13	2.88	3.10	4.89
24	2.31	14.65	16.47	18.10	26.60	32.14	14.09	5.45	3.09	2.86	3.12	5.12
25	2.31	14.29	16.76	18.49	27.35	31.79	13.51	5.22	3.07	2.85	3.11	5.18
26	2.34	13.67	16.94	18.88	28.09	31.46	12.96	5.02	3.07	2.84	3.08	5.13
27	2.61	12.99	17.19	19.28	28.69	31.12	12.48	4.85	3.05	2.85	3.04	5.07
28	3.87	12.46	17.51	19.67	29.09	30.67	12.04	4.72	3.04	2.85	3.02	5.01
29	5.64	12.08	18.02	20.15	---	30.06	11.62	4.62	3.01	2.85	3.00	4.94
30	6.91	11.88	18.62	20.76	---	29.25	11.21	4.54	2.98	2.84	2.98	5.74
31	7.69	---	19.47	21.36	---	28.20	---	4.52	---	2.85	2.92	---
TOTAL	87.56	369.92	451.76	594.83	661.78	947.98	522.54	229.03	105.44	88.40	93.56	132.26
MEAN	2.82	12.33	14.57	19.19	23.64	30.58	17.42	7.39	3.51	2.85	3.02	4.41
MAX	7.69	14.78	19.47	21.64	29.09	34.35	27.07	10.80	4.43	2.96	3.14	5.74
MIN	2.18	8.25	11.78	17.42	20.92	27.78	11.21	4.52	2.98	2.74	2.85	2.87

CAL YR 1997 TOTAL 2711.06 MEAN 7.43 MAX 19.47 MIN 2.18
WTR YR 1998 TOTAL 4285.06 MEAN 11.74 MAX 34.35 MIN 2.18

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 fair.

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1650	6700	10600	18800	20600	30900	30300	9290	3960	2380	2170	2140
2	1700	7310	10500	19500	21000	31600	27200	8960	3860	2340	2230	2140
3	1720	8070	10500	20000	21300	32000	25600	8640	3820	2300	2270	2220
4	1730	8830	10500	20300	21500	31900	24400	8340	3750	2280	2280	2400
5	1720	9560	10600	20300	21700	31500	23200	8030	3640	2250	2260	2870
6	1720	10300	10700	20100	21800	30600	21900	7740	3540	2220	2220	3200
7	1690	10800	10900	19700	21800	29900	20600	7520	3440	2190	2190	3350
8	1660	11100	11300	19300	21800	29200	19300	7310	3350	2170	2150	3530
9	1630	11200	11700	18900	21800	28900	18300	7260	3270	2150	2160	3670
10	1590	11000	12200	18500	21600	28600	17900	7290	3200	2160	2220	3760
11	1550	10600	12400	18200	21500	28800	17600	7300	3130	2130	2250	3840
12	1520	10100	12500	17900	21400	29600	17200	7320	3080	2120	2310	3910
13	1490	9780	12400	17500	21300	31000	16700	7280	3040	2150	2340	3950
14	1460	9670	12400	17100	21100	32800	16300	7170	3020	2150	2350	3950
15	1450	9760	12400	16800	20900	36000	16000	7010	2990	2190	2310	3760
16	1500	9950	12600	16700	20600	41000	15800	6810	2940	2270	2290	3480
17	1440	e10200	12800	16800	21000	46200	15700	6570	2890	2260	2290	3230
18	1460	e10800	13000	17000	21600	50000	15700	6340	2850	2260	2320	3070
19	1450	e11200	13100	17100	22200	52700	15600	6100	2820	2260	2340	3000
20	1440	e11700	13300	17000	22800	53100	15100	5860	2810	2270	2370	3060
21	1420	e12400	13600	16900	23400	52000	14500	5610	2780	2240	2390	3260
22	1410	e12700	14100	16800	24000	50200	14000	5360	2750	2200	2380	3560
23	1390	e13000	14600	16900	24700	48200	13500	5120	2710	2190	2370	3820
24	1380	e12900	15100	17200	25200	46300	12900	4910	2630	2180	2380	4000
25	1390	12800	15400	17600	25800	44700	12200	4710	2590	2170	2370	4070
26	1420	12400	15600	18000	26600	43200	11600	4540	2560	2160	2340	4040
27	1640	11800	15900	18300	28200	41800	11000	4390	2520	2160	2300	3990
28	2300	11300	16200	18700	29700	40300	10500	4270	2480	2150	2280	3920
29	3930	10900	16700	19100	---	38500	9990	4160	2440	2150	2250	3870
30	5270	10700	17200	19600	---	36300	9630	4080	2410	2140	2230	4350
31	6140	---	18000	20100	---	33500	---	4040	---	2150	2190	---
MEAN	1912	10650	13190	18280	22750	38110	17010	6430	3042	2206	2284	3447
MAX	6140	13000	18000	20300	29700	53100	30300	9290	3960	2380	2390	4350
MIN	1380	6700	10500	16700	20600	28600	9630	4040	2410	2120	2150	2140
CFSM	.27	1.48	1.83	2.54	3.16	5.30	2.37	.89	.42	.31	.32	.48

e Estimated

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

MEAN	4104	6922	8250	11930	16500	25150	11180	5752	3604	3101	3991	2837
MAX	6296	10650	13190	18280	22750	38110	17010	6430	4165	3995	5699	3447
(WY)	1997	1998	1998	1998	1998	1998	1998	1998	1997	1997	1997	1998
MIN	1912	3193	3314	5572	10250	12200	5358	5073	3042	2206	2284	2227
(WY)	1998	1997	1997	1997	1997	1997	1997	1997	1998	1998	1998	1997

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1997 - 1998	
ANNUAL MEAN	6674		11550		8573	
HIGHEST ANNUAL MEAN					11550	1998
LOWEST ANNUAL MEAN					5595	1997
HIGHEST DAILY MEAN	18000	Dec 31	53100	Mar 20	53100	Mar 20 1998
LOWEST DAILY MEAN	1380	Oct 24	1380	Oct 24	1380	Oct 24 1997
ANNUAL SEVEN-DAY MINIMUM	1410	Oct 20	1410	Oct 20	1410	Oct 20 1997
INSTANTANEOUS PEAK FLOW			53500	Mar 20	53500	Mar 20 1998
INSTANTANEOUS PEAK STAGE			54.07	Mar 20	54.07	Mar 20 1998
INSTANTANEOUS LOW FLOW			1360	Oct 24	1360	Oct 24 1997
ANNUAL RUNOFF (CFSM)	.93		1.61		1.19	
10 PERCENT EXCEEDS	12800		26100		19600	
50 PERCENT EXCEEDS	5690		8070		4950	
90 PERCENT EXCEEDS	1760		2150		2190	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.44	28.89	32.93	40.02	41.68	48.56	48.39	32.64	26.18	23.91	23.60	23.55
2	22.50	29.57	32.86	40.66	42.03	48.78	47.41	32.27	26.05	23.85	23.68	23.54
3	22.53	30.39	32.84	41.18	42.38	48.90	46.40	31.91	26.00	23.79	23.75	23.67
4	22.55	31.20	32.86	41.43	42.57	48.87	45.38	31.56	25.90	23.75	23.76	23.95
5	22.54	31.96	32.90	41.44	42.68	48.73	44.36	31.21	25.76	23.72	23.72	24.65
6	22.53	32.62	33.04	41.23	42.78	48.49	43.27	30.87	25.61	23.68	23.67	25.13
7	22.49	33.14	33.25	40.87	42.83	48.28	42.15	30.62	25.47	23.63	23.62	25.35
8	22.45	33.43	33.58	40.50	42.84	48.07	41.08	30.37	25.35	23.59	23.56	25.60
9	22.41	33.48	33.98	40.10	42.78	47.98	40.23	30.32	25.23	23.55	23.57	25.79
10	22.36	33.33	34.37	39.77	42.66	47.87	39.88	30.35	25.13	23.57	23.67	25.92
11	22.30	32.95	34.59	39.50	42.56	47.95	39.57	30.36	25.03	23.53	23.71	26.02
12	22.26	32.49	34.66	39.20	42.46	48.19	39.20	30.38	24.96	23.52	23.80	26.11
13	22.22	32.17	34.57	38.86	42.33	48.59	38.81	30.34	24.91	23.55	23.86	26.18
14	22.18	32.06	34.52	38.53	42.18	49.13	38.43	30.21	24.87	23.56	23.87	26.17
15	22.17	32.15	34.56	38.34	41.94	49.99	38.12	30.02	24.83	23.62	23.81	25.92
16	22.23	32.33	34.70	38.26	41.70	51.26	37.96	29.77	24.76	23.74	23.78	25.53
17	22.15	---	34.89	38.34	42.08	52.49	37.91	29.50	24.69	23.72	23.77	25.17
18	22.18	---	35.05	38.45	42.59	53.32	37.91	29.22	24.63	23.73	23.82	24.94
19	22.17	---	35.16	38.53	43.19	53.89	37.80	28.93	24.59	23.72	23.86	24.84
20	22.15	---	35.35	38.49	43.76	53.98	37.43	28.63	24.57	23.75	23.90	24.94
21	22.13	---	35.66	38.42	44.26	53.75	36.99	28.32	24.52	23.70	23.94	25.22
22	22.11	---	36.04	38.35	44.83	53.37	36.60	28.01	24.47	23.64	23.93	25.63
23	22.08	---	36.44	38.40	45.45	52.94	36.21	27.71	24.42	23.62	23.90	25.99
24	22.07	---	36.86	38.64	45.97	52.52	35.75	27.44	24.30	23.61	23.90	26.25
25	22.09	34.92	37.14	38.94	46.57	52.15	35.22	27.19	24.23	23.58	23.90	26.33
26	22.12	34.55	37.33	39.26	47.18	51.79	34.71	26.96	24.18	23.56	23.86	26.30
27	22.43	34.01	37.54	39.59	47.74	51.47	34.25	26.76	24.13	23.57	23.80	26.22
28	23.42	33.55	37.80	39.88	48.21	51.11	33.81	26.60	24.07	23.56	23.76	26.14
29	25.62	33.22	38.21	40.26	---	50.66	33.39	26.46	24.01	23.56	23.72	26.07
30	27.26	33.02	38.68	40.74	---	50.07	33.01	26.35	23.96	23.55	23.69	26.70
31	28.26	---	39.33	41.23	---	49.31	---	26.29	---	23.56	23.62	---
MEAN	22.79	---	35.22	39.59	43.58	50.40	39.05	29.28	24.89	23.64	23.77	25.46
MAX	28.26	---	39.33	41.44	48.21	53.98	48.39	32.64	26.18	23.91	23.94	26.70
MIN	22.07	---	32.84	38.26	41.68	47.87	33.01	26.29	23.96	23.52	23.56	23.54

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.--No estimated daily discharges. Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2180	6280	11200	18300	20300	30100	32100	10500	4530	3000	2750	2670
2	2210	6850	11100	18900	20700	30500	30800	10100	4440	2970	2780	2670
3	2230	7560	11000	19400	21000	30900	29400	9710	4390	2930	2810	2770
4	2240	8360	11000	19800	21300	31000	27900	9350	4330	2900	2830	2840
5	2240	9170	11000	19900	21400	31000	26500	9000	4230	2880	2810	3180
6	2230	9930	11200	19900	21600	30800	25100	8660	4140	2860	2780	3440
7	2220	10600	11400	19700	21700	30600	23600	8380	4060	2830	2750	3590
8	2190	11000	11700	19500	21800	30300	22200	8130	3990	2800	2720	3730
9	2170	11200	12100	19100	21800	30200	21000	8000	3920	2780	2710	3850
10	2140	11100	12600	18800	21800	29900	20200	7980	3850	2780	2750	3930
11	2120	10800	12900	18600	21700	29800	19700	7980	3780	2770	2780	4010
12	2090	10400	13100	18300	21600	30000	19200	7970	3720	2760	2810	4060
13	2070	10100	13100	18100	21500	30400	18700	7920	3670	2770	2840	4110
14	2050	9900	13100	17900	21300	31000	18200	7810	3620	2780	2860	4130
15	2030	9940	13100	17700	21200	32000	17700	7660	3570	2780	2840	4030
16	1980	10100	13300	17600	21100	33500	17400	7450	3520	2840	2820	3820
17	1910	10400	13500	17600	21400	36200	17300	7230	3470	2840	2810	3630
18	1890	10800	13700	17700	21800	39000	17200	7000	3420	2850	2820	3460
19	1870	11400	13800	17800	22400	41500	17100	6780	3370	2860	2840	3400
20	1860	11900	14100	17700	23100	43200	16700	6530	3340	2860	2850	3410
21	1840	12500	14500	17700	23800	43200	16200	6290	3300	2840	2880	3570
22	1830	13100	14900	17700	24600	42300	15800	6030	3250	2810	2880	3790
23	1820	13400	15300	17700	25500	41300	15300	5770	3220	2780	2860	4030
24	1820	13500	15700	17900	26200	40400	14700	5540	3200	2780	2850	4240
25	1830	13400	15900	18100	27000	39400	14000	5340	3150	2780	2850	4350
26	1820	13000	16100	18300	27800	38500	13200	5150	3150	2760	2830	4390
27	1980	12500	16300	18600	28600	37700	12500	4990	3120	2750	2800	4360
28	2330	12000	16600	18900	29400	36700	11900	4860	3110	2740	2780	4330
29	3530	11600	16900	19200	---	35700	11400	4750	3080	2740	2760	4300
30	4700	11400	17200	19500	---	34500	10900	4660	3040	2730	2740	4680
31	5640	---	17700	19900	---	33400	---	4600	---	2730	2700	---
TOTAL	71060	324190	425100	575800	643400	1075000	573900	222120	108980	87280	86890	112770
MEAN	2292	10810	13710	18570	22980	34680	19130	7165	3633	2815	2803	3759
MAX	5640	13500	17700	19900	29400	43200	32100	10500	4530	3000	2880	4680
MIN	1820	6280	11000	17600	20300	29800	10900	4600	3040	2730	2700	2670
MED	2090	10900	13300	18300	21800	33400	17600	7450	3550	2780	2810	3840
AC-FT	140900	643000	843200	1142000	1276000	2132000	1138000	440600	216200	173100	172300	223700
CFSM	.31	1.48	1.88	2.55	3.16	4.76	2.63	.98	.50	.39	.39	.52
IN.	.36	1.66	2.17	2.94	3.29	5.49	2.93	1.14	.56	.45	.44	.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1998, BY WATER YEAR (WY)

MEAN	8130	5002	4601	6088	9147	11820	11040	7259	4211	4318	7252	7425
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	1600	1467	2155	2803	2316
(WY)	1932	1932	1932	1935	1934	1934	1934	1932	1935	1935	1998	1931

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1927 - 1998	
ANNUAL TOTAL	2526770		4306490			
ANNUAL MEAN	6923		11800		7439	
HIGHEST ANNUAL MEAN					12570	1929
LOWEST ANNUAL MEAN					2709	1934
HIGHEST DAILY MEAN	17700	Dec 31	43200	Mar 20	66000	Aug 24 1928
LOWEST DAILY MEAN	1820	Oct 23	1820	Oct 23	1290	Jun 25 1935
ANNUAL SEVEN-DAY MINIMUM	1830	Oct 20	1830	Oct 20	1300	Jun 25 1935
INSTANTANEOUS PEAK FLOW			43600	Mar 20	90000	Apr 8 1948
INSTANTANEOUS PEAK STAGE			47.09	Mar 20	53.50	Apr 8 1948
INSTANTANEOUS LOW FLOW			1800	Oct 24	1290	Jun 25 1935
ANNUAL RUNOFF (AC-FT)	5012000		8542000		5389000	
ANNUAL RUNOFF (CFSM)	.95		1.62		1.02	
ANNUAL RUNOFF (INCHES)	12.91		22.01		13.88	
10 PERCENT EXCEEDS	13300		28200		16300	
50 PERCENT EXCEEDS	5800		8660		4650	
90 PERCENT EXCEEDS	2280		2740		1830	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18.49	23.09	27.33	33.38	35.32	41.73	42.90	28.20	21.99	19.90	19.49	19.37
2	18.55	23.65	27.25	33.97	35.67	42.01	42.06	27.82	21.88	19.84	19.56	19.38
3	18.58	24.32	27.22	34.47	35.99	42.19	41.19	27.47	21.81	19.79	19.60	19.53
4	18.60	25.04	27.22	34.78	36.20	42.27	40.30	27.13	21.74	19.75	19.62	19.65
5	18.59	25.73	27.22	34.90	36.33	42.27	39.41	26.79	21.62	19.72	19.59	20.17
6	18.59	26.35	27.31	34.87	36.45	42.17	38.45	26.47	21.51	19.67	19.56	20.55
7	18.56	26.85	27.47	34.72	36.53	42.04	37.46	26.19	21.40	19.63	19.51	20.76
8	18.51	27.18	27.72	34.50	36.58	41.88	36.51	25.93	21.30	19.59	19.46	20.96
9	18.48	27.32	28.03	34.15	36.60	41.80	35.68	25.81	21.21	19.56	19.44	21.12
10	18.44	27.28	28.39	33.86	36.56	41.64	35.16	25.79	21.11	19.55	19.50	21.23
11	18.40	27.04	28.60	33.63	36.52	41.60	34.80	25.78	21.03	19.53	19.54	21.33
12	18.35	26.72	28.73	33.41	36.46	41.71	34.42	25.77	20.95	19.52	19.60	21.40
13	18.32	26.48	28.73	33.16	36.38	41.94	34.04	25.73	20.87	19.54	19.65	21.46
14	18.28	26.33	28.70	32.92	36.28	42.30	33.66	25.61	20.80	19.55	19.68	21.48
15	18.25	26.37	28.73	32.78	36.14	42.84	33.35	25.45	20.74	19.56	19.65	21.35
16	18.16	26.52	28.83	32.66	36.02	43.72	33.12	25.24	20.67	19.66	19.61	21.08
17	18.04	26.75	28.97	32.65	36.32	44.80	33.01	25.00	20.59	19.65	19.59	20.81
18	18.00	27.08	29.11	32.72	36.57	45.81	32.96	24.75	20.52	19.67	19.61	20.59
19	17.98	27.47	29.22	32.82	36.99	46.64	32.86	24.50	20.46	19.67	19.64	20.50
20	17.95	27.88	29.39	32.81	37.45	47.02	32.59	24.23	20.40	19.68	19.67	20.51
21	17.92	28.32	29.65	32.77	37.87	47.02	32.21	23.95	20.34	19.66	19.71	20.74
22	17.90	28.70	29.97	32.73	38.39	46.87	31.85	23.67	20.28	19.60	19.71	21.04
23	17.89	28.94	30.32	32.79	38.97	46.60	31.49	23.40	20.24	19.56	19.69	21.36
24	17.88	29.01	30.70	32.92	39.40	46.28	31.09	23.15	20.20	19.54	19.67	21.62
25	17.89	28.92	30.98	33.13	39.86	45.95	30.64	22.93	20.13	19.55	19.67	21.77
26	17.88	28.69	31.18	33.39	40.36	45.64	30.17	22.72	20.12	19.52	19.64	21.81
27	18.17	28.31	31.40	33.68	40.85	45.34	29.74	22.54	20.08	19.50	19.59	21.78
28	18.73	27.94	31.61	33.91	41.34	45.01	29.33	22.38	20.07	19.48	19.55	21.74
29	20.38	27.66	31.93	34.19	---	44.65	28.93	22.25	20.01	19.48	19.51	21.71
30	21.67	27.47	32.31	34.56	---	44.19	28.57	22.15	19.96	19.46	19.48	22.16
31	22.53	---	32.80	34.95	---	43.62	---	22.08	---	19.46	19.43	---
TOTAL	575.96	809.41	907.02	1042.18	1044.40	1359.55	1027.95	770.88	624.03	607.84	607.22	628.96
MEAN	18.58	26.98	29.26	33.62	37.30	43.86	34.26	24.87	20.80	19.61	19.59	20.97
MAX	22.53	29.01	32.80	34.95	41.34	47.02	42.90	28.20	21.99	19.90	19.71	22.16
MIN	17.88	23.09	27.22	32.65	35.32	41.60	28.57	22.08	19.96	19.46	19.43	19.37

WTR YR 1998 TOTAL 10005.40 MEAN 27.41 MAX 47.02 MIN 17.88

02320500 SUWANNEE RIVER AT BRANFORD, FL
(National water-quality assessment network station)

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.

WATER-DISCHARGE RECORDS

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2670	5870	11300	17100	18800	31400	36500	12100	5980	4120	3710	3690
2	2680	6350	11100	17700	19100	32000	35100	11700	5880	4070	3750	3670
3	2690	7100	11000	18300	19500	32400	33400	11400	5800	4030	3770	3880
4	2690	7650	11000	18700	19700	32700	31800	11000	5730	3990	3790	3860
5	2700	8360	11000	19000	19900	32800	30000	10700	5640	3960	3790	3990
6	2690	9080	11000	19200	20000	32800	28100	10400	5550	3950	3780	4230
7	2670	9720	11000	19200	20100	32600	26100	10100	5440	3930	3770	4420
8	2640	10200	11200	19100	20200	32500	24100	9820	5330	3880	3800	4570
9	2620	10500	11500	18700	20200	32600	22300	9610	5250	3860	3780	4690
10	2580	10600	11800	18400	20200	32300	20700	9500	5180	3840	3770	4780
11	2550	10600	12100	18100	20100	31900	19900	9420	5110	3820	3800	4860
12	2520	10400	12300	17800	20000	31600	19300	9360	4990	3810	3810	4930
13	2510	10200	12400	17500	20000	31700	18800	9290	4870	3820	3840	4990
14	2490	10000	12400	17300	19800	31800	18300	9190	4820	3830	3860	5030
15	2460	9940	12400	17200	19700	32400	17800	9050	4770	3850	3860	5000
16	2490	10000	12600	17000	19700	33200	17500	8870	4720	3850	3830	4880
17	2460	10200	12800	16800	20300	34600	17200	8670	4660	3870	3800	4730
18	2440	10400	13000	16800	20400	37500	17000	8460	4590	3870	3790	4590
19	2440	10800	13200	16800	21000	40400	16900	8250	4540	3870	3850	4510
20	2420	11200	13400	16800	21800	43500	16700	8020	4490	3850	3900	4480
21	2400	11600	13600	16700	22800	45500	16300	7780	4450	3850	3910	4580
22	2390	12100	13900	16600	24000	46500	15900	7550	4400	3830	3920	4740
23	2380	12400	14200	16800	26000	46500	15600	7320	4360	3820	3910	4920
24	2370	12600	14600	16800	26900	45800	15100	7090	4330	3800	3890	5100
25	2410	12600	14900	16900	27700	44700	14700	6890	4300	3780	3880	5250
26	2400	12500	15100	17100	28500	43600	14200	6700	4290	3780	3860	5340
27	2580	12200	15300	17400	29500	42300	13700	6530	4250	3750	3850	5390
28	2660	11900	15500	17600	30600	41100	13300	6390	4230	3730	3820	5410
29	3320	11700	15900	17800	---	39800	12900	6260	4200	3720	3790	5410
30	4330	11600	16200	18100	---	38600	12500	6150	4180	3710	3760	5800
31	5200	---	16600	18400	---	37700	---	6060	---	3710	3730	---
MEAN	2705	10350	13040	17670	22020	36930	20390	8698	4878	3856	3818	4724
MAX	5200	12600	16600	19200	30600	46500	36500	12100	5980	4120	3920	5800
MIN	2370	5870	11000	16600	18800	31400	12500	6060	4180	3710	3710	3670
IN.	.40	1.47	1.91	2.59	2.91	5.40	2.89	1.27	.69	.56	.56	.67

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1998, BY WATER YEAR (WY)

MEAN	5387	4413	4822	6579	9442	12150	11930	7512	5456	5305	6195	6061
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

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1931 - 1998	
ANNUAL MEAN	7472		12370		7099	
HIGHEST ANNUAL MEAN					19260	1948
LOWEST ANNUAL MEAN					1950	1955
HIGHEST DAILY MEAN	16800	Mar 7	46500	Mar 22	82800	Apr 11 1948
LOWEST DAILY MEAN	2370	Oct 24	2370	Oct 24	1530	Jul 1 1955
ANNUAL SEVEN-DAY MINIMUM	2400	Oct 20	2400	Oct 20	1550	Jan 8 1956
INSTANTANEOUS PEAK FLOW			46900	Mar 22	83900	Apr 11 1948
INSTANTANEOUS PEAK STAGE			29.23	Mar 22	34.07	Apr 11 1948
INSTANTANEOUS LOW FLOW			2350	Oct 24	1530	Jul 1 1955
ANNUAL RUNOFF (INCHES)	12.88		21.31		12.24	
10 PERCENT EXCEEDS	12900		30200		14600	
50 PERCENT EXCEEDS	6570		9720		5020	
90 PERCENT EXCEEDS	2860		3730		2380	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.37	8.91	14.38	19.26	21.29	26.31	27.65	16.69	10.09	7.28	6.54	6.45
2	4.48	9.43	14.25	19.68	21.55	26.46	27.28	16.35	9.97	7.20	6.59	6.42
3	4.50	10.27	14.17	20.08	21.83	26.57	26.86	16.01	9.85	7.12	6.62	6.76
4	4.51	10.79	14.18	20.41	22.03	26.65	26.40	15.68	9.75	7.05	6.66	6.73
5	4.51	11.48	14.17	20.62	22.15	26.69	25.90	15.36	9.62	7.00	6.65	6.94
6	4.50	12.13	14.18	20.74	22.25	26.69	25.34	15.04	9.50	6.97	6.64	7.33
7	4.47	12.70	14.26	20.76	22.36	26.64	24.74	14.76	9.35	6.95	6.63	7.61
8	4.42	13.12	14.43	20.74	22.44	26.60	24.12	14.51	9.20	6.87	6.66	7.84
9	4.37	13.39	14.66	20.55	22.49	26.64	23.52	14.30	9.07	6.82	6.64	8.02
10	4.31	13.50	14.95	20.36	22.51	26.54	22.98	14.19	8.97	6.79	6.62	8.14
11	4.25	13.46	15.16	20.20	22.52	26.43	22.56	14.12	8.86	6.75	6.67	8.25
12	4.20	13.29	15.34	20.05	22.51	26.35	22.18	14.05	8.69	6.72	6.69	8.35
13	4.17	13.18	15.44	19.89	22.48	26.38	21.83	13.98	8.51	6.75	6.73	8.43
14	4.14	13.03	15.48	19.73	22.43	26.42	21.49	13.87	8.43	6.77	6.77	8.49
15	4.09	12.99	15.53	19.70	22.36	26.57	21.19	13.72	8.35	6.80	6.77	8.45
16	4.14	13.07	15.65	19.60	22.45	26.79	20.93	13.54	8.27	6.79	6.70	8.28
17	4.08	13.21	15.81	19.50	22.80	27.17	20.74	13.32	8.16	6.82	6.66	8.06
18	4.05	13.44	15.99	19.51	22.87	27.90	20.61	13.09	8.06	6.83	6.63	7.84
19	4.06	13.75	16.16	19.55	23.07	28.41	20.51	12.86	7.97	6.82	6.73	7.72
20	4.01	14.08	16.35	19.56	23.36	28.81	20.36	12.60	7.89	6.80	6.82	7.68
21	3.97	14.45	16.56	19.55	23.70	29.06	20.09	12.33	7.83	6.78	6.84	7.83
22	3.96	14.81	16.80	19.54	24.08	29.19	19.80	12.06	7.75	6.75	6.85	8.05
23	3.93	15.09	17.06	19.68	24.72	29.18	19.50	11.78	7.69	6.74	6.82	8.31
24	3.91	15.24	17.31	19.73	25.01	29.10	19.19	11.52	7.63	6.69	6.80	8.56
25	4.00	15.29	17.55	19.81	25.23	28.97	18.83	11.26	7.58	6.67	6.78	8.76
26	3.97	15.22	17.74	19.96	25.48	28.82	18.45	11.03	7.56	6.66	6.75	8.88
27	4.30	15.04	17.94	20.20	25.77	28.67	18.07	10.82	7.49	6.61	6.72	8.95
28	4.46	14.80	18.10	20.38	26.09	28.51	17.70	10.64	7.46	6.58	6.67	8.97
29	5.54	14.64	18.36	20.56	---	28.33	17.35	10.47	7.41	6.56	6.62	8.97
30	7.02	14.57	18.59	20.79	---	28.16	17.01	10.32	7.37	6.54	6.57	9.48
31	8.13	---	18.88	21.04	---	27.96	---	10.20	---	6.53	6.51	---
TOTAL	138.82	398.37	495.43	621.73	647.83	852.97	653.18	410.47	254.33	211.01	207.35	240.55
MEAN	4.48	13.28	15.98	20.06	23.14	27.52	21.77	13.24	8.48	6.81	6.69	8.02
MAX	8.13	15.29	18.88	21.04	26.09	29.19	27.65	16.69	10.09	7.28	6.85	9.48
MIN	3.91	8.91	14.17	19.26	21.29	26.31	17.01	10.20	7.37	6.53	6.51	6.42

CAL YR 1997 TOTAL 3697.74 MEAN 10.13 MAX 18.88 MIN 3.91
WTR YR 1998 TOTAL 5132.04 MEAN 14.06 MAX 29.19 MIN 3.91

02320700 SANTA FE RIVER NEAR GRAHAM, FL

LOCATION.--Lat 29°50'46", long 82°13'11", in NE¼ sec.32, T.7 S., R.21 E., Alachua County, Hydrologic Unit 03110206, near left bank on upstream side of bridge on State Highway 225, 1.0 mi south of Graham, 1.5 mi upstream from Sampson River, and 71 mi upstream from mouth.

DRAINAGE AREA.--94.9 mi^2.

PERIOD OF RECORD.--August 1957 to September 1998 (discontinued).

REVISED RECORDS.--WSP 2105: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 103.55 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair, except for Oct. 1 to Nov. 13, which are poor. Records do not include diversions during periods of high stages from Santa Fe Lake through Lochloosa Creek in St. Johns River basin.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	11	21	282	156	610	130	36	4.3	.19	2.0	15
2	.53	7.9	19	242	140	513	126	35	3.7	.17	6.4	13
3	.47	6.2	18	209	299	416	121	33	3.2	.16	8.0	32
4	.40	5.3	19	186	356	347	115	31	2.7	.16	8.6	37
5	.35	5.0	20	168	318	318	109	30	2.1	.21	9.9	28
6	.31	5.3	19	153	305	295	103	29	1.8	1.5	11	28
7	.26	5.4	17	142	289	276	98	27	1.7	5.5	12	54
8	.21	5.3	16	196	261	263	94	26	1.3	5.0	12	73
9	.17	5.0	21	235	228	360	91	24	.91	3.5	12	53
10	.17	4.7	36	244	201	357	87	23	.65	2.7	12	53
11	.17	4.3	51	233	179	343	83	22	.48	2.1	9.8	50
12	.17	4.0	119	209	163	318	80	21	.36	1.7	8.7	42
13	.17	16	393	186	148	287	76	19	.33	7.3	7.8	33
14	.17	25	434	168	142	258	73	18	.30	11	7.3	26
15	.17	19	583	162	136	235	70	17	.24	8.2	6.5	21
16	.17	17	660	165	388	218	67	16	.24	11	7.2	18
17	.16	16	602	152	984	204	65	14	.24	9.5	18	24
18	.19	15	492	141	912	192	62	13	.24	7.8	44	93
19	.24	14	380	130	809	218	60	13	.24	8.8	25	85
20	.23	14	319	121	673	312	57	12	.24	11	18	81
21	.22	13	274	113	544	286	55	11	.24	9.7	22	86
22	.26	12	231	106	573	269	53	9.9	.24	9.7	42	116
23	.28	12	199	108	1320	246	50	8.8	.52	11	43	150
24	.37	11	177	117	1130	222	48	8.0	.24	8.9	45	163
25	.60	11	194	116	893	201	46	7.2	.25	8.4	44	176
26	.60	10	240	113	680	185	44	6.5	.43	6.8	40	157
27	4.1	9.3	445	188	641	172	41	6.3	.42	5.7	35	150
28	3.9	8.7	441	227	662	161	40	6.0	.32	4.6	29	136
29	2.4	8.5	427	220	---	152	38	5.6	.24	3.7	24	116
30	1.8	14	364	206	---	144	38	5.2	.25	3.0	21	241
31	3.9	---	322	181	---	136	---	4.8	---	2.4	18	---
MEAN	.77	10.5	244	175	483	275	74.0	17.4	.95	5.53	19.7	78.3
MAX	4.1	25	660	282	1320	610	130	36	4.3	11	45	241
MIN	.16	4.0	16	106	136	136	38	4.8	.24	.16	2.0	13
IN.	.01	.12	2.96	2.12	5.30	3.34	.87	.21	.01	.07	.24	.92

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1998, BY WATER YEAR (WY)

MEAN	42.3	20.4	34.1	51.2	86.7	94.8	58.5	24.4	27.3	41.0	72.1	76.7
MAX	218	102	244	221	483	387	259	254	236	271	414	436
(WY)	1993	1970	1998	1970	1998	1959	1970	1959	1972	1960	1978	1964
MIN	.41	.31	.44	.71	1.67	.89	.76	.051	.14	.15	.34	.22
(WY)	1978	1978	1992	1981	1991	1985	1976	1981	1981	1977	1977	1990

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1957 - 1998	
ANNUAL MEAN	36.4		113		52.4	
HIGHEST ANNUAL MEAN					155	1970
LOWEST ANNUAL MEAN					5.67	1990
HIGHEST DAILY MEAN	660	Dec 16	1320	Feb 23	1870	Sep 12 1964
LOWEST DAILY MEAN	.06	Sep 23	.16	Oct 17	.03	May 28 1981
ANNUAL SEVEN-DAY MINIMUM	.10	Sep 18	.17	Oct 11	.03	May 28 1981
INSTANTANEOUS PEAK FLOW			1550	Feb 23	2360	Sep 12 1964
INSTANTANEOUS PEAK STAGE			13.84	Feb 23	14.97	Sep 12 1964
INSTANTANEOUS LOW FLOW			.12	Oct 17	.02	Jun 1 1981
ANNUAL RUNOFF (INCHES)	5.20		16.18		7.50	
10 PERCENT EXCEEDS	73		318		138	
50 PERCENT EXCEEDS	7.3		26		20	
90 PERCENT EXCEEDS	.37		.32		.67	

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e6.5	121	75	224	e390	1280	110	6.4	1.2	1.4	36	66
2	e6.0	145	81	194	e340	1080	98	5.9	1.1	1.3	880	57
3	e5.5	156	78	172	e370	883	88	5.5	1.0	.93	1120	61
4	e5.0	151	83	154	e380	723	79	5.1	.90	.72	845	79
5	e4.8	135	92	140	e340	592	71	4.7	.74	.76	641	85
6	e4.6	111	94	129	e300	486	63	4.4	.60	1.2	474	76
7	e4.4	86	87	126	e280	400	56	4.3	.51	2.0	485	77
8	e4.2	64	77	152	e260	338	51	3.9	.43	1.4	512	105
9	4.0	50	78	e165	e225	644	49	3.6	.34	1.0	483	162
10	3.8	41	90	e160	e210	845	47	3.3	.28	.80	390	163
11	3.4	34	117	e155	e190	682	43	3.1	.25	.59	294	134
12	3.1	28	196	e150	e180	572	39	2.8	.23	.43	198	103
13	3.1	31	821	e145	e170	479	34	2.6	.20	.62	147	80
14	2.9	51	1420	e135	e160	384	31	2.3	.19	2.1	113	64
15	2.7	68	2090	e155	e150	290	27	2.3	.17	20	131	52
16	2.6	74	2470	e230	e1000	215	25	2.2	.16	229	135	43
17	2.7	72	2160	e225	e8000	188	22	1.9	.14	648	121	38
18	2.8	68	1750	e210	7020	168	20	1.9	.13	476	123	38
19	2.9	60	1290	e190	5990	435	18	2.0	.13	344	171	49
20	2.9	51	948	e180	3910	930	17	1.9	.13	243	190	105
21	2.7	43	720	e175	2510	815	15	1.7	.12	192	173	148
22	2.5	37	563	e170	2110	694	14	1.6	.12	143	168	188
23	2.4	32	455	e400	4710	585	12	1.4	.12	102	230	431
24	2.4	28	376	e700	3990	474	10	1.3	.12	89	230	539
25	3.2	24	339	e650	3180	371	9.3	1.3	.30	81	198	607
26	3.5	22	317	e600	2220	272	8.4	1.3	1.7	65	166	581
27	25	19	304	e575	1530	207	7.5	1.3	.91	65	129	493
28	80	18	343	e625	1280	181	6.8	1.4	.81	92	93	399
29	94	17	371	e570	---	159	6.5	1.6	1.1	91	68	292
30	88	39	341	e500	---	140	6.5	1.4	1.4	65	56	420
31	98	---	291	e425	---	123	---	1.3	---	43	65	---
MEAN	15.5	62.5	597	283	1836	504	36.1	2.76	.52	96.9	292	191
MAX	98	156	2470	700	8000	1280	110	6.4	1.7	648	1120	607
MIN	2.4	17	75	126	150	123	6.5	1.3	.12	.43	36	38
IN.	.09	.37	3.61	1.71	10.01	3.05	.21	.02	.00	.58	1.77	1.12

e Estimated

02321000 NEW RIVER NEAR LAKE BUTLER, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1998, BY WATER YEAR (WY)

MEAN	247	48.6	121	140	292	281	147	111	86.1	159	270	261
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	3.55	2.51	4.20
(WY)	1991	1991	1991	1957	1950	1950	1956	1955	1998	1954	1954	1993

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1950 - 1998	
ANNUAL MEAN	167		317		181	
HIGHEST ANNUAL MEAN					457	1970
LOWEST ANNUAL MEAN					9.66	1962
HIGHEST DAILY MEAN	2520	Apr 30	8000	Feb 17	10400	Sep 13 1964
LOWEST DAILY MEAN	.98	Sep 24	.12	Jun 21	.12	Jun 21 1998
ANNUAL SEVEN-DAY MINIMUM	1.3	Sep 20	.12	Jun 18	.12	Jun 18 1998
INSTANTANEOUS PEAK FLOW			8000	Feb 17	11400	Sep 12 1964
INSTANTANEOUS PEAK STAGE			12.22	Feb 18	15.33	Sep 12 1964
INSTANTANEOUS LOW FLOW			.09	Jun 17	.09	Jun 17 1998
ANNUAL RUNOFF (INCHES)	11.88		22.53		12.85	
10 PERCENT EXCEEDS	455		649		462	
50 PERCENT EXCEEDS	53		85		35	
90 PERCENT EXCEEDS	4.5		1.2		3.8	

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.--No estimated daily discharges. 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 1997 TO SEPTEMBER 1998
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	262	146	1570	1690	3650	824	91	19	12	53	70
2	34	293	180	1410	1510	3250	724	85	14	12	56	71
3	30	302	202	1250	1650	3020	633	78	12	11	88	99
4	27	295	210	1090	2040	2800	569	72	11	10	567	109
5	26	274	217	950	2340	2480	514	68	10	10	880	117
6	25	252	223	823	2450	2220	459	63	9.6	10	763	125
7	24	226	222	724	2330	2030	416	59	9.5	11	582	132
8	23	193	211	732	2140	1880	384	56	8.9	13	463	128
9	21	159	223	808	1910	2130	362	53	7.6	14	519	149
10	20	128	263	939	1670	2380	338	49	7.0	15	600	182
11	19	107	318	1130	1470	2480	309	45	6.7	17	499	207
12	18	92	515	1210	1280	2360	283	42	5.5	18	404	207
13	16	105	1430	1200	1110	2140	261	39	3.7	20	330	181
14	16	173	2310	1130	972	1940	242	37	3.4	22	255	144
15	15	219	3170	1060	848	1770	226	34	3.4	30	198	106
16	14	241	3810	1050	1630	1610	213	32	3.6	40	152	80
17	14	235	4160	979	6010	1470	200	30	3.6	63	147	69
18	14	217	3960	911	11900	1350	188	29	3.7	133	146	100
19	15	198	3520	841	11200	1410	178	28	3.7	262	190	160
20	15	180	3000	738	8870	2290	173	26	3.0	339	232	176
21	14	161	2510	659	6660	2900	164	25	3.4	301	225	210
22	13	143	2120	606	5310	2770	153	23	3.2	245	220	300
23	12	128	1850	639	7730	2410	142	21	3.2	236	211	399
24	13	116	1650	835	9130	2110	131	19	2.9	169	218	513
25	17	103	1540	942	7660	1860	122	17	5.1	120	247	728
26	20	94	1460	1000	6070	1650	114	16	14	94	255	909
27	71	87	1450	1300	4840	1480	107	16	18	81	231	1010
28	195	81	1530	1790	4090	1330	101	17	17	63	191	1000
29	189	77	1750	1980	---	1190	97	17	14	62	149	901
30	171	104	1780	2060	---	1060	95	17	12	72	104	944
31	168	---	1700	1900	---	937	---	24	---	65	79	---
MEAN	42.2	175	1536	1105	4161	2076	291	39.6	8.06	82.9	299	318
MAX	195	302	4160	2060	11900	3650	824	91	19	339	880	1010
MIN	12	77	146	606	848	937	95	16	2.9	10	53	69
IN.	.08	.34	3.08	2.22	7.54	4.16	.56	.08	.02	.17	.60	.62

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

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1998, BY WATER YEAR (WY)

MEAN	530	195	261	381	631	672	450	188	267	338	629	726
MAX	3043	1789	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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1932 - 1998	
ANNUAL MEAN	437		824		438	
HIGHEST ANNUAL MEAN					1163	1948
LOWEST ANNUAL MEAN					54.8	1956
HIGHEST DAILY MEAN	4160	Dec 17	11900	Feb 18	19000	Sep 13 1964
LOWEST DAILY MEAN	12	Oct 23	2.9	Jun 24	.60	Jun 24 1955
ANNUAL SEVEN-DAY MINIMUM	14	Oct 18	3.3	Jun 18	1.3	Jun 20 1955
INSTANTANEOUS PEAK FLOW			12900	Feb 18	20000	Sep 13 1964
INSTANTANEOUS PEAK STAGE			23.69	Feb 18	28.40	Sep 13 1964
INSTANTANEOUS LOW FLOW			2.8	Jun 24	.50	Jun 24 1955
ANNUAL RUNOFF (INCHES)	10.33		19.46		10.35	
10 PERCENT EXCEEDS	1430		2170		1140	
50 PERCENT EXCEEDS	198		200		147	
90 PERCENT EXCEEDS	24		14		19	

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

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.18	11.04	9.82	16.05	16.27	18.82	14.38	9.64	8.36	8.12	9.03	9.34
2	8.08	11.33	10.22	15.76	15.94	18.40	14.07	9.55	8.21	8.12	9.07	9.35
3	7.99	11.41	10.46	15.45	16.19	18.14	13.78	9.46	8.13	8.07	9.53	9.73
4	7.91	11.34	10.54	15.14	16.84	17.87	13.51	9.38	8.08	8.06	13.24	9.85
5	7.88	11.16	10.61	14.82	17.27	17.47	13.24	9.32	8.05	8.06	14.53	9.95
6	7.86	10.95	10.67	14.51	17.42	17.11	12.96	9.25	8.04	8.06	14.19	10.03
7	7.84	10.69	10.66	14.24	17.26	16.82	12.71	9.19	8.03	8.08	13.55	10.10
8	7.80	10.36	10.55	14.26	16.98	16.59	12.50	9.14	8.02	8.15	12.95	10.07
9	7.75	9.98	10.66	14.47	16.63	16.97	12.34	9.09	7.97	8.20	13.24	10.29
10	7.72	9.60	11.06	14.79	16.24	17.32	12.16	9.01	7.95	8.24	13.65	10.66
11	7.68	9.32	11.55	15.21	15.86	17.46	11.93	8.95	7.94	8.29	13.15	10.92
12	7.65	9.11	12.93	15.38	15.51	17.29	11.72	8.89	7.89	8.33	12.59	10.93
13	7.61	9.29	15.73	15.35	15.18	16.98	11.53	8.84	7.81	8.38	12.04	10.65
14	7.58	10.14	17.21	15.21	14.87	16.68	11.35	8.79	7.80	8.45	11.40	10.24
15	7.56	10.62	18.30	15.05	14.57	16.40	11.21	8.73	7.80	8.63	10.83	9.82
16	7.54	10.84	18.98	15.04	15.98	16.13	11.08	8.68	7.81	8.86	10.32	9.50
17	7.53	10.79	19.32	14.89	20.28	15.86	10.95	8.64	7.81	9.23	10.27	9.33
18	7.54	10.61	19.13	14.73	23.40	15.63	10.83	8.61	7.81	10.11	10.26	9.73
19	7.57	10.42	18.68	14.55	23.37	15.74	10.72	8.58	7.81	11.44	10.74	10.41
20	7.56	10.22	18.11	14.28	22.40	17.18	10.67	8.55	7.78	12.11	11.18	10.59
21	7.53	10.00	17.51	13.95	21.16	17.99	10.56	8.51	7.79	11.80	11.11	10.95
22	7.50	9.79	16.95	13.67	20.28	17.84	10.43	8.46	7.78	11.30	11.06	11.79
23	7.48	9.61	16.54	13.82	21.94	17.37	10.31	8.41	7.79	11.21	10.97	12.56
24	7.48	9.44	16.19	14.54	22.75	16.94	10.17	8.35	7.77	10.51	11.04	13.21
25	7.63	9.27	16.00	14.80	21.91	16.55	10.05	8.31	7.86	9.98	11.32	14.08
26	7.71	9.14	15.86	14.94	20.86	16.20	9.94	8.27	8.21	9.67	11.40	14.61
27	8.71	9.04	15.82	15.53	19.91	15.88	9.84	8.26	8.32	9.51	11.16	14.87
28	10.37	8.94	15.98	16.44	19.25	15.59	9.76	8.30	8.29	9.21	10.76	14.86
29	10.31	8.88	16.37	16.74	---	15.29	9.71	8.30	8.20	9.20	10.29	14.59
30	10.11	9.28	16.43	16.86	---	15.00	9.68	8.29	8.14	9.38	9.80	14.68
31	10.07	---	16.29	16.61	---	14.69	---	8.48	---	9.25	9.48	---
TOTAL	249.73	302.61	455.13	467.08	516.52	520.20	344.09	272.23	239.25	286.01	354.15	337.69
MEAN	8.06	10.09	14.68	15.07	18.45	16.78	11.47	8.78	7.97	9.23	11.42	11.26
MAX	10.37	11.41	19.32	16.86	23.40	18.82	14.38	9.64	8.36	12.11	14.53	14.87
MIN	7.48	8.88	9.82	13.67	14.57	14.69	9.68	8.26	7.77	8.06	9.03	9.33

CAL YR 1997 TOTAL 3994.93 MEAN 10.95 MAX 19.32 MIN 7.48
WTR YR 1998 TOTAL 4344.69 MEAN 11.90 MAX 23.40 MIN 7.48

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 miles northwest of the intersection of U.S. 441 and U.S. 27, and 18 miles 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.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	308	316	246	1230	1650	6530	2110	833	653	655	674	631
2	308	316	246	1210	1610	5950	1980	806	653	650	670	623
3	304	316	254	1180	1600	e5500	1860	787	649	649	664	630
4	296	316	269	1150	1570	5010	1760	773	650	649	670	608
5	292	324	285	1090	1600	e4700	1650	756	654	648	735	606
6	285	349	300	1040	1720	4300	1560	736	657	646	800	614
7	281	341	300	1020	1840	e4000	1480	727	654	644	813	618
8	273	332	300	1010	1840	e3750	1410	720	654	642	803	621
9	269	324	308	995	1810	3480	1360	702	657	645	792	614
10	267	316	316	984	1770	e3400	1300	687	662	646	803	616
11	265	300	324	963	1670	e3300	1240	671	665	645	818	631
12	261	300	341	963	1570	3230	1190	654	665	642	807	644
13	261	292	421	974	1480	e3100	1150	639	670	646	797	645
14	254	292	541	984	1400	e3000	1120	632	672	640	784	633
15	254	285	858	1010	1310	e2850	1100	635	668	637	760	617
16	254	285	1140	995	1400	e2750	1070	637	662	643	726	607
17	254	300	1220	974	2000	2600	1040	638	661	650	700	596
18	254	308	1320	952	3120	2480	1010	637	664	657	689	587
19	246	316	1460	931	8060	2490	990	635	667	667	699	591
20	246	316	1620	910	8940	2620	973	636	667	696	701	602
21	242	308	2280	936	8720	2990	956	641	662	723	699	625
22	239	300	2010	931	8120	3530	941	640	659	732	704	664
23	239	292	1840	879	7840	3790	921	638	660	730	701	712
24	231	277	1590	900	8420	3780	903	635	658	726	696	760
25	231	269	1470	942	9150	3610	887	639	660	713	695	814
26	231	261	1360	1010	9050	3350	880	639	659	703	697	878
27	231	261	1330	1180	8490	3110	876	641	662	690	692	934
28	246	254	1280	1290	7320	2880	863	642	659	677	687	981
29	277	254	1240	1460	---	2660	855	643	659	669	675	1010
30	292	254	1240	1590	---	2450	848	645	661	671	661	1070
31	308	---	1230	1650	---	2270	---	648	---	676	644	---
MEAN	264	299	934	1075	4110	3531	1209	677	660	668	724	693
MAX	308	349	2280	1650	9150	6530	2110	833	672	732	818	1070
MIN	231	254	246	879	1310	2270	848	632	649	637	644	587
IN.	.36	.39	1.25	1.44	4.98	4.74	1.57	.91	.86	.90	.97	.90

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1998, BY WATER YEAR (WY)

MEAN	1305	492	521	718	1321	1244	808	565	459	545	657	536
MAX	3505	1006	934	1075	4110	3531	1226	1172	852	745	877	829
(WY)	1993	1993	1998	1998	1998	1998	1993	1997	1997	1996	1997	1995
MIN	146	299	228	352	232	535	377	250	258	379	259	226
(WY)	1994	1998	1994	1996	1996	1995	1994	1994	1994	1993	1993	1993

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1993 - 1998	
ANNUAL MEAN	655		1219		762	
HIGHEST ANNUAL MEAN					1219	1998
LOWEST ANNUAL MEAN					470	1994
HIGHEST DAILY MEAN	3080	May 3	9150	Feb 25	9150	Feb 25 1998
LOWEST DAILY MEAN	231	Oct 24	231	Oct 24	99	Oct 29 1993
ANNUAL SEVEN-DAY MINIMUM	235	Oct 21	235	Oct 21	113	Oct 23 1993
INSTANTANEOUS PEAK FLOW			9250	Feb 25	9250	Feb 25 1998
INSTANTANEOUS PEAK STAGE			44.75	Feb 25	45.23	Oct 6 1992
INSTANTANEOUS LOW FLOW			231	Oct 24	99	Oct 29 1993
ANNUAL RUNOFF (INCHES)	10.35		19.27		12.05	
10 PERCENT EXCEEDS	1160		2640		1300	
50 PERCENT EXCEEDS	568		692		553	
90 PERCENT EXCEEDS	285		285		255	

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	952	959	961	2110	2420	11800	3930	2090	1520	1390	1480	1290
2	950	964	951	2100	2410	10900	3870	2070	1510	1390	1470	1280
3	946	963	968	2080	2410	10300	3760	2050	1500	1390	1460	1350
4	946	972	998	2040	2400	9760	3690	2020	1490	1390	1450	1280
5	946	983	993	1990	2410	9310	3660	1980	1480	1380	1500	1250
6	946	1000	990	1950	2460	8920	3600	1950	1480	1380	1600	1260
7	946	1020	995	1930	2550	6180	3520	1920	1460	1400	1640	1270
8	946	1010	1010	1930	2610	5190	3430	1890	1440	1380	1660	1260
9	946	1000	1040	1880	2630	5070	3330	1850	1430	1380	1640	1260
10	929	992	1040	1860	2600	4890	3220	1820	1430	1380	1620	1250
11	912	982	1040	1850	2570	4800	3080	1790	1420	1380	1620	1250
12	903	975	1100	1860	2520	4740	2940	1760	1420	1370	1600	1270
13	894	1000	1160	1870	2440	4670	2860	1730	1410	1380	1580	1270
14	886	981	1270	1870	2360	4600	2790	1710	1410	1410	1560	1270
15	877	965	1530	1890	2300	4470	2730	1690	1400	1400	1530	1250
16	869	973	1920	1890	2420	4330	2700	1670	1380	1390	1490	1250
17	866	982	2270	1850	2730	4140	2660	1660	1380	1390	1440	1240
18	873	999	2510	1830	3330	3920	2600	1650	1370	1410	1420	1230
19	869	1010	2720	1820	5010	3770	2530	1630	1370	1410	1410	1240
20	861	1010	2850	1790	8760	3790	2450	1610	1360	1420	1410	1240
21	859	1010	2860	1760	10900	8120	2400	1600	1360	1470	1410	1250
22	858	1010	2790	1740	11400	9330	2360	1580	1350	1520	1410	1280
23	855	998	2660	1770	11700	9770	2320	1570	1350	1530	1410	1320
24	864	981	2530	1790	11800	9960	2280	1550	1350	1530	1400	1380
25	868	975	2410	1790	12800	9940	2250	1550	1370	1530	1390	1440
26	863	975	2310	1860	13400	9760	2210	1530	1370	1510	1380	1510
27	922	968	2260	2000	13300	9510	2180	1550	1380	1490	1380	1600
28	881	960	2190	2090	12600	9230	2140	1540	1390	1480	1370	1680
29	894	964	2160	2200	---	8940	2120	1530	1400	1480	1360	1740
30	914	988	2150	2320	---	7060	2110	1530	1400	1510	1340	1900
31	945	---	2140	2400	---	4030	---	1520	---	1480	1310	---
MEAN	903	986	1767	1939	5616	7135	2857	1729	1413	1431	1475	1345
MAX	952	1020	2860	2400	13400	11800	3930	2090	1520	1530	1660	1900
MIN	855	959	951	1740	2300	3770	2110	1520	1350	1370	1310	1230
IN.	1.02	1.08	2.00	2.20	5.75	8.09	3.14	1.96	1.55	1.62	1.67	1.48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1998, BY WATER YEAR (WY)

MEAN	1807	1411	1305	1431	1647	1886	1761	1437	1344	1417	1715	1962
MAX	4357	3840	2778	3415	5616	7135	4668	3409	4063	2728	3545	6344
(WY)	1993	1948	1965	1942	1998	1998	1948	1959	1959	1972	1928	1964
MIN	730	691	641	678	691	670	671	636	679	773	808	756
(WY)	1956	1991	1991	1956	1956	1957	1956	1957	1956	1990	1990	1955

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1928 - 1998	
ANNUAL MEAN	1384		2364		1592	
HIGHEST ANNUAL MEAN					3112	1948
LOWEST ANNUAL MEAN					724	1956
HIGHEST DAILY MEAN	3360	May 5	13400	Feb 26	16900	Sep 16 1964
LOWEST DAILY MEAN	855	Oct 23	855	Oct 23	608	Jan 7 1991
ANNUAL SEVEN-DAY MINIMUM	861	Oct 20	861	Oct 20	611	Jan 4 1991
INSTANTANEOUS PEAK FLOW			13500	Feb 26	17000	Sep 16 1964
INSTANTANEOUS PEAK STAGE			12.15	Feb 26	15.34	Sep 16 1964
INSTANTANEOUS LOW FLOW			853	Oct 21	608	Jan 7 1991
ANNUAL RUNOFF (INCHES)	18.48		31.57		21.27	
10 PERCENT EXCEEDS	2140		4220		2610	
50 PERCENT EXCEEDS	1290		1530		1310	
90 PERCENT EXCEEDS	955		964		886	

02322616 CANNON CREEK NEAR LAKE CITY, FL

LOCATION.--Lat 30°09'30", long 82°40'02", in NE¼ sec.12, T.4 S., R.16 E., Columbia County, Hydrologic Unit 03110206, on left bank, 8 ft above railroad culvert, at county road 341, 2.9 mi southwest of courthouse in Lake City and 3.2 mi upstream from mouth.

DRAINAGE AREA.--2.33 mi^2.

PERIOD OF RECORD.--October 1992 to September 1998 (discontinued).

GAGE.--Water-stage recorder.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	4.0	2.7	1.1	2.2	e4.0	.68	.07	.00	.02	.03	.00
2	.00	3.2	2.3	.94	2.6	e3.5	.66	.03	.00	.00	.05	.00
3	.00	2.1	2.0	.87	5.5	e3.0	.62	.00	.00	.00	.04	9.6
4	.00	1.3	2.1	.82	4.0	e2.5	.48	.00	.00	.00	.00	4.5
5	.00	.82	2.1	.76	2.8	2.4	.37	.00	.00	.00	.00	2.0
6	.00	.61	1.6	.71	2.3	2.2	.33	.00	.00	.00	.00	1.1
7	.00	.59	1.4	1.2	2.0	2.9	.30	.00	.00	.00	.01	1.0
8	.00	.41	1.3	8.3	1.7	8.2	.40	.00	.00	.00	.17	.80
9	.00	.26	2.0	4.7	1.5	34	5.3	.00	.00	.00	3.2	.65
10	.00	.20	2.9	2.9	1.3	7.2	2.9	.00	.00	.00	5.5	.48
11	.00	.17	2.9	2.1	1.4	4.2	1.8	.00	.00	.00	2.4	.35
12	.00	.17	3.3	1.6	1.2	3.1	1.1	.00	.00	.03	1.1	.24
13	.00	2.5	6.9	1.4	1.1	2.6	.77	.00	.00	.04	.56	.17
14	.00	2.0	9.7	1.4	1.2	2.3	.53	.00	.00	.35	.31	.10
15	.00	1.1	6.2	16	1.6	2.1	.40	.00	.00	1.8	.22	.06
16	.00	.75	3.7	10	67	1.8	.30	.00	.00	3.1	.14	.02
17	.00	.53	2.7	4.4	163	1.4	.24	.00	.00	1.7	.10	.04
18	.00	.41	2.1	3.0	27	5.4	.20	.01	.00	2.2	.07	.60
19	.00	.33	1.6	2.6	8.0	67	.25	.26	.00	.99	.14	.61
20	.00	.25	1.3	2.4	9.1	31	.33	.03	.00	.45	.40	2.0
21	.00	.20	1.2	2.0	5.4	7.5	.21	.00	.00	.23	.17	6.9
22	.00	.18	1.1	1.8	72	4.8	.17	.00	.00	.37	.38	9.8
23	.00	.18	1.1	50	106	3.5	.13	.00	.00	.83	.96	4.9
24	.00	.15	2.1	14	e10	2.9	.11	.00	.00	.40	.24	2.8
25	.00	.12	4.1	5.5	e8.0	2.4	.08	.00	.00	.69	.10	2.0
26	.03	.12	2.7	3.8	e6.5	2.0	.05	.00	.00	1.2	.04	2.1
27	5.1	.11	3.0	8.5	e5.0	1.6	.03	.00	.12	.40	.00	3.4
28	1.7	.11	2.5	6.2	e4.5	1.3	.04	.00	.19	.20	.00	2.2
29	.76	.72	2.0	4.0	---	1.2	.10	.00	1.2	.16	.00	1.5
30	.35	5.2	1.9	3.1	---	.94	.08	.00	.21	.11	.00	54
31	3.2	---	1.4	2.6	---	.78	---	.00	---	.07	.00	---
MEAN	.36	.96	2.71	5.44	18.7	7.09	.63	.013	.057	.49	.53	3.80
MAX	5.1	5.2	9.7	50	163	67	5.3	.26	1.2	3.1	5.5	54
MIN	.00	.11	1.1	.71	1.1	.78	.03	.00	.00	.00	.00	.00
IN.	.18	.46	1.34	2.69	8.36	3.51	.30	.01	.03	.24	.26	1.82

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1998, BY WATER YEAR (WY)

MEAN	8.80	1.00	.94	4.36	5.40	3.34	2.47	.30	1.30	1.79	1.23	1.21
MAX	19.6	1.81	2.71	8.29	18.7	7.09	10.0	1.49	4.57	5.61	2.56	3.80
(WY)	1997	1996	1998	1994	1998	1998	1997	1997	1997	1996	1995	1998
MIN	.14	.086	.32	.23	.27	.27	.23	.000	.057	.39	.000	.000
(WY)	1994	1997	1995	1996	1996	1997	1994	1993	1998	1994	1993	1993

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1993 - 1998	
ANNUAL MEAN	2.27		3.30		2.67	
HIGHEST ANNUAL MEAN					3.69	1997
LOWEST ANNUAL MEAN					1.48	1994
HIGHEST DAILY MEAN	141	Apr 27	163	Feb 17	206	Oct 7 1996
LOWEST DAILY MEAN	.00	Apr 6	.00	Oct 2	.00	Apr 24 1993
ANNUAL SEVEN-DAY MINIMUM	.00	Apr 6	.00	Oct 2	.00	Apr 24 1993
INSTANTANEOUS PEAK FLOW			392	Feb 17	485	Oct 7 1996
INSTANTANEOUS PEAK STAGE			8.23	Feb 17	8.23	Feb 17 1998
INSTANTANEOUS LOW FLOW			.00	Oct 2	.00	Apr 24 1993
ANNUAL RUNOFF (INCHES)	13.24		19.20		15.58	
10 PERCENT EXCEEDS	3.9		5.2		3.8	
50 PERCENT EXCEEDS	.57		.53		.36	
90 PERCENT EXCEEDS	.00		.00		.00	

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 fair. Flow generally affected by tide when discharge is less than 17,500 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4270	6710	12500	18400	22400	37800	44300	18200	9350	6530	5710	5600
2	4220	7140	12500	18800	22800	38200	43200	17800	9250	6420	5630	5390
3	4230	7650	12300	19200	23200	38400	42000	17300	9130	6300	5590	5520
4	4140	7970	12000	19700	23500	38500	40600	16700	8890	6190	5620	6840
5	4230	8360	12400	20100	24100	38600	39000	16100	8730	6140	5570	5950
6	4190	8970	12400	20600	24500	38500	37500	15700	8630	6050	5560	5900
7	4170	9600	12400	20900	24700	38500	36000	15100	8590	6060	5610	6260
8	4100	10200	12200	21000	24900	38400	34500	14500	8290	6080	5700	6400
9	4150	10600	12300	21300	25100	38700	33100	14200	8060	5980	5860	6590
10	4160	10700	12500	21400	25300	38300	31700	13900	8060	6030	5770	6770
11	4090	10900	12800	21300	25500	37900	30400	13800	7950	6010	5790	6740
12	4000	10800	13300	21200	25600	37400	29200	13800	7820	6120	5860	6850
13	4050	10700	13400	21000	25700	37000	28200	13700	7700	6150	5900	6890
14	4140	10800	13600	20800	25700	36800	27400	13500	7670	6040	5880	6950
15	4080	11000	13800	20700	25600	36700	26400	13300	7540	6110	5870	6920
16	4130	11000	14000	20600	26100	36800	25700	13200	7500	6160	5870	6870
17	4060	11100	14000	20600	26300	37100	24900	12900	7430	6130	5780	6750
18	4090	11000	14200	20500	26800	37800	24400	12700	7290	6110	5720	6800
19	4150	11300	14500	20300	27000	39400	24100	12600	7170	6080	5720	6680
20	4090	11500	14800	20300	27400	41300	23800	12400	7030	5990	5730	6820
21	3950	11700	14900	20300	28200	43000	23600	12100	6980	5980	5710	6880
22	3930	12100	15200	20300	29800	44500	23200	11700	6880	5940	5700	6990
23	4060	12500	15700	20400	32300	45800	22700	11300	6810	5960	5820	7080
24	3740	13000	15900	20600	33500	46800	22300	11000	6730	5990	5750	7320
25	4250	13100	16200	20800	34300	47400	21700	10700	6770	5940	5790	7350
26	4060	13000	16600	20800	35100	47600	21100	10400	6670	5920	5710	7110
27	4710	12900	16800	20900	36100	47500	20400	10100	6630	5890	5740	7700
28	4540	12800	17300	21200	37100	47200	19800	10000	6610	5840	5720	7900
29	4370	12500	17300	21500	---	46600	19300	9870	6600	5810	5670	7830
30	4990	12400	17600	21700	---	46000	18700	9760	6510	5760	5650	7870
31	5720	---	17900	22000	---	45200	---	9570	---	5720	5570	---
MEAN	4228	10800	14300	20620	27450	40960	28640	13160	7642	6046	5728	6784
MAX	5720	13100	17900	22000	37100	47600	44300	18200	9350	6530	5900	7900
MIN	3740	6710	12000	18400	22400	36700	18700	9570	6510	5720	5560	5390
IN.	.51	1.25	1.71	2.47	2.97	4.90	3.32	1.57	.88	.72	.69	.79

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1998, BY WATER YEAR (WY)

MEAN	8678	7683	8101	10210	12940	15870	16050	11330	8620	8373	9260	9298
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	3603	3796	4631	4422	4174	3844	3925	4104
(WY)	1982	1956	1956	1956	1957	1957	1956	1955	1955	1981	1981	1981

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1931 - 1998	
ANNUAL MEAN	9361		15450		10520	
HIGHEST ANNUAL MEAN					24560	1948
LOWEST ANNUAL MEAN					4291	1955
HIGHEST DAILY MEAN	17900	Dec 31	47600	Mar 26	84700	Apr 14 1948
LOWEST DAILY MEAN	3740	Oct 24	3740	Oct 24	2960	Oct 25 1981
ANNUAL SEVEN-DAY MINIMUM	4000	Oct 18	4000	Oct 18	3350	Oct 21 1981
INSTANTANEOUS PEAK FLOW			47700	Mar 26	84700	Apr 14 1948
INSTANTANEOUS PEAK STAGE			17.37	Mar 26	22.32	Apr 14 1948
ANNUAL RUNOFF (INCHES)	13.18		21.77		14.82	
10 PERCENT EXCEEDS	14100		36800		18700	
50 PERCENT EXCEEDS	8800		11700		8360	
90 PERCENT EXCEEDS	5330		5600		4800	

SUWANNEE RIVER BASIN

02323500 SUWANNEE RIVER NEAR WILCOX, FL--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.06	4.82	7.14	9.11	10.57	15.27	16.65	9.34	5.46	4.15	3.64	3.72
2	3.12	5.08	6.90	9.22	10.72	15.37	16.43	9.14	5.41	3.94	3.52	3.72
3	2.94	4.76	6.79	9.39	10.97	15.43	16.18	8.92	5.28	3.76	3.59	5.40
4	2.97	4.69	6.82	9.59	11.13	15.45	15.88	8.72	5.24	3.72	3.73	4.87
5	2.96	4.87	6.74	9.77	11.20	15.45	15.55	8.54	5.25	3.72	3.78	4.09
6	2.87	5.19	6.58	9.94	11.26	15.45	15.19	8.34	5.26	3.86	3.77	4.11
7	2.79	5.53	6.54	10.11	11.32	15.43	14.80	8.17	5.11	3.96	3.91	4.33
8	2.80	5.63	6.59	10.29	11.39	15.41	14.43	8.08	4.93	4.00	3.96	4.49
9	2.84	5.83	6.82	10.35	11.46	15.49	14.05	7.98	5.00	4.03	3.94	4.57
10	2.81	6.08	6.99	10.32	11.52	15.40	13.65	7.86	5.03	4.09	3.87	4.42
11	2.75	6.23	7.10	10.26	11.59	15.29	13.23	7.79	4.95	3.99	3.94	4.42
12	2.99	6.32	7.19	10.20	11.65	15.17	12.84	7.62	4.88	3.93	3.96	4.43
13	3.21	6.60	7.30	10.16	11.67	15.08	12.51	7.51	4.84	3.97	3.85	4.45
14	3.30	6.68	7.38	10.12	11.67	15.02	12.23	7.42	4.81	3.99	3.74	4.44
15	3.31	6.43	7.35	10.11	11.66	15.00	11.99	7.36	4.86	4.05	3.76	4.44
16	3.16	6.14	7.33	10.13	11.82	15.03	11.77	7.29	4.80	4.05	3.74	4.51
17	3.10	5.95	7.42	10.05	12.00	15.09	11.58	7.21	4.65	4.00	3.70	4.70
18	3.19	6.02	7.58	9.94	12.05	15.25	11.40	7.14	4.48	3.95	3.75	4.73
19	3.02	6.16	7.72	9.91	12.10	15.63	11.27	7.03	4.41	3.90	3.76	4.74
20	2.77	6.29	7.83	9.89	12.25	16.04	11.18	6.84	4.41	3.94	3.78	4.78
21	2.84	6.48	7.97	9.85	12.51	16.38	11.03	6.68	4.43	3.95	3.79	4.79
22	2.97	6.67	8.15	9.85	13.04	16.70	10.89	6.55	4.41	4.03	3.85	4.72
23	2.78	6.79	8.30	10.00	13.82	16.97	10.73	6.46	4.38	4.11	3.94	4.67
24	3.13	6.82	8.44	10.07	14.14	17.19	10.57	6.37	4.41	4.07	3.92	4.52
25	3.40	6.85	8.62	10.03	14.37	17.31	10.40	6.27	4.39	4.02	3.82	4.33
26	3.52	6.96	8.68	10.00	14.58	17.35	10.24	6.17	4.22	3.96	3.87	4.54
27	3.99	7.06	8.79	10.11	14.84	17.33	10.07	6.11	4.23	3.93	3.97	5.37
28	2.92	7.07	8.83	10.20	15.08	17.27	9.90	6.01	4.21	3.91	3.86	5.22
29	2.98	7.11	8.89	10.26	---	17.15	9.71	5.87	4.08	3.83	3.86	5.13
30	3.42	7.23	8.97	10.35	---	17.01	9.52	5.70	4.15	3.78	3.71	5.80
31	4.19	---	9.04	10.46	---	16.84	---	5.55	---	3.74	3.74	---
MEAN	3.10	6.14	7.64	10.00	12.23	15.94	12.53	7.29	4.73	3.95	3.81	4.61
MAX	4.19	7.23	9.04	10.46	15.08	17.35	16.65	9.34	5.46	4.15	3.97	5.80
MIN	2.75	4.69	6.54	9.11	10.57	15.00	9.52	5.55	4.08	3.72	3.52	3.72

WTR YR 1998 MEAN 7.63 MAX 17.35 MIN 2.75

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.--Records good, except for estimated daily discharges, which are poor. Below about 500 ft^3/s, all flow enters sinkhole 0.5 mi dowmstream 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	e240	e400	e850	1310	3500	910	127	13	4.1	4.3	3.9
2	22	e280	e500	e800	1230	3100	835	111	13	4.1	4.8	4.5
3	19	e300	e600	e750	1640	2630	766	101	11	4.0	4.7	21
4	17	e350	e550	e700	1710	2280	703	91	9.9	3.9	4.4	42
5	16	e300	e500	e650	1700	1960	620	87	8.7	3.9	4.3	45
6	14	e280	e450	e600	1650	1690	559	78	9.0	3.9	3.9	45
7	13	e250	e400	e550	1570	1520	511	71	8.5	3.9	3.8	61
8	12	e220	e350	e700	1470	1440	532	66	8.1	3.9	4.2	70
9	12	e200	e300	e800	1330	1600	567	62	7.4	4.0	5.3	72
10	11	e190	e250	e750	1200	1650	520	55	7.2	4.1	5.2	70
11	10	e180	e300	e700	1070	1670	469	52	6.8	3.9	4.9	66
12	9.6	e170	e400	e650	972	1640	432	45	6.1	3.7	4.4	62
13	9.5	e200	e500	e800	879	1560	397	40	5.7	3.7	4.1	59
14	9.2	e300	e600	e900	833	1450	359	35	5.3	3.7	3.9	55
15	8.9	e400	e700	e1000	766	1350	329	31	5.3	3.7	4.4	68
16	10	e500	e800	e1300	856	1250	305	29	5.1	3.7	4.7	63
17	19	e450	e900	e1600	1830	1160	283	27	5.0	3.6	4.0	58
18	26	e400	e800	e1700	2770	1110	267	25	4.5	3.4	4.0	59
19	27	e350	e700	e1600	3450	1450	259	22	4.4	3.4	5.0	58
20	25	e300	e650	e1500	3450	1800	287	21	4.3	3.6	6.6	118
21	23	e275	e600	1430	3110	2040	262	19	4.3	5.0	6.5	313
22	20	e250	e550	1300	2980	2200	237	18	4.1	7.7	6.2	493
23	19	e225	e500	1460	4020	2210	214	17	4.1	5.8	6.6	563
24	17	e200	e600	1740	4710	2070	194	15	4.1	4.7	6.0	537
25	24	e190	e700	1870	4810	1860	178	13	3.9	4.2	5.3	489
26	25	e170	e800	1900	4450	1640	162	13	3.9	4.9	4.8	436
27	92	e160	e900	1830	3980	1480	151	13	4.1	5.2	4.3	397
28	164	e140	e950	1740	3710	1340	146	13	4.6	4.4	4.3	386
29	196	e200	e1000	1630	---	1220	136	13	4.1	4.1	4.1	346
30	190	e300	e950	1540	---	1110	132	13	4.0	4.0	4.1	1340
31	e200	---	e900	1440	---	1010	---	13	---	3.9	4.1	---
MEAN	41.5	266	616	1186	2266	1742	391	43.1	6.32	4.20	4.75	213
MAX	200	500	1000	1900	4810	3500	910	127	13	7.7	6.6	1340
MIN	8.9	140	250	550	766	1010	132	13	3.9	3.4	3.8	3.9
IN.	.14	.85	2.03	3.91	6.74	5.74	1.25	.14	.02	.01	.02	.68

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1998, BY WATER YEAR (WY)

MEAN	284	129	199	346	493	513	353	129	122	315	512	496
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	9.09	3.75	4.20	4.75	29.5
(WY)	1956	1956	1956	1956	1957	1950	1956	1962	1981	1998	1998	1956

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1950 - 1998	
ANNUAL MEAN	296		555		325	
HIGHEST ANNUAL MEAN					901	1964
LOWEST ANNUAL MEAN					35.4	1956
HIGHEST DAILY MEAN	1300	Apr 30	4810	Feb 25	16400	Sep 14 1964
LOWEST DAILY MEAN	8.9	Oct 15	3.4	Jul 18	2.6	Jul 3 1981
ANNUAL SEVEN-DAY MINIMUM	9.7	Oct 10	3.6	Jul 14	2.8	Jul 2 1981
INSTANTANEOUS PEAK FLOW			4920	Feb 25	17600	Sep 13 1964
INSTANTANEOUS PEAK STAGE			15.94	Feb 25	18.90	Sep 13 1964
INSTANTANEOUS LOW FLOW			3.4	Jul 17	2.5	Jul 18 1981
ANNUAL RUNOFF (INCHES)	11.47		21.52		12.61	
10 PERCENT EXCEEDS	633		1640		871	
50 PERCENT EXCEEDS	225		190		123	
90 PERCENT EXCEEDS	26		4.1		16	

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 mean daily discharges, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	27	27	43	69	e360	164	38	2.0	1.1	28	12
2	5.4	35	25	41	70	e335	151	35	1.8	1.1	29	13
3	4.8	34	24	38	136	e310	140	32	1.7	1.1	28	53
4	4.4	31	25	37	144	e290	131	29	1.5	1.1	28	85
5	4.0	29	25	36	139	e280	121	27	1.4	1.1	23	114
6	3.6	27	24	34	130	e275	113	25	1.4	1.1	21	117
7	3.2	26	23	36	121	e295	107	23	1.4	1.1	21	113
8	2.9	24	22	70	113	e360	102	21	1.4	1.0	18	111
9	2.6	23	26	73	100	e390	102	20	1.4	1.2	17	106
10	2.4	22	38	66	92	412	102	18	1.3	1.3	15	97
11	2.1	21	45	61	86	387	98	17	1.3	1.2	13	88
12	1.9	20	45	57	84	350	93	15	1.3	1.1	12	77
13	1.8	36	50	55	94	315	89	14	1.3	1.0	10	65
14	1.6	39	52	57	100	285	85	13	1.3	1.1	9.0	55
15	1.5	36	53	78	104	257	82	11	1.2	1.2	9.6	45
16	2.7	33	49	99	107	232	79	10	1.2	1.1	8.9	39
17	3.8	31	43	91	465	211	76	9.0	1.2	1.1	8.7	35
18	3.9	29	40	85	515	200	74	8.2	1.2	1.1	10	44
19	4.1	27	37	81	489	281	72	7.2	1.2	1.1	23	47
20	3.9	26	35	78	456	437	73	6.3	1.2	1.2	32	63
21	3.6	25	34	73	414	442	71	5.6	1.2	1.5	37	98
22	3.2	24	35	69	409	421	68	5.0	1.2	2.0	41	149
23	2.9	23	37	94	545	389	65	4.4	1.2	4.0	41	174
24	3.1	22	42	111	514	354	61	3.9	1.2	11	37	179
25	6.6	21	58	104	477	320	59	3.4	1.2	16	31	166
26	6.5	20	55	97	459	290	55	2.9	1.2	19	26	139
27	19	19	55	93	e420	263	50	2.7	1.2	27	22	119
28	23	18	57	90	e400	236	47	2.7	1.2	31	20	104
29	23	17	53	84	---	215	43	2.5	1.2	31	18	93
30	22	24	51	78	---	197	40	2.3	1.2	30	16	226
31	23	---	47	73	---	179	---	2.1	---	30	14	---
MEAN	6.53	26.3	39.7	70.4	259	309	87.1	13.4	1.32	7.25	21.5	94.2
MAX	23	39	58	111	545	442	164	38	2.0	31	41	226
MIN	1.5	17	22	34	69	179	40	2.1	1.2	1.0	8.7	12
IN.	.13	.49	.76	1.35	4.50	5.93	1.62	.26	.02	.14	.41	1.75

e Estimated

FENHOLLOWAY RIVER BASIN

02324400 FENHOLLOWAY RIVER NEAR FOLEY, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1998, BY WATER YEAR (WY)

MEAN	36.6	13.4	27.1	48.9	76.9	91.3	73.9	26.7	32.5	49.4	82.8	61.2
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1956 - 1998	
ANNUAL MEAN	38.1		76.7		51.6	
HIGHEST ANNUAL MEAN					154	1964
LOWEST ANNUAL MEAN					4.42	1968
HIGHEST DAILY MEAN	131	Jan 31	545	Feb 23	2710	Sep 12 1964
LOWEST DAILY MEAN	1.5	Oct 15	1.0	Jul 8	.35	Aug 25 1993
ANNUAL SEVEN-DAY MINIMUM	2.0	Oct 9	1.1	Jul 2	.41	Aug 20 1993
INSTANTANEOUS PEAK FLOW			552	Feb 23	3210	Sep 12 1964
INSTANTANEOUS PEAK STAGE			11.97	Feb 23	15.21	Sep 12 1964
INSTANTANEOUS LOW FLOW			1.0	Jul 12	.32	Aug 25 1993
ANNUAL RUNOFF (INCHES)	8.62		17.37		11.69	
10 PERCENT EXCEEDS	77		244		141	
50 PERCENT EXCEEDS	32		32		17	
90 PERCENT EXCEEDS	6.6		1.3		1.5	

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 bridge on 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	e150	e170	193	249	602	441	207	132	107	167	135
2	127	e157	e168	188	259	590	422	203	130	107	170	140
3	128	e156	e165	185	355	571	407	199	128	106	164	245
4	126	e154	e170	181	391	550	398	193	127	106	160	239
5	126	e152	e173	177	399	525	400	188	129	105	157	243
6	125	e150	e177	174	396	502	405	183	126	103	149	274
7	125	e149	e176	171	388	499	397	179	126	101	142	318
8	124	e148	e175	200	384	517	385	176	125	101	144	307
9	122	e147	e180	214	370	545	378	173	124	100	139	298
10	122	e146	e190	221	350	603	366	168	124	112	141	284
11	120	e145	e195	219	331	619	348	168	109	104	139	267
12	120	e145	e200	213	315	602	334	163	110	103	134	254
13	120	e160	e205	208	302	585	321	158	118	108	133	240
14	118	e170	e207	210	302	565	307	153	118	123	143	225
15	119	e167	e208	222	298	547	298	149	116	137	141	214
16	125	e165	202	253	313	528	290	150	115	127	138	207
17	122	e163	198	264	476	509	284	147	113	126	136	202
18	122	e162	192	271	641	498	280	144	112	132	139	217
19	122	e161	186	271	701	531	278	140	110	130	159	230
20	121	e160	179	267	681	584	284	138	109	143	149	239
21	120	e159	175	257	639	660	274	136	110	152	160	283
22	e120	e158	173	250	626	674	265	135	109	148	173	344
23	e120	e156	177	271	641	655	255	135	106	129	174	399
24	e121	e155	181	288	717	627	248	135	108	138	170	402
25	e123	e154	200	297	696	601	242	134	107	140	164	400
26	e125	e153	202	298	660	578	234	132	104	133	159	390
27	e135	e151	209	295	630	555	227	133	106	163	149	370
28	e145	e150	210	288	612	531	223	132	122	150	146	348
29	e146	e150	209	279	---	506	219	134	115	165	141	333
30	e142	e160	205	269	---	483	206	137	109	164	141	402
31	e145	---	199	259	---	461	---	135	---	164	137	---
MEAN	126	155	189	237	469	561	314	157	117	127	150	282
MAX	146	170	210	298	717	674	441	207	132	165	174	402
MIN	118	145	165	171	249	461	206	132	104	100	133	135

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1998, BY WATER YEAR (WY)

MEAN	170	144	155	198	254	295	273	165	145	195	241	184
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	104	93.0	99.2	94.8	82.8	94.2
(WY)	1991	1991	1991	1996	1996	1989	1989	1989	1990	1993	1993	1993

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1977 - 1998	
ANNUAL MEAN	181		239		202	
HIGHEST ANNUAL MEAN					317	1983
LOWEST ANNUAL MEAN					125	1989
HIGHEST DAILY MEAN	372	Jan 17	717	Feb 24	1130	Jul 31 1982
LOWEST DAILY MEAN	90	Jul 5	100	Jul 9	35	Oct 8 1990
ANNUAL SEVEN-DAY MINIMUM	100	Jun 30	103	Jul 3	48	Oct 4 1990
INSTANTANEOUS PEAK FLOW			725	Feb 24	1360	Sep 18 1964
INSTANTANEOUS PEAK STAGE			21.78	Feb 23	24.39	Sep 13 1964
INSTANTANEOUS LOW FLOW			95	Jul 9	35	Oct 8 1990
10 PERCENT EXCEEDS	288		507		362	
50 PERCENT EXCEEDS	160		173		155	
90 PERCENT EXCEEDS	121		120		105	

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, except for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	402	237	240	260	979	e475	96	30	21	28	22
2	46	420	247	232	269	924	e450	91	30	21	28	25
3	42	430	259	225	372	865	e415	88	29	20	28	110
4	39	427	265	217	410	808	e380	83	28	20	28	157
5	37	416	263	210	423	758	356	77	27	19	27	159
6	34	396	252	203	434	719	e335	71	26	18	25	170
7	33	368	241	198	441	743	e320	67	25	18	24	169
8	31	337	232	219	430	869	e300	63	24	18	25	152
9	30	307	229	225	410	1050	e280	60	24	19	24	141
10	29	282	230	221	388	1100	e265	56	24	20	28	136
11	28	264	230	219	369	e1120	e245	53	23	19	28	129
12	28	252	232	218	355	e1080	226	50	23	19	27	123
13	27	314	237	218	338	e1020	215	47	22	21	26	119
14	27	353	254	224	324	e960	205	44	22	27	e30	112
15	26	361	269	237	308	e900	193	42	22	29	e27	104
16	28	365	273	265	320	845	183	40	21	30	24	95
17	27	355	275	270	636	e800	173	38	21	29	e23	88
18	28	334	273	276	1030	e760	165	37	21	29	e25	85
19	28	310	265	285	1040	e780	162	35	20	28	e27	90
20	28	287	255	287	1020	e800	169	34	20	31	29	92
21	27	268	245	280	977	e825	165	32	19	31	30	108
22	26	252	236	272	992	853	159	32	19	32	30	124
23	26	238	229	301	1180	e820	152	31	19	32	30	142
24	26	223	231	332	1240	e800	143	30	20	32	30	153
25	27	210	246	333	1220	e750	135	29	19	30	29	152
26	30	199	244	328	1160	e700	126	28	19	30	28	149
27	149	188	248	325	1100	e650	118	31	20	29	27	146
28	238	177	256	316	1040	e600	111	32	23	29	25	142
29	341	178	255	301	---	573	105	32	22	29	24	138
30	400	225	251	286	---	e535	100	31	22	29	24	251
31	403	---	247	273	---	e500	---	31	---	28	23	---
MEAN	75.5	305	249	259	660	822	228	48.7	22.8	25.4	26.8	126
MAX	403	430	275	333	1240	1120	475	96	30	32	30	251
MIN	26	177	229	198	260	500	100	28	19	18	23	22
IN.	.44	1.72	1.45	1.51	3.47	4.79	1.28	.28	.13	.15	.16	.71

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1998, BY WATER YEAR (WY)

MEAN	113	66.0	102	145	229	259	228	89.9	90.6	113	178	146
MAX	816	305	771	624	814	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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1951 - 1998	
ANNUAL MEAN	191		235		146	
HIGHEST ANNUAL MEAN					317	1991
LOWEST ANNUAL MEAN					18.1	1955
HIGHEST DAILY MEAN	461	Aug 6	1240	Feb 24	2480	Sep 18 1957
LOWEST DAILY MEAN	26	Oct 15	18	Jul 6	2.4	Jul 8 1955
ANNUAL SEVEN-DAY MINIMUM	27	Oct 19	19	Jul 5	2.6	Jul 3 1955
INSTANTANEOUS PEAK FLOW			1250	Feb 24	2540	Sep 17 1957
INSTANTANEOUS PEAK STAGE			11.56	Feb 24	12.78	Sep 17 1957
INSTANTANEOUS LOW FLOW			17	Jul 7	2.3	Jul 8 1955
ANNUAL RUNOFF (INCHES)	13.12		16.09		10.04	
10 PERCENT EXCEEDS	326		708		380	
50 PERCENT EXCEEDS	186		153		65	
90 PERCENT EXCEEDS	47		24		18	

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	581	530	496	580	703	1170	967	664	550	508	654	639
2	576	540	498	566	749	1120	946	654	552	509	639	667
3	571	536	503	557	954	1080	928	648	550	507	632	1420
4	567	536	507	551	982	1050	908	641	552	507	626	1320
5	563	537	501	548	1040	1020	887	631	548	508	624	1660
6	558	527	495	547	1110	989	869	620	549	506	623	1690
7	555	516	490	559	1050	1110	855	614	545	506	629	1550
8	552	508	489	633	967	1510	849	610	545	506	636	1450
9	548	501	492	628	908	1970	853	606	543	514	640	1310
10	544	496	495	633	869	2220	833	604	544	521	647	1160
11	540	492	494	657	852	2160	816	601	539	517	652	1040
12	535	495	493	646	831	2010	804	596	537	513	651	947
13	531	554	494	629	812	1910	792	593	532	541	648	882
14	528	556	501	626	796	1770	781	589	530	558	645	834
15	525	566	504	685	786	1610	769	586	526	550	653	800
16	522	593	502	726	830	1500	762	582	526	544	649	777
17	521	576	499	734	1180	1420	755	579	522	544	647	765
18	520	547	496	774	1250	1380	749	575	519	551	646	758
19	517	527	492	767	1420	1410	755	570	515	568	666	758
20	513	514	489	724	1420	1510	760	563	515	561	708	793
21	509	507	489	692	1280	1490	754	560	514	557	707	850
22	505	500	503	679	1280	1440	746	554	514	561	707	857
23	501	496	523	721	1440	1390	737	551	511	554	698	888
24	500	490	563	741	1410	1330	723	545	514	556	684	889
25	500	485	624	749	1460	1270	712	543	515	562	675	878
26	504	483	654	792	1410	1210	701	541	517	571	670	858
27	529	481	701	797	1320	1150	690	542	513	574	663	841
28	515	478	697	764	1230	1100	680	543	510	591	656	794
29	511	483	658	741	---	1050	673	547	507	637	651	822
30	506	496	624	730	---	1020	671	547	507	664	658	1470
31	518	---	601	716	---	992	---	550	---	682	648	---
MEAN	531	518	534	674	1084	1399	791	585	529	550	656	1012
MAX	581	593	701	797	1460	2220	967	664	552	682	708	1690
MIN	500	478	489	547	703	989	671	541	507	506	623	639
IN.	1.14	1.08	1.15	1.45	2.11	3.02	1.65	1.26	1.10	1.19	1.41	2.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1998, BY WATER YEAR (WY)

MEAN	647	553	591	648	762	908	873	687	692	730	780	749
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	337
(WY)	1969	1969	1991	1957	1957	1957	1968	1968	1968	1968	1968	1968

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1957 - 1998	
ANNUAL MEAN	739		736		719	
HIGHEST ANNUAL MEAN					1148	1994
LOWEST ANNUAL MEAN					403	1968
HIGHEST DAILY MEAN	1530	Jul 2	2220	Mar 10	4700	Apr 6 1973
LOWEST DAILY MEAN	478	Nov 28	478	Nov 28	315	Oct 4 1968
ANNUAL SEVEN-DAY MINIMUM	485	Nov 23	485	Nov 23	328	Mar 12 1957
INSTANTANEOUS PEAK FLOW			2230	Mar 10	4750	Apr 7 1973
INSTANTANEOUS PEAK STAGE			8.55	Mar 10	11.81	Apr 7 1973
INSTANTANEOUS LOW FLOW			475	Nov 28	310	Apr 25 1964
ANNUAL RUNOFF (INCHES)	18.77		18.68		18.27	
10 PERCENT EXCEEDS	1020		1240		1090	
50 PERCENT EXCEEDS	700		626		640	
90 PERCENT EXCEEDS	504		504		410	

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.

WATER-DISCHARGE RECORDS

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e80	e30	99	248	142	389	55	3.8	1.9	1.1	338	53
2	e65	e50	98	210	218	327	46	3.4	1.7	1.1	561	117
3	e40	77	91	179	792	263	39	3.3	1.6	1.1	428	2610
4	e30	e70	99	154	1110	211	33	3.1	1.5	1.2	339	3700
5	e25	e60	104	134	1130	172	27	2.9	1.5	1.2	247	3190
6	e20	e50	95	118	924	150	22	2.8	1.6	1.1	173	2200
7	e15	e40	84	120	708	334	18	2.7	1.6	1.2	125	1390
8	e10	e30	75	419	559	1060	16	2.7	1.5	1.6	132	853
9	e9.0	e25	77	600	458	2160	15	2.5	1.5	2.1	238	620
10	e8.0	e20	82	635	385	3010	15	2.4	1.5	1.9	323	481
11	e7.0	e15	80	550	329	2580	13	2.2	1.5	1.5	387	367
12	e6.0	e30	75	464	287	1780	12	2.1	1.4	1.3	306	283
13	e5.0	e100	72	410	255	1150	10	2.1	1.4	2.1	213	220
14	e4.0	e300	79	403	225	748	8.9	2.2	1.4	3.1	166	170
15	e3.5	e200	92	436	196	560	8.0	2.2	1.3	11	131	130
16	e3.0	e150	97	511	229	433	7.2	2.1	1.3	9.8	104	103
17	e2.5	e100	92	494	494	343	6.7	2.1	1.2	5.9	83	100
18	e2.0	e90	85	445	596	283	6.3	2.0	1.2	12	70	107
19	e1.7	e80	78	393	595	301	7.5	2.0	1.3	19	84	120
20	1.4	e70	70	348	538	373	11	1.9	1.5	18	148	195
21	e1.1	e60	63	299	464	387	12	1.9	1.3	22	136	486
22	e.90	e65	104	257	544	349	11	1.8	1.3	21	149	834
23	e.70	e70	184	325	936	297	10	1.8	1.2	34	182	942
24	e1.0	e60	239	372	968	249	8.8	1.7	1.1	35	189	811
25	e5.0	e55	389	364	844	208	7.3	1.7	1.1	41	159	630
26	e10	e50	419	333	673	173	6.1	1.7	1.2	50	124	492
27	e30	e45	433	294	547	143	5.3	1.7	1.1	47	94	447
28	e40	e50	421	261	459	119	4.6	1.7	1.1	39	70	397
29	e30	e70	376	227	---	97	4.2	1.7	1.1	39	51	639
30	e20	e85	336	195	---	80	4.0	1.7	1.1	146	48	3200
31	e10	---	292	167	---	66	---	1.8	---	238	64	---
TOTAL	486.80	2197	4980	10365	15605	18795	449.9	69.7	41.0	809.3	5862	25887
MEAN	15.7	73.2	161	334	557	606	15.0	2.25	1.37	26.1	189	863
MAX	80	300	433	635	1130	3010	55	3.8	1.9	238	561	3700
MIN	.70	15	63	118	142	66	4.0	1.7	1.1	1.1	48	53
MED	8.0	60	95	333	541	327	11	2.1	1.3	9.8	149	484
AC-FT	966	4360	9880	20560	30950	37280	892	138	81	1610	11630	51350
CFSM	.15	.72	1.57	3.28	5.46	5.94	.15	.02	.01	.26	1.85	8.46
IN.	.18	.80	1.82	3.78	5.69	6.85	.16	.03	.01	.30	2.14	9.44

e Estimated

02327100 SOPCHOPPY RIVER NEAR SOPCHOPPY, FL--continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1998, BY WATER YEAR (WY)

MEAN	105	62.4	157	268	310	310	185	67.5	141	248	306	205
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1964 - 1998	
ANNUAL TOTAL	60644.76		85547.70			
ANNUAL MEAN	166		234		196	
HIGHEST ANNUAL MEAN					334	1991
LOWEST ANNUAL MEAN					43.4	1968
HIGHEST DAILY MEAN	2110	Aug 5	3700	Sep 4	5100	Jul 31 1975
LOWEST DAILY MEAN	.70	Oct 23	.70	Oct 23	.70	Oct 23 1997
ANNUAL SEVEN-DAY MINIMUM	.92	Sep 18	1.1	Jun 27	.92	Sep 18 1997
INSTANTANEOUS PEAK FLOW			3970	Sep 30	5260	Jul 31 1975
INSTANTANEOUS PEAK STAGE			31.67	Sep 30	34.47	Jul 31 1975
INSTANTANEOUS LOW FLOW			.70	Oct 23	.70	Oct 23 1997
ANNUAL RUNOFF (AC-FT)	120300		169700		141700	
ANNUAL RUNOFF (CFSM)	1.63		2.30		1.92	
ANNUAL RUNOFF (INCHES)	22.12		31.20		26.06	
10 PERCENT EXCEEDS	408		554		528	
50 PERCENT EXCEEDS	77		75		66	
90 PERCENT EXCEEDS	3.7		1.5		3.2	

02329000 OCHLOCKONEE RIVER NEAR HAVANA, FL
(National water-quality assessment network station)

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.

WATER-DISCHARGE RECORDS

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	197	1470	1760	4090	2350	3870	1950	615	105	73	377	57
2	149	1640	1940	3430	2250	3810	e1800	571	97	63	367	61
3	119	1820	2290	3050	2430	3540	1650	540	93	54	323	583
4	105	2140	2590	2730	2580	3240	1760	510	92	48	323	654
5	96	2350	2860	2440	2950	2920	1670	481	87	45	294	752
6	90	2270	2970	2190	3620	2640	1520	453	80	41	247	1030
7	84	2080	2880	1980	4150	2700	1400	428	74	37	212	1320
8	80	1820	2640	2090	4290	4000	1300	411	69	34	200	1390
9	76	1540	2380	2060	4080	7050	1220	391	71	33	e195	1350
10	73	1340	2150	2090	3630	12100	1190	374	72	31	e190	1230
11	69	1180	1900	2300	3270	16900	1260	356	65	28	186	1050
12	66	1090	1670	2480	2930	17800	1390	339	60	26	e187	851
13	64	1520	1470	2620	2580	14100	1620	328	57	70	e180	668
14	62	1890	1390	2680	2340	10600	1790	333	54	227	e177	538
15	60	2870	1380	2640	2150	8030	1840	346	51	138	e180	453
16	58	5260	1410	2550	2020	6270	1810	358	47	125	e190	393
17	56	5950	1540	2430	2150	5100	1750	352	44	164	194	350
18	54	5660	1710	2390	2230	4340	1610	327	41	174	e195	319
19	52	5030	1900	2390	2360	4010	1430	298	39	210	e197	292
20	52	4290	2090	2370	2760	3850	1330	273	40	229	198	275
21	51	3620	2180	2340	3030	4580	1230	253	40	227	194	311
22	49	3160	2130	2300	3170	5610	e1160	235	38	259	189	466
23	49	2700	2000	2300	3420	6160	1080	220	39	280	169	567
24	51	2340	1940	2290	3480	5980	1030	208	47	337	134	660
25	56	2080	2010	2260	3650	5250	990	196	46	231	111	731
26	68	1840	2170	2270	3830	4450	e930	183	45	210	102	752
27	213	1600	2690	2330	3950	3740	e880	170	71	212	95	722
28	445	1410	3460	2410	3960	3220	e820	156	77	340	86	690
29	708	1370	4440	2470	---	2760	e740	139	87	295	79	1140
30	1080	1630	5180	2490	---	2400	e680	126	83	342	71	2930
31	1360	---	4890	2460	---	2150	---	114	---	350	64	---
MEAN	187	2499	2387	2481	3058	5909	1361	325	63.7	159	191	753
MAX	1360	5950	5180	4090	4290	17800	1950	615	105	350	377	2930
MIN	49	1090	1380	1980	2020	2150	680	114	38	26	64	57
IN.	.19	2.45	2.42	2.51	2.79	5.98	1.33	.33	.06	.16	.19	.74

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1998, BY WATER YEAR (WY)

MEAN	492	399	754	1341	2029	2320	1934	835	645	723	828	585
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1926 - 1998	
ANNUAL MEAN	1153		1607		1069	
HIGHEST ANNUAL MEAN					2854	1948
LOWEST ANNUAL MEAN					209	1968
HIGHEST DAILY MEAN	6150	Feb 20	17800	Mar 12	53100	Apr 4 1948
LOWEST DAILY MEAN	49	Oct 22	26	Jul 12	17	Oct 23 1954
ANNUAL SEVEN-DAY MINIMUM	51	Oct 18	33	Jul 6	17	Oct 22 1954
INSTANTANEOUS PEAK FLOW			18800	Mar 12	55900	Apr 4 1948
INSTANTANEOUS PEAK STAGE			30.52	Mar 12	35.08	Apr 4 1948
INSTANTANEOUS LOW FLOW			25	Jul 13	17	Oct 23 1954
ANNUAL RUNOFF (INCHES)	13.73		19.15		12.74	
10 PERCENT EXCEEDS	2630		3770		2620	
50 PERCENT EXCEEDS	774		1050		465	
90 PERCENT EXCEEDS	96		60		87	

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.11	20.29	21.03	24.89	22.64	24.72	21.60	---	12.56	12.11	14.69	11.75
2	12.73	20.74	21.56	24.29	22.40	24.67	---	16.07	12.50	11.97	14.62	11.80
3	12.50	21.20	22.49	23.79	22.84	24.42	20.77	15.86	12.45	11.83	14.26	16.04
4	12.35	22.10	23.12	23.35	23.12	24.05	21.02	15.67	12.44	11.74	14.26	16.59
5	12.24	22.63	23.53	22.84	23.66	23.62	---	15.46	12.39	11.67	14.01	17.15
6	12.16	22.43	23.69	22.23	24.49	23.21	20.44	15.26	12.29	11.61	13.59	18.58
7	12.09	21.93	23.57	21.67	24.94	23.29	20.05	15.08	12.20	11.54	13.26	19.76
8	12.03	21.21	23.21	21.97	25.04	24.81	---	14.96	12.13	11.49	13.13	20.03
9	11.98	20.48	22.71	21.90	24.88	26.64	19.41	14.81	12.16	11.46	---	19.89
10	11.93	19.83	22.12	21.97	24.51	28.68	19.29	14.67	12.16	11.43	---	19.44
11	11.89	19.23	21.44	22.52	24.09	30.05	19.53	14.53	12.06	11.38	13.00	18.68
12	11.85	18.87	20.81	22.94	23.63	30.28	---	14.39	11.99	11.34	13.10	17.69
13	11.81	20.42	20.27	23.19	23.12	29.32	---	14.30	11.93	11.82	---	16.67
14	11.79	21.42	20.01	23.27	22.61	28.19	21.13	14.34	11.88	13.42	12.83	15.85
15	11.76	23.41	19.98	23.22	22.13	27.15	21.28	14.45	11.83	12.71	---	15.26
16	11.72	25.68	20.11	23.07	21.77	26.29	21.19	14.54	11.77	12.62	---	14.82
17	11.69	26.11	20.48	22.83	22.12	25.59	21.01	14.50	11.72	12.87	13.08	14.48
18	11.67	25.94	20.92	22.74	22.32	25.08	20.65	14.29	11.68	12.93	---	14.23
19	11.65	25.55	21.44	22.73	22.66	24.83	20.18	14.05	11.63	13.24	---	14.00
20	11.64	25.04	21.98	22.69	23.39	24.70	19.82	13.82	11.65	13.43	13.12	13.85
21	11.63	24.49	22.21	22.62	23.76	25.24	---	13.65	11.65	13.41	12.89	14.15
22	11.61	23.95	22.08	22.50	23.95	25.91	---	13.48	11.60	13.71	13.04	15.35
23	11.60	23.29	21.72	22.52	24.28	26.23	---	13.34	11.62	13.88	12.89	16.04
24	11.64	22.61	21.56	22.47	24.35	26.13	18.58	13.22	11.74	14.37	12.64	16.62
25	11.71	21.94	21.74	22.40	24.54	25.69	---	13.10	11.72	13.45	12.46	17.05
26	11.88	21.26	22.17	22.44	24.69	25.16	---	12.99	11.71	13.24	12.35	17.16
27	13.28	20.63	23.25	22.58	24.79	24.61	---	12.92	12.10	13.26	12.26	17.00
28	15.19	20.09	24.31	22.79	24.79	24.02	---	12.84	12.18	14.40	12.15	16.80
29	16.88	19.95	25.15	22.93	---	23.39	---	12.75	12.30	14.02	12.05	18.73
30	18.80	20.72	25.65	22.97	---	22.75	---	12.68	12.24	14.41	11.95	23.62
31	19.91	---	25.46	22.89	---	22.13	---	12.61	---	14.48	11.84	---
MEAN	12.73	22.11	22.25	22.81	23.63	25.51	---	---	12.01	12.75	---	16.64
MAX	19.91	26.11	25.65	24.89	25.04	30.28	---	---	12.56	14.48	---	23.62
MIN	11.60	18.87	19.98	21.67	21.77	22.13	---	---	11.60	11.34	---	11.75

CAL YR 1997 MEAN 17.50 MAX 26.22 MIN 11.60

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	440	1100	1780	430	334	1330	370	171	55	45	658	409
2	223	1850	2120	382	483	1350	351	166	57	53	e519	e891
3	117	4200	e1500	367	1380	938	631	154	55	44	403	1550
4	81	3100	953	359	1720	590	871	143	49	39	384	2140
5	77	1790	708	352	2070	477	721	139	45	37	379	2220
6	75	731	561	348	1750	573	422	135	45	35	372	1860
7	74	555	477	421	1130	1130	327	126	44	34	370	800
8	73	494	436	1230	690	5410	302	129	42	33	379	300
9	71	433	442	1390	531	11200	390	129	42	35	392	251
10	67	358	448	1430	476	6470	484	119	53	37	439	230
11	64	316	440	1220	485	3490	431	109	47	44	e500	217
12	62	436	463	719	654	2240	320	101	45	40	439	203
13	63	2540	541	545	634	1480	253	94	40	53	e600	187
14	62	6610	680	578	508	1130	224	87	38	263	e850	164
15	59	6130	799	687	413	923	205	84	37	652	e1100	139
16	57	3410	768	908	543	812	198	e78	34	690	e900	140
17	55	2140	639	978	1210	753	190	e74	33	282	724	140
18	55	1270	460	896	1320	749	196	69	31	172	e633	141
19	56	693	398	691	1470	918	241	68	33	175	542	160
20	53	517	371	562	1350	1080	470	64	35	157	483	204
21	51	459	351	470	813	1300	505	64	32	337	449	356
22	49	875	347	436	707	1280	374	60	31	432	469	893
23	48	767	440	784	1210	881	258	59	36	434	457	900
24	64	564	907	925	1190	652	195	58	56	392	446	594
25	217	425	1400	861	1150	567	177	57	56	308	429	267
26	207	371	1570	652	908	508	166	56	80	381	420	217
27	1270	374	1520	486	927	473	160	55	174	372	418	201
28	2210	373	1110	450	1200	455	156	55	117	764	416	191
29	3110	514	741	426	---	434	152	54	74	953	414	1350
30	1750	1510	613	386	---	422	155	51	54	991	414	10500
31	675	---	501	353	---	394	---	49	---	822	412	---
MEAN	372	1497	790	668	973	1626	330	92.2	52.3	294	510	927
MAX	3110	6610	2120	1430	2070	11200	871	171	174	991	1100	10500
MIN	48	316	347	348	334	394	152	49	31	33	370	139
IN.	1.41	5.48	2.99	2.53	3.32	6.15	1.21	.35	.19	1.11	1.93	3.39

e Estimated

02329600 LITTLE RIVER NEAR MIDWAY, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1998, BY WATER YEAR (WY)

MEAN	367	364	389	725	850	862	385	260	346	323	383	307
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	146	82.6	52.3	60.1	66.0	49.3
(WY)	1991	1989	1989	1989	1989	1989	1989	1990	1998	1990	1990	1990

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1986 - 1998	
ANNUAL MEAN	476		675		462	
HIGHEST ANNUAL MEAN					709	1991
LOWEST ANNUAL MEAN					228	1989
HIGHEST DAILY MEAN	6610	Nov 14	11200	Mar 9	30300	Oct 3 1994
LOWEST DAILY MEAN	44	Sep 11	31	Jun 18	13	Oct 17 1990
ANNUAL SEVEN-DAY MINIMUM	47	Sep 7	33	Jun 16	14	Oct 12 1990
INSTANTANEOUS PEAK FLOW			14900	Sep 30	49200	Sep 22 1969
INSTANTANEOUS PEAK STAGE			80.68	Sep 30	86.25	Sep 22 1969
INSTANTANEOUS LOW FLOW			30	Jun 18	13	Oct 16 1990
ANNUAL RUNOFF (INCHES)	21.21		30.05		20.56	
10 PERCENT EXCEEDS	1100		1380		1020	
50 PERCENT EXCEEDS	261		421		226	
90 PERCENT EXCEEDS	63		53		75	

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. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1140	2610	3560	5080	2830	4980	716	1010	153	170	188	175
2	1080	3380	4710	4520	4510	5000	627	851	147	168	223	1020
3	845	4260	6020	4070	4740	4700	644	822	146	165	201	4360
4	370	5670	6440	3660	5070	4070	2140	835	149	160	187	4790
5	142	3950	6680	2300	4510	3780	2870	628	152	160	182	2680
6	153	3280	6580	3680	4630	3540	2570	689	151	167	179	2500
7	153	2860	6490	3060	4660	5920	1880	666	148	152	179	2020
8	145	2480	6390	5410	4610	7760	1780	579	149	163	180	1430
9	202	2250	5940	3400	4500	9000	1780	566	151	167	183	1390
10	197	1910	5670	3260	4640	15900	1820	565	151	165	207	1670
11	174	1390	5120	3500	4040	18000	1790	530	151	166	210	1410
12	142	2390	4400	3250	4120	18000	1770	498	151	179	198	1270
13	138	6050	3070	3220	3620	18100	1400	486	151	172	175	970
14	141	7140	2470	3560	3320	17600	1460	218	151	161	196	919
15	141	8410	2570	3700	3200	14800	1760	151	157	146	182	788
16	140	6690	2310	3850	3260	11700	2010	157	174	180	153	502
17	140	6240	2170	3920	4130	10300	2270	198	152	162	246	563
18	133	6120	2090	3440	4260	7470	2140	722	140	165	678	552
19	129	6080	2180	2830	3890	6080	2320	744	179	171	1280	497
20	136	5550	2240	3060	3830	5810	1950	508	165	166	1390	565
21	138	5830	2470	3530	3760	5360	1810	221	155	176	1190	1340
22	136	3480	2580	3180	4610	5370	1760	168	149	167	592	2570
23	125	3850	2650	3710	5200	6070	1500	162	159	156	535	2960
24	127	3410	3180	3480	4930	6140	1340	160	156	287	522	2810
25	126	2680	3900	3440	4700	6370	1240	159	155	226	398	1140
26	178	2090	3730	3040	4580	5760	1230	160	156	181	217	1010
27	1340	1470	3710	2970	5340	5160	1230	156	156	170	169	937
28	2570	1660	3740	2840	5360	3770	984	121	156	171	161	617
29	2780	3170	4000	2920	---	2980	925	155	163	177	174	2150
30	2670	4290	4190	2910	---	2080	988	158	165	177	175	14200
31	2490	---	5110	3010	---	1240	---	159	---	175	175	---
MEAN	597	4021	4076	3477	4316	7833	1623	426	155	173	352	1994
MAX	2780	8410	6680	5410	5360	18100	2870	1010	179	287	1390	14200
MIN	125	1390	2090	2300	2830	1240	627	121	140	146	153	175
IN.	.41	2.64	2.77	2.36	2.64	5.31	1.07	.29	.10	.12	.24	1.31

02330000 OCHLOCKONEE RIVER NEAR BLOXHAM, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1998, BY WATER YEAR (WY)

MEAN	992	793	1364	2085	2923	3373	2867	1385	1193	1304	1494	1289
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	361	172	102	115	194	120
(WY)	1955	1955	1959	1935	1957	1955	1927	1927	1955	1952	1990	1958

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1926 - 1998	
ANNUAL MEAN	1970		2410		1724	
HIGHEST ANNUAL MEAN					4516	1948
LOWEST ANNUAL MEAN					315	1955
HIGHEST DAILY MEAN	8410	Nov 15	18100	Mar 13	73200	Sep 23 1969
LOWEST DAILY MEAN	125	Oct 23	121	May 28	1.2	Nov 1 1957
ANNUAL SEVEN-DAY MINIMUM	131	Oct 19	131	Oct 19	2.6	Sep 26 1958
INSTANTANEOUS PEAK FLOW			19900	Sep 30	89400	Sep 25 1969
INSTANTANEOUS PEAK STAGE			22.00	Sep 30	29.20	Sep 23 1969
INSTANTANEOUS LOW FLOW			52	May 28	1.0	Nov 1 1957
ANNUAL RUNOFF (INCHES)	15.73		19.25		13.78	
10 PERCENT EXCEEDS	4790		5600		4210	
50 PERCENT EXCEEDS	1470		1460		1030	
90 PERCENT EXCEEDS	204		153		157	

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.

DRAINGAGE 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	1020	978	185	163	735	167	108	121	49	107	55
2	72	1480	632	170	230	431	166	105	103	52	108	92
3	66	1560	373	162	771	279	195	104	77	67	111	2610
4	62	807	282	159	1590	210	293	103	66	62	193	3230
5	59	404	244	158	962	185	266	97	61	51	303	947
6	58	248	220	159	518	188	176	92	57	47	393	439
7	56	197	199	201	353	504	158	90	55	45	464	229
8	54	184	189	462	269	4480	151	88	54	43	488	172
9	53	186	191	785	226	4750	160	86	53	43	431	153
10	52	170	198	610	205	2270	176	84	56	45	188	140
11	51	155	194	318	209	1000	163	81	57	44	154	129
12	50	216	187	221	278	648	143	78	53	42	118	124
13	50	1630	188	243	319	489	135	75	50	48	88	122
14	51	3420	229	343	241	407	131	73	49	73	78	116
15	52	2230	301	441	199	360	130	70	47	150	106	108
16	52	988	309	476	245	331	130	68	46	205	148	105
17	53	566	226	570	505	308	129	66	45	144	154	112
18	53	391	189	417	836	309	131	66	44	141	131	117
19	54	314	176	284	598	347	145	65	43	127	102	130
20	53	275	170	240	346	400	204	64	42	121	95	127
21	51	254	163	212	248	391	238	61	55	134	142	147
22	49	285	164	200	252	320	166	60	87	211	132	246
23	48	336	180	353	491	264	135	59	62	192	138	331
24	66	306	268	549	683	231	124	58	55	241	108	279
25	153	239	437	498	444	210	117	57	65	311	90	188
26	206	204	540	304	276	196	112	56	70	176	77	157
27	679	192	374	230	394	188	109	56	84	175	69	167
28	1320	185	254	212	748	181	107	56	64	105	64	186
29	692	242	227	202	---	176	106	55	57	106	60	308
30	301	567	228	182	---	172	107	56	51	153	57	3710
31	251	---	214	170	---	170	---	97	---	138	56	---
MEAN	160	642	281	313	450	682	156	75.3	61.0	114	160	499
MAX	1320	3420	978	785	1590	4750	293	108	121	311	488	3710
MIN	48	155	163	158	163	170	106	55	42	42	56	55
IN.	1.46	5.68	2.58	2.87	3.72	6.24	1.38	.69	.54	1.05	1.46	4.42

02330100 TELOGIA CREEK NEAR BRISTOL, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1998, BY WATER YEAR (WY)

MEAN	178	166	204	267	310	340	242	167	175	212	219	218
MAX	867	642	749	766	812	1100	615	788	605	510	726	1269
(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	61.2	57.3	44.0	48.3	47.0	38.4
(WY)	1955	1991	1991	1989	1957	1955	1985	1968	1955	1968	1954	1954

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1950 - 1998	
ANNUAL MEAN	220		298		224	
HIGHEST ANNUAL MEAN					478	1965
LOWEST ANNUAL MEAN					87.9	1968
HIGHEST DAILY MEAN	3420	Nov 14	4750	Mar 9	16600	Sep 22 1969
LOWEST DAILY MEAN	48	Oct 23	42	Jun 20	28	Sep 14 1954
ANNUAL SEVEN-DAY MINIMUM	51	Oct 10	44	Jul 6	31	Oct 22 1954
INSTANTANEOUS PEAK FLOW			6800	Mar 8	20600	Sep 22 1969
INSTANTANEOUS PEAK STAGE			10.77	Mar 8	16.65	Sep 22 1969
INSTANTANEOUS LOW FLOW			41	Jul 13	28	Oct 26 1954
ANNUAL RUNOFF (INCHES)	23.72		32.08		24.17	
10 PERCENT EXCEEDS	415		544		445	
50 PERCENT EXCEEDS	133		170		134	
90 PERCENT EXCEEDS	62		54		62	

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.--No estimated daily discharges. Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	930	3090	3310	4230	2880	5980	2170	1180	292	278	748	307
2	1160	3270	3820	4470	3020	5520	1590	1170	296	269	789	363
3	1220	3420	3920	4480	3950	5120	1250	1090	300	268	856	3410
4	1090	3880	5050	4000	5700	4980	1120	982	309	267	769	8670
5	761	4960	6110	3640	5970	4560	1520	973	308	263	652	7910
6	442	5160	6350	3030	5500	4070	2170	865	296	263	561	6730
7	348	4260	6250	2890	5410	4260	2510	812	282	272	503	5210
8	322	3520	6060	3320	5100	8910	2390	790	272	264	447	3860
9	305	2970	5960	4390	4750	21100	2180	729	270	254	407	2880
10	313	2680	5720	4540	4450	20500	2070	687	279	257	395	2180
11	315	2420	5230	3660	4300	24000	2030	664	267	257	389	1930
12	303	2180	4970	3590	4200	25500	2020	635	262	251	376	1780
13	280	2590	4330	3610	3960	23200	1990	600	259	266	372	1590
14	266	5370	3810	3580	3790	21700	1880	569	256	275	371	1320
15	260	8290	3050	3730	3490	20400	1760	452	252	275	380	1120
16	257	10800	2770	3980	3400	17200	1790	361	248	306	363	987
17	263	9940	2660	4110	3750	13400	1970	334	254	333	354	865
18	262	7650	2530	4100	4210	11500	2120	345	248	361	392	797
19	257	6650	2430	3880	4540	8670	2240	545	241	372	600	771
20	251	6070	2400	3450	4320	7120	2270	673	242	386	910	804
21	250	5500	2410	3070	4120	6400	2270	593	281	389	1180	1010
22	251	5540	2510	3280	4300	5660	2130	433	271	388	1250	1570
23	250	4760	2600	3490	4820	5190	2040	337	262	431	984	2230
24	246	3880	2740	3660	5520	5450	1920	311	270	506	834	2710
25	261	3590	3010	3840	5620	5740	1780	301	281	612	764	3020
26	277	3140	3540	3650	5010	5800	1620	295	283	655	674	2360
27	416	2760	3830	3460	4850	5580	1530	291	302	649	515	1870
28	997	2300	3760	3240	5340	4990	1480	287	301	654	405	1610
29	1760	2090	3740	3080	---	4180	1350	277	291	640	351	1900
30	2340	2420	3810	2960	---	3280	1210	273	287	715	331	6810
31	2770	---	3880	2900	---	2740	---	286	---	750	317	---
MEAN	627	4505	3954	3655	4510	10090	1879	585	275	391	588	2619
MAX	2770	10800	6350	4540	5970	25500	2510	1180	309	750	1250	8670
MIN	246	2090	2400	2890	2880	2740	1120	273	241	251	317	307
CFSM	.30	2.17	1.90	1.76	2.17	4.85	.90	.28	.13	.19	.28	1.26
IN.	.35	2.42	2.19	2.03	2.26	5.59	1.01	.32	.15	.22	.33	1.41

02330150 OCHLOCKONEE RIVER NEAR SMITH CREEK, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1998, BY WATER YEAR (WY)

MEAN	1412	2527	2804	2696	4002	6163	1694	1271	880	922	975	1323
MAX	2197	4505	3954	3655	4510	10090	1879	1956	1484	1453	1361	2619
(WY)	1997	1998	1998	1998	1998	1998	1998	1997	1997	1997	1997	1998
MIN	627	548	1653	1737	3494	2239	1509	585	275	391	588	353
(WY)	1998	1997	1997	1997	1997	1997	1997	1998	1998	1998	1998	1997

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1996 - 1998	
ANNUAL MEAN	2045		2798		2228	
HIGHEST ANNUAL MEAN					2798	1998
LOWEST ANNUAL MEAN					1658	1997
HIGHEST DAILY MEAN	10800	Nov 16	25500	Mar 12	25500	Mar 12 1998
LOWEST DAILY MEAN	246	Oct 24	241	Jun 19	241	Jun 19 1998
ANNUAL SEVEN-DAY MINIMUM	252	Oct 19	249	Jun 14	249	Jun 14 1998
INSTANTANEOUS PEAK FLOW			26100	Mar 11	26100	Mar 11 1998
INSTANTANEOUS PEAK STAGE			17.69	Mar 11	17.69	Mar 11 1998
INSTANTANEOUS LOW FLOW			236	Jun 19	236	Jun 19 1998
ANNUAL RUNOFF (CFSM)	.98		1.35		1.07	
ANNUAL RUNOFF (INCHES)	13.35		18.26		14.55	
10 PERCENT EXCEEDS	4330		5640		4680	
50 PERCENT EXCEEDS	1710		1930		1400	
90 PERCENT EXCEEDS	319		271		303	

02330400 NEW RIVER NEAR SUMATRA, FL

LOCATION.--Lat 30°02'19", long 84°50'38", in SE¼ sec16, 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, FL.

DRAINAGE AREA.--157 mi^2.

PERIOD OF RECORD.-November 1964 to October 1986 (annual maximum discharge and gage-height), December 1996 to September 1998.

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 discharges for periods of no gage-height record. Records poor. Partial records published only due to variable equipment failure and vandalism.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,670 ft^3/s, Sept. 23, 1969, gage height 27.38 ft; minimum discharge, no flow, many days each year.

EXTREMES FOR CURRENT YEAR.--1997 water year: Maximum discharge, 1,570 ft^3/s, Aug. 5, gage height 22.00 ft; minimum discharge, no flow, Sept. 11.

1998 water year: Maximum discharge, 1,770 ft^3/s, Sept. 6, gage height 22.36 ft; minimum discharge, no flow many days in June and July.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	1300	239	518	421	33
2	---	---	---	---	---	---	---	1270	209	564	681	38
3	---	---	---	---	---	---	---	1150	179	538	1080	37
4	---	---	---	---	---	214	---	990	148	500	1460	42
5	---	---	---	---	---	---	---	838	160	551	1560	110
6	---	---	---	---	---	---	---	729	149	524	1450	70
7	---	---	---	---	---	---	---	632	136	468	1320	35
8	---	---	---	---	---	---	---	538	131	433	1320	19
9	---	---	---	---	---	---	---	445	104	378	1250	10
10	---	---	---	---	---	---	---	344	77	317	1150	6.3
11	---	---	855	---	---	---	---	245	52	266	1080	2.8
12	---	---	839	---	---	---	---	176	38	219	1020	---
13	---	---	804	---	---	---	---	137	32	176	979	---
14	---	---	749	---	---	---	---	100	48	164	881	---
15	---	---	689	---	---	---	---	70	56	150	790	---
16	---	---	627	---	---	---	---	48	49	105	713	---
17	---	---	577	---	---	---	---	31	38	67	664	---
18	---	---	537	---	---	---	---	21	33	50	605	---
19	---	---	542	---	---	---	---	15	39	72	527	---
20	---	---	550	---	---	---	---	10	35	185	450	---
21	---	---	565	---	---	---	3.2	8.2	41	205	377	---
22	---	---	577	---	---	---	3.2	30	60	240	306	---
23	---	---	569	---	---	---	7.2	73	99	248	230	---
24	---	---	546	---	---	---	4.8	156	133	244	162	---
25	---	---	514	---	---	---	3.4	159	160	227	112	---
26	---	---	475	---	---	---	32	225	164	238	74	---
27	---	---	432	---	---	---	203	249	164	231	49	---
28	---	---	389	---	---	---	366	285	203	285	33	---
29	---	---	---	---	---	---	651	311	262	295	24	---
30	---	---	---	---	---	---	1060	294	386	274	23	---
31	---	---	---	---	---	---	---	265	---	278	18	---
TOTAL	---	---	---	---	---	---	---	11144.2	3624	9010	20809	---
MEAN	---	---	---	---	---	---	---	359	121	291	671	---
MAX	---	---	---	---	---	---	---	1300	386	564	1560	---
MIN	---	---	---	---	---	---	---	8.2	32	50	18	---
IN.	---	---	---	---	---	---	---	2.64	.86	2.13	4.93	---

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	110	---	---	405	---	---	2.4	---	.45	241	65
2	---	117	---	---	417	---	---	2.2	---	.43	235	129
3	---	141	---	---	646	---	---	2.1	---	.37	221	620
4	---	153	---	---	894	562	---	2.4	---	.28	234	1250
5	---	---	---	---	1130	---	---	2.7	.00	.19	270	1710
6	---	---	---	222	1200	---	---	2.6	.40	.06	271	1730
7	---	---	---	---	1160	---	---	2.3	.53	.02	253	1620
8	---	---	---	---	1050	---	---	2.0	.42	.00	265	1480
9	---	---	---	---	919	---	---	1.9	.30	.05	309	1340
10	---	---	---	525	809	---	---	1.9	.19	.31	351	1170
11	---	---	---	550	722	---	---	1.7	.06	.25	386	995
12	---	---	---	564	646	---	---	1.4	.00	.12	376	838
13	---	---	---	559	577	---	---	1.2	.00	.05	346	724
14	---	---	---	573	521	---	---	1.2	.00	.11	310	618
15	---	---	---	598	475	---	---	1.0	.00	.09	289	519
16	---	---	---	662	462	---	---	.94	.00	.15	273	427
17	.46	---	---	694	---	---	---	.88	.00	.39	264	370
18	---	---	---	693	---	---	---	.82	.00	.25	260	405
19	---	---	---	688	---	---	---	.69	.00	.20	303	449
20	.51	---	---	662	---	---	---	.57	.00	.23	393	504
21	.74	---	---	599	---	---	---	.46	.00	.24	436	620
22	.63	---	---	561	---	---	---	---	.00	.76	434	706
23	.47	---	---	584	---	---	---	---	.36	1.8	424	791
24	.48	---	---	627	755	---	---	---	1.4	1.8	395	902
25	.89	---	---	645	---	---	---	---	1.2	23	350	943
26	1.2	---	---	638	---	---	---	---	1.1	109	293	927
27	12	---	---	598	---	---	2.5	---	.98	161	231	856
28	13	---	---	585	---	---	2.6	---	.90	212	174	783
29	16	---	---	562	---	---	2.5	---	.78	226	129	754
30	30	---	---	514	---	---	2.5	---	.62	215	95	1110
31	44	---	---	460	---	---	---	---	---	213	72	---
TOTAL	---	---	---	---	---	---	---	---	---	1167.60	8883	25355
MEAN	---	---	---	---	---	---	---	---	---	37.7	287	845
MAX	---	---	---	---	---	---	---	---	---	226	436	1730
MIN	---	---	---	---	---	---	---	---	---	.00	72	65
IN.	---	---	---	---	---	---	---	---	---	.28	2.10	6.01

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.

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6810	13700	50700	68300	44000	60500	31800	26000	22300	16000	9450	8410
2	7350	15000	52000	61600	44100	55300	e29500	28200	20800	16500	9600	8430
3	8460	14300	52000	57100	49500	56600	27200	27100	20500	15200	11800	16300
4	9460	13800	46900	43500	63800	54700	30800	25400	18100	16100	12100	24000
5	9620	13800	44100	33800	85000	54100	31700	33200	13900	15800	11800	17900
6	9660	14100	45000	29800	99600	54300	33300	39500	13300	15600	11600	15200
7	9850	15000	41900	37700	102000	62200	38900	40400	13100	17500	11300	15000
8	9560	17100	34600	51000	98700	90700	40100	40300	13100	16200	11100	20000
9	9520	17100	29000	63800	91200	132000	e40400	41400	12900	e16200	11300	20800
10	9550	16000	24700	62100	80500	183000	40600	41800	12900	e16300	13400	19200
11	12500	14300	21900	62000	71100	217000	50000	40400	12900	e16400	13700	16100
12	12800	14200	26500	59000	68600	227000	53800	36800	12800	e16300	13200	14800
13	12900	19100	31500	56600	67600	217000	52900	39100	12500	e16200	13200	13800
14	12300	29100	31400	56200	61300	177000	45000	e40800	12400	e16200	14300	12900
15	12100	30500	34100	56200	50800	140000	40800	e40200	12100	16000	16000	12500
16	12300	31000	42500	51900	49100	120000	43300	e37000	11700	15800	16200	10700
17	12300	31700	48600	46700	52300	103000	54400	e30000	10300	15700	16000	8610
18	12300	31400	50900	45900	64600	94000	61800	e26000	9270	15400	15000	8130
19	12400	29300	51900	45700	68400	91600	62900	25100	9200	13200	14800	8200
20	12400	24400	47200	45400	70700	79700	63100	25400	9730	10900	14400	8130
21	12400	20500	38200	45300	61800	68900	63100	e21200	9830	8940	13200	9190
22	12300	17300	35400	45300	63800	66300	63500	16800	9740	8510	12100	13100
23	12300	18400	33900	45500	70400	63800	63300	14500	9710	8480	11400	13600
24	12400	20100	43200	45800	65300	58500	62100	14300	11100	8510	11300	13000
25	12600	17900	74500	45800	62800	53700	56700	14200	11400	8400	11300	12900
26	12800	15700	101000	46300	58800	49400	46300	16000	12800	8480	11300	13000
27	13700	16700	110000	48400	58400	43800	37600	20300	12600	8420	11300	12900
28	13700	16700	103000	50800	60600	40300	27700	23800	11900	8480	11200	12900
29	13300	14900	90000	47900	---	32200	25400	23500	13000	8390	11300	18700
30	13100	26800	83400	44600	---	25800	24400	22600	14300	9380	11300	38500
31	13200	---	81600	44200	---	27900	---	22600	---	9580	9920	---
MEAN	11480	19660	51660	49810	67310	90330	44750	28840	13010	13200	12450	14560
MAX	13700	31700	110000	68300	102000	227000	63500	41800	22300	17500	16200	38500
MIN	6810	13700	21900	29800	44000	25800	24400	14200	9200	8390	9450	8130
IN.	.77	1.28	3.46	3.34	4.08	6.06	2.90	1.93	.84	.88	.83	.94

02358000 APALACHICOLA RIVER AT CHATTAHOOCHEE, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1998, BY WATER YEAR (WY)

MEAN	12650	13480	20710	28450	34550	41690	34850	22250	16680	17070	15200	12360
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	13980	9534	7148	6510	4750	6092
(WY)	1955	1932	1982	1956	1989	1955	1986	1986	1941	1988	1988	1954

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1929 - 1998	
ANNUAL MEAN	23570		34620		22440	
HIGHEST ANNUAL MEAN					35680	1929
LOWEST ANNUAL MEAN					11280	1955
HIGHEST DAILY MEAN	110000	Dec 27	227000	Mar 12	291000	Mar 20 1929
LOWEST DAILY MEAN	6250	Sep 28	6810	Oct 1	3900	Nov 15 1987
ANNUAL SEVEN-DAY MINIMUM	6790	Sep 25	8450	Jul 23	4530	Aug 10 1988
INSTANTANEOUS PEAK FLOW			211000	Mar 11	293000	Mar 20 1929
INSTANTANEOUS PEAK STAGE			76.56	Mar 12	79.55	Mar 20 1929
INSTANTANEOUS LOW FLOW			5640	Oct 2	2570	Aug 6 1986
ANNUAL RUNOFF (INCHES)	18.60		27.33		17.73	
10 PERCENT EXCEEDS	46200		64900		44200	
50 PERCENT EXCEEDS	17900		22600		16400	
90 PERCENT EXCEEDS	12500		9890		8960	

e Estimated

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40.53	44.29	57.00	60.82	56.03	59.50	50.95	49.66	48.17	44.84	42.10	41.51
2	40.85	44.94	57.52	59.69	56.08	58.59	---	50.49	47.55	---	42.18	41.52
3	41.54	44.62	57.52	58.90	57.38	58.83	49.31	50.07	47.41	45.04	43.37	45.51
4	42.11	44.37	56.99	55.77	60.05	58.47	51.85	49.42	46.37	45.45	43.50	48.87
5	42.20	44.36	55.30	52.55	63.33	58.38	49.94	52.34	44.41	45.31	43.38	46.29
6	42.22	44.49	55.30	51.10	65.33	58.40	52.97	54.53	44.10	44.67	43.25	45.04
7	42.32	44.94	55.26	53.87	65.63	59.74	53.69	54.84	44.02	---	43.12	44.96
8	42.16	45.90	53.31	57.77	65.21	64.10	53.79	54.80	44.02	45.50	43.01	47.19
9	42.14	45.93	50.44	60.08	64.21	69.11	---	55.18	43.91	---	43.08	47.52
10	42.16	45.42	49.46	59.80	62.68	73.83	53.88	55.33	43.90	---	44.19	46.84
11	43.73	44.61	47.40	59.77	61.27	75.92	57.61	54.85	43.91	---	44.30	45.44
12	43.89	44.56	50.64	59.25	60.87	76.45	58.32	53.62	43.88	---	44.07	44.83
13	43.91	46.78	51.08	58.82	60.71	75.89	58.14	53.42	43.70	---	44.05	44.36
14	43.63	50.83	51.08	58.75	59.63	73.42	56.29	---	43.68	---	44.62	43.90
15	43.52	51.37	52.89	58.76	57.75	69.98	54.99	---	43.49	45.40	45.42	43.70
16	43.61	51.54	56.03	57.95	57.42	67.84	55.79	---	43.32	45.32	45.48	42.75
17	43.61	51.81	56.71	56.91	58.02	65.77	58.38	---	42.57	45.26	45.39	41.63
18	43.64	51.70	57.27	56.66	60.21	64.58	59.75	---	42.00	45.12	44.96	41.35
19	43.65	50.91	57.27	56.58	60.83	64.26	59.93	48.53	41.96	44.08	44.86	41.38
20	43.66	49.01	57.21	56.48	61.20	62.56	59.96	58.75	42.26	42.88	44.65	41.34
21	43.66	47.41	54.54	56.46	59.74	60.91	59.97	46.41	42.31	41.81	44.07	41.93
22	43.61	46.01	52.74	56.44	60.07	60.49	60.02	45.77	42.26	41.57	43.49	44.02
23	43.62	46.46	52.74	56.52	61.15	60.09	60.00	44.69	42.24	41.55	43.14	44.26
24	43.66	47.24	57.93	56.62	60.34	59.16	59.80	44.59	42.99	41.57	43.11	43.99
25	43.75	46.25	63.95	56.63	59.90	58.30	58.83	44.58	43.16	41.50	43.09	43.94
26	43.85	45.25	65.99	56.78	59.22	57.45	56.65	45.42	43.85	41.55	43.08	43.96
27	44.32	45.75	66.27	57.27	59.14	55.95	53.86	47.28	43.77	41.52	43.09	43.91
28	44.31	45.75	66.27	57.76	59.53	54.82	50.32	48.79	43.40	41.55	43.07	43.91
29	44.12	44.88	64.18	57.12	---	51.95	49.43	48.66	43.94	41.50	43.09	46.45
30	44.04	49.96	62.74	56.23	---	49.56	49.01	48.28	44.62	42.06	43.11	54.16
31	44.08	---	62.29	56.10	---	49.56	---	48.28	---	42.18	42.35	---
MEAN	43.16	46.91	56.62	57.23	60.46	62.38	---	---	43.91	---	43.67	44.55
MAX	44.32	51.81	66.27	60.82	65.63	76.45	---	---	48.17	---	45.48	54.16
MIN	40.53	44.29	47.40	51.10	56.03	49.56	---	---	41.96	---	42.10	41.34

WATER-QUALITY RECORDS

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

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

WATER-QUALITY DATA

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SEDIMENT, SUSPENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
			NOV 1997			
12...	0922	865	14000	44.44	16	70
12...	0925	865	14000	44.43	9	86
12...	0930	1030	14000	44.43	8	94
12...	0933	1030	14000	44.43	12	81
12...	0938	1140	14000	44.44	12	85
12...	0942	1140	14000	44.44	10	83
12...	0949	1200	14000	44.44	10	88
12...	0953	1200	14000	44.44	9	80
12...	1001	1290	14000	44.45	8	100
12...	1006	1290	14000	44.45	5	94
			DEC			
15...	1150	825	27800	50.35	14	100
15...	1155	825	27800	50.35	13	100
15...	1200	985	27800	50.35	12	100
15...	1205	985	27900	50.37	10	100
15...	1208	1120	27900	50.39	13	100
15...	1211	1120	27900	50.40	12	100
15...	1214	1200	28000	50.41	13	98
15...	1216	1200	28000	50.43	12	100
15...	1220	1300	28100	50.45	10	100
15...	1222	1300	28100	50.46	11	98
			JAN 1998			
09...	1050	740	65000	60.28	16	97
09...	1053	740	64900	60.27	20	91
09...	1100	898	64700	60.24	14	100
09...	1104	898	64700	60.23	21	98
09...	1110	1040	64600	60.22	19	100
09...	1114	1040	64600	60.21	18	100
09...	1119	1070	64500	60.20	17	100
09...	1122	1070	64500	60.20	17	100
09...	1127	1300	64400	60.19	20	95
09...	1131	1300	64400	60.19	23	96
			APR			
20...	1125	745	63000	59.95	28	90
20...	1127	745	63000	59.95	28	98
20...	1129	905	63000	59.95	30	88
20...	1131	905	63000	59.95	28	92
20...	1133	1050	63000	59.95	25	96
20...	1135	1050	63000	59.95	23	95
20...	1137	1170	63000	59.95	23	96
20...	1139	1170	63000	59.95	27	84
20...	1141	1300	63000	59.95	26	90
20...	1142	1300	63000	59.95	29	86

02358000 APALACHICOLA RIVER AT CHATTAHOOCHEE, FL--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998--Continued

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK) (00009)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	SEDIMENT, SUSPENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
			JUN			
12...	1317	880	13100	44.02	9	90
12...	1319	880	13100	44.02	11	83
12...	1324	1030	13100	44.01	10	86
12...	1333	1140	13100	44.02	13	77
12...	1344	1200	13100	44.01	20	54
12...	1349	1200	13100	44.01	10	86
12...	1352	1290	13100	44.01	11	83
12...	1356	1290	13100	44.01	11	85
			AUG			
26...	1000	886	11400	43.13	20	90
26...	1002	886	11400	43.13	11	90
26...	1005	1040	11400	43.14	26	99
26...	1007	1040	11400	43.14	14	66
26...	1009	1150	11400	43.15	4	100
26...	1011	1150	11400	43.15	3	100
26...	1013	1200	11400	43.16	3	100
26...	1015	1200	11400	43.16	3	100
26...	1017	1290	11400	43.16	6	96
26...	1019	1290	11400	43.16	5	88

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.--1997 Water Year: Maximum daily discharge, 64,300 ft^3/s, Feb. 26, gage height, 19.80 ft; minimum daily, 7,210 ft^3/s, Sept. 29.

1998 water year: Maximum daily discharge, 266,000 ft^3/s, mar. 13, gage height, 27.23 ft; minimum daily, 7,390 ft^3/s, Oct. 1.

DISCHARGE, MAIN CHANNEL ONLY, CUBIC FEET PER SECOND, WATER YEAR
OCTOBER 1996 TO SEPTEMBER 1997, DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9900	13300	13700	14000	35900	59200	18500	53800	14600	23500	15900	13300
2	9790	12500	13900	e14100	34700	57000	18700	50800	14500	24100	17100	13300
3	10100	10400	13800	14200	30300	55400	18700	43900	15000	25400	16000	13200
4	12700	9620	14700	15700	26300	55100	18600	36700	16200	27000	15400	13200
5	14900	9460	17700	16700	25000	55600	18600	33300	18700	27700	14900	12900
6	15500	9450	21600	17000	24700	59100	18500	31900	20700	26300	14600	12700
7	16300	9490	e20800	17100	24400	60100	18500	29300	22000	24200	14500	13000
8	18500	9540	e20000	17400	24400	55500	18400	25400	21100	20900	14300	13100
9	17800	9540	e19500	19300	24400	50600	18300	22400	18800	18300	14100	13200
10	15200	9510	19200	31300	24400	48000	18300	22400	18100	16900	14600	13200
11	13500	9480	16100	39500	24500	46400	18400	22300	17900	16200	14400	13100
12	13400	9450	15200	44000	24300	42200	18600	22000	17900	15500	13900	13100
13	14000	9620	14800	42300	24000	34100	18700	20900	16900	15200	14000	13200
14	14100	12400	14100	40900	25400	30400	18600	20300	15400	15100	13900	13200
15	14100	13400	12900	40100	33900	29100	18600	19200	14900	15000	13900	13200
16	14200	12000	13700	38600	43800	28000	20000	18800	14700	15000	14000	13100
17	14100	11600	15100	37100	50600	25400	18900	18600	14600	14900	13900	13100
18	14100	11300	15500	33800	58800	24200	17000	18600	14900	15000	13800	13200
19	14000	e11800	15500	30900	61100	23600	16400	18400	16300	15100	13800	13100
20	14000	12400	15600	29900	57100	23900	16300	18400	20100	15100	13600	12400
21	14000	13400	15600	27000	52100	25100	15700	18400	26300	15200	13300	11400
22	14000	13600	15500	24500	50600	25500	14400	18400	30100	15700	13400	8680
23	14100	13500	15400	24000	52500	25600	14000	e18400	30000	15600	13500	8110
24	14100	13600	15100	23000	57000	25800	11900	18500	26200	15200	13500	7760
25	14000	13600	14700	23000	62400	25200	10600	18900	22100	15100	13400	7690
26	13900	13700	14700	26500	64300	22600	10100	18400	19600	14900	13400	8070
27	14000	13600	14800	29100	62100	21500	10900	15700	18900	14700	13400	8090
28	13900	13600	14800	30700	60400	21200	13900	14100	20200	e14700	13300	7620
29	13700	13600	14900	34300	---	19700	26900	13700	22900	14700	13300	7210
30	13400	13600	14700	35600	---	18800	45500	13800	23500	14800	13400	7490
31	13300	---	14100	35900	---	18600	---	14400	---	14900	13400	---
MEAN	13950	11740	15730	27980	40690	35890	18020	23550	19440	17800	14130	11460
MAX	18500	13700	21600	44000	64300	60100	45500	53800	30100	27700	17100	13300
MIN	9790	9450	12900	14000	24000	18600	10100	13700	14500	14700	13300	7210
IN.	.91	.74	1.03	1.83	2.41	2.35	1.14	1.54	1.23	1.17	.93	.73

CAL YR 1996 MEAN 21870 MAX 79200 MIN 7550 IN. 16.92
WTR YR 1997 MEAN 20760 MAX 64300 MIN 7210 IN. 16.02

e Estimated

02358700 APALACHICOLA RIVER NEAR BLOUNTSTOWN, FL--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.94	5.94	6.16	6.31	14.83	19.20	8.50	18.43	6.61	10.61	7.28	5.95
2	3.87	5.50	6.23	e6.35	14.48	18.91	8.59	17.95	6.56	10.84	7.86	5.92
3	4.05	4.23	6.21	6.38	13.10	18.68	8.59	16.70	6.80	11.31	7.33	5.89
4	5.60	3.77	6.64	7.16	11.67	18.63	8.55	15.05	7.42	11.91	7.00	5.87
5	6.74	3.66	8.11	7.66	11.18	18.70	8.54	14.10	8.59	12.19	6.76	5.73
6	7.05	3.65	9.83	7.80	11.05	19.19	8.50	13.62	9.46	11.65	6.62	5.58
7	7.47	3.68	e9.48	7.86	10.94	19.31	8.48	12.73	9.99	10.85	6.54	5.79
8	8.50	3.71	e9.13	7.98	10.94	18.70	8.43	11.31	9.60	9.55	6.47	5.84
9	8.16	3.71	e8.92	8.83	10.96	17.92	8.41	10.16	8.62	8.38	6.36	5.86
10	6.93	3.69	8.78	13.42	10.96	17.50	8.40	10.15	8.29	7.76	6.60	5.86
11	6.05	3.67	7.36	15.73	11.00	17.19	8.43	10.12	8.23	7.40	6.50	5.80
12	5.96	3.65	6.93	16.71	10.91	16.34	8.54	10.00	8.20	7.05	6.24	5.81
13	6.32	3.76	6.73	16.35	10.79	14.32	8.56	9.54	7.73	6.93	6.32	5.86
14	6.35	5.45	6.36	16.06	11.32	13.14	8.52	9.27	7.00	6.85	6.26	5.86
15	6.36	6.00	5.37	15.90	14.27	12.67	8.51	8.80	6.76	6.85	6.25	5.86
16	6.38	5.23	6.13	15.52	16.66	12.28	9.16	8.63	6.66	6.81	6.28	5.84
17	6.35	4.95	6.86	15.14	17.92	11.34	8.67	8.54	6.62	6.75	6.23	5.83
18	6.33	4.77	7.08	14.23	19.15	10.86	7.77	8.52	6.76	6.80	6.19	5.89
19	6.32	e5.11	7.08	13.29	19.43	10.65	7.50	8.47	7.46	6.86	6.17	5.82
20	6.32	5.44	7.11	12.97	18.92	10.73	7.48	8.45	9.19	6.88	6.07	5.43
21	6.32	6.00	7.10	11.92	18.17	11.22	7.18	8.43	11.65	6.91	5.93	4.83
22	6.32	6.10	7.05	10.98	17.93	11.37	6.53	8.43	13.01	7.16	5.98	3.14
23	6.35	6.06	7.00	10.77	18.22	11.41	6.31	e8.46	13.00	7.12	6.05	2.74
24	6.33	6.07	6.89	10.41	18.91	11.47	5.12	8.49	11.62	6.93	6.02	2.49
25	6.28	6.11	6.68	10.38	19.58	11.24	4.36	8.66	10.01	6.87	6.00	2.44
26	6.27	6.15	6.68	11.72	19.80	10.25	4.05	8.45	9.98	6.74	5.98	2.71
27	6.28	6.12	6.71	12.68	19.55	9.80	4.56	7.15	8.68	6.68	5.97	2.73
28	6.25	6.09	6.70	13.23	19.34	9.65	6.23	6.38	9.23	e6.68	5.95	2.39
29	6.13	6.09	6.77	14.37	---	9.02	11.89	6.13	10.35	6.68	5.95	2.08
30	6.00	6.08	6.67	14.74	---	8.62	17.02	6.18	10.61	6.72	5.96	2.29
31	5.94	---	6.34	14.83	---	8.52	---	6.53	---	6.74	5.96	---
TOTAL	193.52	150.44	221.09	367.68	421.98	428.83	241.38	313.83	264.69	249.46	197.08	144.13
MEAN	6.24	5.01	7.13	11.86	15.07	13.83	8.05	10.12	8.82	8.05	6.36	4.80
MAX	8.50	6.15	9.83	16.71	19.80	19.31	17.02	18.43	13.01	12.19	7.86	5.95
MIN	3.87	3.65	5.37	6.31	10.79	8.52	4.05	6.13	6.56	6.68	5.93	2.08

CAL YR 1996 TOTAL 3273.29 MEAN 8.94 MAX 21.22 MIN 2.34
WTR YR 1997 TOTAL 3194.11 MEAN 8.75 MAX 19.80 MIN 2.08

e Estimated

DISCHARGE, MAIN CHANNEL ONLY, CUBIC FEET PER SECOND, WATER YEAR
OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES
DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7390	15000	38600	76400	50000	68100	31600	27700	25200	15800	10300	9650
2	7430	16600	46000	73700	50500	65600	30100	29700	23900	e15800	10300	9620
3	8540	16700	50000	68600	53400	63900	28500	30400	23100	15900	11400	16400
4	9280	15400	50300	61900	60200	62900	29500	28500	22000	16500	12600	25300
5	9870	15000	46000	48500	72000	61800	29900	31200	17500	16800	12700	22300
6	9980	14900	44500	38500	93700	61300	32700	38000	15600	16000	12300	18100
7	10000	15400	43500	37200	109000	63800	38100	42600	15000	16600	12200	16600
8	10100	17400	38200	50600	113000	84500	39700	43300	14900	16900	12000	19500
9	9870	18200	31100	58100	108000	113000	40400	44600	14700	16800	12000	22000
10	9870	17900	27300	62600	98900	170000	40600	45700	14500	16800	13200	21800
11	11200	16100	22300	63300	86600	228000	44100	45900	14400	16800	14400	18900
12	13000	15500	22100	63100	78900	259000	51300	43500	14400	17000	14200	16700
13	13200	19600	28100	61600	75600	266000	55700	39600	14000	17000	13900	15700
14	13100	28800	30300	60500	73500	247000	53900	33800	13800	17000	14400	14300
15	12500	33500	29900	60200	65500	201000	48200	31000	13600	17100	16400	13900
16	12800	34300	34800	59800	60200	158000	46000	26500	13100	16900	17200	12800
17	12900	35900	42500	55500	59000	128000	50400	25400	12500	16700	17300	10400
18	13000	36400	46600	52400	64200	110000	58300	25500	10600	16700	16500	9370
19	13000	36000	49500	51300	70600	102000	62800	24600	10500	15200	16000	9160
20	13000	32600	49800	50800	77400	96300	64300	22100	10500	13200	15800	9110
21	e13000	28800	43900	50500	75500	81800	64400	21400	10900	10700	14800	22000
22	13000	24800	37000	50600	71400	74100	64500	20500	10900	9690	13700	13800
23	12900	23500	35300	51400	74800	70600	64700	17600	10700	9730	12600	14400
24	13100	26200	33800	51400	e74400	66600	64500	16600	11500	9480	12300	14300
25	13200	26300	47800	51500	73700	62300	63200	16300	12200	9490	12100	14100
26	13500	23400	67800	51600	69700	58700	57700	17000	13300	9510	12100	14100
27	15200	23700	93100	52700	67400	54200	49400	20400	13800	9390	12000	14100
28	15300	24400	104000	55000	66800	48800	37400	25000	13100	9390	12000	14200
29	14700	23500	95700	55700	---	42400	31200	26100	13200	9340	11900	16900
30	14200	29200	82700	52900	---	33100	28500	25400	14800	9690	12000	36600
31	14300	---	78300	50800	---	30400	---	25400	---	10400	11500	---
MEAN	12010	23500	48090	55760	74780	104300	46720	29400	14610	14010	13290	16200
MAX	15300	36400	104000	76400	113000	266000	64700	45900	25200	17100	17300	36600
MIN	7390	14900	22100	37200	50000	30400	28500	16300	10500	9340	10300	9110
IN.	.79	1.49	3.15	3.65	4.43	6.83	2.96	1.93	.93	.92	.87	1.03

CAL YR 1997 MEAN 24320 MAX 104000 MIN 7210 IN. 18.76
WTR YR 1998 MEAN 37560 MAX 266000 MIN 7390 IN. 28.97

e Estimated

APALACHICOLA RIVER BASIN

02358700 APALACHICOLA RIVER NEAR BLOUNTSTOWN, FL

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.22	6.80	15.39	20.65	17.16	19.25	13.37	12.19	11.25	7.20	4.17	3.78
2	2.25	7.61	16.95	20.45	17.21	18.98	12.94	12.90	10.74	e7.23	4.18	3.76
3	3.04	7.65	17.63	20.05	17.65	18.81	12.42	13.13	10.42	7.26	4.87	7.53
4	3.54	7.00	17.69	19.29	18.55	18.71	12.78	12.46	9.99	7.54	5.56	11.30
5	3.93	6.84	16.95	17.39	19.76	18.59	12.95	13.36	8.05	7.69	5.58	10.10
6	3.99	6.79	16.67	15.38	21.10	18.56	13.83	15.25	7.12	7.30	5.40	8.30
7	4.02	7.00	16.46	15.04	21.83	18.87	15.27	16.29	6.84	7.59	5.33	7.58
8	4.09	7.99	15.31	17.69	22.00	20.57	15.65	16.44	6.76	7.76	5.21	8.93
9	3.92	8.36	13.34	18.75	21.76	22.00	15.81	16.69	6.68	7.71	5.18	9.99
10	3.92	8.23	12.02	19.30	21.28	24.26	15.87	16.89	6.57	7.69	5.89	9.91
11	4.77	7.38	10.11	19.37	20.63	26.11	16.58	16.93	6.51	7.68	6.49	8.66
12	5.74	7.09	10.04	19.32	20.14	26.97	17.85	16.46	6.49	7.77	6.39	7.65
13	5.87	8.97	12.33	19.12	19.89	27.17	18.50	15.64	6.30	7.77	6.26	7.15
14	5.81	12.57	13.08	18.96	19.71	26.70	18.24	14.15	6.21	7.81	5.63	6.47
15	5.51	14.08	12.96	18.92	18.97	25.39	17.34	13.31	6.09	7.82	7.53	6.23
16	5.66	14.28	14.44	18.84	18.33	23.95	16.95	11.73	5.83	7.73	7.89	5.66
17	5.71	14.72	16.26	18.25	18.16	22.81	17.70	11.33	5.52	7.65	7.95	4.28
18	5.74	14.86	17.07	17.80	18.77	22.04	18.83	11.36	4.40	7.65	7.54	3.60
19	5.75	14.76	17.55	17.61	19.40	21.71	19.39	11.05	4.32	6.90	7.30	3.46
20	5.76	13.81	17.60	17.50	19.89	21.44	19.57	10.05	4.33	5.88	7.21	3.44
21	e5.75	12.58	16.54	17.44	19.73	20.69	19.58	9.72	4.56	4.46	6.71	9.99
22	5.74	11.10	15.02	17.44	19.40	20.16	19.60	9.34	4.56	3.81	6.12	6.18
23	5.73	10.61	14.57	17.54	19.65	19.91	19.62	8.07	4.45	3.83	5.52	6.53
24	5.84	11.61	14.14	17.54	e19.63	19.57	19.61	7.61	4.90	3.67	5.35	6.44
25	5.88	11.66	17.27	17.53	19.60	19.08	19.44	7.47	5.34	3.68	5.27	6.33
26	6.01	10.57	19.98	17.53	19.31	18.66	18.76	7.78	5.91	3.69	5.24	6.37
27	6.92	10.69	21.64	17.67	19.12	18.07	17.53	9.30	6.21	3.62	5.21	6.37
28	6.97	10.93	22.20	17.98	19.08	17.25	15.12	11.17	5.83	3.61	5.19	6.40
29	6.68	10.61	21.78	18.05	---	16.07	13.37	11.58	5.89	3.58	5.17	7.74
30	6.42	12.71	21.09	17.64	---	13.81	12.45	11.34	6.73	3.81	5.19	14.91
31	6.45	---	20.79	17.30	---	12.99	---	11.31	---	4.23	4.89	---
TOTAL	159.63	309.86	504.87	563.34	547.71	639.15	496.92	382.30	194.80	191.62	181.42	215.04
MEAN	5.15	10.33	16.29	18.17	19.56	20.62	16.56	12.33	6.49	6.18	5.85	7.17
MAX	6.97	14.86	22.20	20.65	22.00	27.17	19.62	16.93	11.25	7.82	7.95	14.91
MIN	2.22	6.79	10.04	15.04	17.16	12.99	12.42	7.47	4.32	3.58	4.17	3.44

CAL YR 1997 TOTAL 3603.42 MEAN 9.87 MAX 22.20 MIN 2.08
WTR YR 1998 TOTAL 4386.66 MEAN 12.02 MAX 27.17 MIN 2.22

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	800	1310	2370	3590	2470	3510	2490	1270	923	740	913	614
2	769	2090	2270	3270	2490	3490	2400	1220	907	771	862	701
3	736	1780	2450	2960	3850	3600	2340	1200	872	723	815	2460
4	753	1360	2790	2660	4810	3620	2310	1200	848	701	846	2480
5	723	1130	2940	2410	4750	3470	2260	1260	829	699	824	2190
6	698	976	2870	2370	4720	3320	2160	1280	852	690	784	2030
7	679	1030	2580	2670	5190	4170	2090	1270	832	690	747	2030
8	674	1080	2210	3930	5630	6680	2130	1240	819	686	771	2100
9	669	1020	1970	4240	5650	7510	2380	1180	840	710	763	1960
10	667	947	1840	4200	5120	7210	2430	1120	830	708	769	1580
11	704	885	1720	4300	4450	8320	2370	1080	813	723	802	1260
12	672	1020	1890	4480	4000	12500	2280	1050	803	754	778	1100
13	658	2920	2180	4680	3570	14500	2230	1010	809	790	765	1020
14	647	3350	2480	4480	3280	13200	2060	987	793	855	768	951
15	644	3020	2660	4220	3080	10000	1970	971	775	891	784	930
16	636	2610	2680	4070	3070	7780	1870	948	763	842	773	887
17	641	2400	2650	3840	3540	6070	1810	939	754	822	795	866
18	640	2300	2600	3640	3650	4740	1760	921	754	814	836	863
19	633	2140	2500	3620	3600	4260	1870	909	753	828	866	865
20	624	1840	2380	3710	3880	4240	2170	890	804	879	843	839
21	618	1590	2180	3640	4250	4070	2110	885	799	873	809	949
22	615	1530	2250	3480	4390	3940	1960	870	779	827	792	1430
23	609	1430	2350	3590	4430	3920	1830	849	788	817	747	1660
24	615	1330	2510	3500	4170	3900	1730	845	778	888	706	1620
25	624	1310	2710	3260	3750	3740	1620	853	786	878	704	1620
26	718	1300	2680	3120	3500	3460	1500	842	775	822	670	1690
27	864	1290	2940	3130	3500	3220	1420	852	769	812	646	1630
28	819	1250	3490	3100	3560	2970	1350	838	755	831	630	1480
29	824	1350	3940	2970	---	2780	1310	835	746	845	627	2720
30	859	2190	4070	2800	---	2660	1300	901	738	811	598	6060
31	1070	---	3880	2640	---	2570	---	965	---	838	588	---
MEAN	707	1659	2614	3502	4013	5465	1984	1015	803	792	762	1620
MAX	1070	3350	4070	4680	5650	14500	2490	1280	923	891	913	6060
MIN	609	885	1720	2370	2470	2570	1300	835	738	686	588	614
IN.	1.04	2.37	3.86	5.17	5.35	8.07	2.83	1.50	1.15	1.17	1.13	2.31

02359000 CHIPOLA RIVER NEAR ALTHA, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1998, BY WATER YEAR (WY)

MEAN	1084	971	1255	1817	2177	2434	2126	1364	1248	1284	1210	1163
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1913 - 1998	
ANNUAL MEAN	1670		2068		1512	
HIGHEST ANNUAL MEAN					2977	1948
LOWEST ANNUAL MEAN					613	1955
HIGHEST DAILY MEAN	4140	Jan 14	14500	Mar 13	21000	Sep 19 1926
LOWEST DAILY MEAN	609	Oct 23	588	Aug 31	312	Jun 18 1972
ANNUAL SEVEN-DAY MINIMUM	620	Oct 19	620	Oct 19	336	Oct 27 1968
INSTANTANEOUS PEAK FLOW			14800	Mar 13	25000	Sep 20 1926
INSTANTANEOUS PEAK STAGE			30.73	Mar 13	33.55	Sep 20 1926
INSTANTANEOUS LOW FLOW			582	Aug 30	309	Nov 18 1990
ANNUAL RUNOFF (INCHES)	29.04		35.96		26.30	
10 PERCENT EXCEEDS	2670		4070		2800	
50 PERCENT EXCEEDS	1500		1330		1130	
90 PERCENT EXCEEDS	800		709		630	

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 discharges for periods of no gage height record. 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; gage height, 9.10 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of January 1978 reached a stage of 25.64 ft.

EXTREMES FOR CURRENT YEAR.--1997 Water Year: Maximum discharge, 12,400 ft^3/s, Feb. 28, gage height, 19.44 ft; minimum discharge, 3,670 ft^3/s, Sept. 30.

1998 Water Year: Maximum discharge, 13,200 ft^3/s, Jan. 1, gage height 19.82 ft; minimum discharge 3,470 ft^3/s, Oct. 3.

DISCHARGE, MAIN CHANNEL ONLY, CUBIC FEET PER SECOND, WATER YEAR
OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3950	4660	5380	5930	10300	12300	7520	---	6250	8300	7320	5480
2	3950	4650	5470	5860	10400	12200	7390	---	6190	8410	7710	5460
3	3980	4460	5520	5810	10400	12100	7280	---	6170	8400	8010	5430
4	4070	4080	5590	5830	10300	11900	7230	---	6190	8330	8060	5480
5	4430	3830	5790	6010	10000	11700	7180	---	6340	8210	7920	5360
6	4800	3690	6240	6180	9650	11600	7130	---	6650	8160	7700	5290
7	5390	3610	7360	6320	9350	11500	7110	---	6960	8100	7480	5220
8	6290	3600	8290	6450	9070	11600	7080	---	7230	8050	7230	5220
9	7050	3600	8800	6680	8900	11600	7110	---	7330	8220	7100	5220
10	7190	3610	8800	7070	8780	11400	7130	---	7220	8330	7080	5240
11	6820	3640	8420	7920	8740	11200	7150	---	7050	8110	7110	5240
12	6250	3650	7820	8700	8740	10900	7320	---	6950	7670	7070	5240
13	5900	3670	7160	9520	8760	10700	7330	---	6850	7320	6980	5250
14	5640	3740	6790	10300	8900	10500	7320	---	6690	7040	6820	5250
15	5440	4080	6310	10900	9180	10100	7260	---	6470	6780	6700	5240
16	5260	4390	6020	11300	9560	9720	7230	---	6310	6590	6550	5220
17	5130	4400	6040	11400	10100	9400	7270	---	6180	6390	6460	5220
18	5030	4370	6140	11300	10500	9140	7220	---	6120	6280	6350	5220
19	4920	4290	6310	11000	11100	8900	7010	---	6130	6310	6250	5230
20	4830	4220	6400	10700	11600	8690	6780	---	6310	6360	6160	5210
21	4770	4410	6450	10300	12100	8630	6620	---	6760	6500	6050	5100
22	4740	4680	6450	9910	12300	8650	6430	7100	7380	6690	5920	4840
23	4720	4830	6440	9580	12200	8550	6260	7100	8030	6950	5830	4340
24	4710	4960	6310	9270	12000	8450	6050	7110	8400	7130	5760	---
25	4680	5040	6260	9250	11800	8380	5700	7190	8300	7080	5710	---
26	4680	5150	6180	9250	11900	8340	5440	7290	8270	7020	5660	---
27	4680	5190	6160	9310	12200	8320	5480	7380	8270	6960	5610	---
28	4680	5230	6090	9460	12300	8200	6310	7180	8100	6940	5570	---
29	4680	5280	6050	9600	---	8140	7260	6830	7990	6910	5540	---
30	4650	5300	6050	9820	---	7920	---	6500	8120	6900	5520	3710
31	4670	---	6000	10100	---	7720	---	6320	---	6970	5490	---
MEAN	5096	4344	6551	8743	10400	9950	---	---	7040	7336	6604	---
MAX	7190	5300	8800	11400	12300	12300	---	---	8400	8410	8060	---
MIN	3950	3600	5380	5810	8740	7720	---	---	6120	6280	5490	---
IN.	4.87	4.02	6.26	8.36	8.98	9.51	---	---	6.51	7.01	6.31	---

CAL YR 1996 MEAN 7183 MAX 13900 MIN 3600 IN. 81.09

02359051 CHIPOLA RIVER AT COCKRAN LANDING NEAR WEWAHITCHKA, FL--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.17	14.11	13.96	14.51	18.33	19.41	16.13	---	14.89	16.83	15.94	13.97
2	13.20	14.07	14.03	14.43	18.40	19.36	16.01	---	14.82	16.92	16.30	13.95
3	13.27	13.76	14.07	14.37	18.40	19.29	15.91	---	14.79	16.91	16.57	13.91
4	13.45	13.20	14.11	14.40	18.31	19.20	15.86	---	14.82	16.85	16.62	13.97
5	13.99	12.76	14.35	14.61	18.13	19.12	15.81	---	14.99	16.75	16.49	13.83
6	14.52	12.48	14.88	14.81	17.89	19.07	15.76	---	15.30	16.70	16.29	13.74
7	15.32	12.32	15.98	14.97	17.66	19.03	15.75	---	15.60	16.65	16.09	13.65
8	16.42	12.26	16.82	15.10	17.45	19.05	15.72	---	15.86	16.61	15.86	13.65
9	17.22	12.23	17.24	15.33	17.32	19.05	15.75	---	15.95	16.76	15.74	13.65
10	17.38	12.22	17.24	15.71	17.22	18.97	15.76	---	15.85	16.85	15.72	13.67
11	17.06	12.22	16.93	16.49	17.19	18.84	15.78	---	15.69	16.66	15.75	13.68
12	16.52	12.21	16.40	17.16	17.19	18.66	15.94	---	15.59	16.27	15.71	13.68
13	16.14	12.20	15.79	17.79	17.21	18.58	15.95	---	15.50	15.94	15.62	13.69
14	15.86	12.28	15.44	18.33	17.32	18.42	15.94	---	15.34	15.68	15.47	13.69
15	15.65	12.79	14.95	18.65	17.53	18.20	15.89	---	15.12	15.43	15.35	13.68
16	15.46	13.20	14.62	18.92	17.82	17.94	15.86	---	14.95	15.24	15.20	13.65
17	15.26	13.18	14.64	18.98	18.16	17.70	15.90	---	14.81	15.04	15.11	13.65
18	15.10	13.10	14.76	18.91	18.45	17.50	15.85	---	14.74	14.92	15.00	13.65
19	14.91	12.95	14.95	18.75	18.77	17.32	15.65	---	14.75	14.95	14.89	13.66
20	14.76	12.81	15.05	18.54	19.09	17.15	15.43	---	14.96	15.01	14.78	13.64
21	14.65	13.04	15.10	18.31	19.30	17.10	15.27	---	15.41	15.15	14.66	13.50
22	14.56	13.37	15.10	18.07	19.39	17.12	15.08	15.74	16.00	15.34	14.50	13.16
23	14.51	13.55	15.09	17.84	19.35	17.04	14.90	15.74	16.59	15.59	14.40	12.48
24	14.45	13.67	14.96	17.60	19.26	16.96	14.65	15.75	16.91	15.76	14.32	---
25	14.39	13.75	14.90	17.59	19.19	16.90	14.24	15.82	16.83	15.72	14.25	---
26	14.35	13.85	14.80	17.59	19.20	16.86	13.92	15.92	16.80	15.66	14.19	---
27	14.31	13.86	14.78	17.63	19.34	16.84	13.98	16.00	16.80	15.60	14.13	---
28	14.27	13.88	14.70	17.75	19.42	16.74	14.95	15.81	16.65	15.58	14.08	---
29	14.23	13.90	14.66	17.85	---	16.69	15.89	15.48	16.55	15.55	14.05	---
30	14.16	13.89	14.65	18.01	---	16.49	---	15.15	16.67	15.54	14.02	11.51
31	14.15	---	14.60	18.19	---	16.31	---	14.97	---	15.61	13.99	---
MEAN	14.93	13.10	15.15	17.01	18.30	17.96	---	---	15.65	15.94	15.20	---
MAX	17.38	14.11	17.24	18.98	19.42	19.41	---	---	16.91	16.92	16.62	---
MIN	13.17	12.20	13.96	14.37	17.19	16.31	---	---	14.74	14.92	13.99	---

CAL YR 1996 MEAN 15.64 MAX 20.16 MIN 11.92

DISCHARGE, MAIN CHANNEL ONLY, CUBIC FEET PER SECOND, WATER YEAR
OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3490	5710	8550	13000	11400	12500	10300	9590	7570	5010	4380	4480
2	3390	5890	9170	13000	11500	12300	9950	9170	7650	5220	4520	4540
3	3350	5810	9810	12900	11700	12300	9690	8930	7640	5410	4510	5640
4	3470	5640	10400	12900	12000	12100	9480	8940	7550	5540	4610	6890
5	3620	5710	10900	12600	12300	12100	9300	8830	7380	5660	4770	8060
6	3760	5870	11100	12100	12600	12000	9230	8770	6970	5760	4830	8460
7	3830	5960	11200	11700	13000	12300	9210	8930	6500	5760	4830	8180
8	3880	5970	11100	11700	12500	13000	9390	9230	6110	5810	4840	7800
9	3910	6040	10900	11900	11900	12300	9640	9490	5860	5900	4830	7690
10	3890	6210	10500	12200	11900	11300	9880	9730	5670	5930	4810	7750
11	3900	6230	9990	12400	12000	9120	10000	9870	5520	5970	4970	7720
12	4090	6200	9330	12500	12700	7090	10200	9950	5400	6020	5170	7470
13	4360	6610	8850	12700	---	6050	10300	9970	5310	6000	5260	7070
14	4540	7550	8770	12800	---	5620	10600	9880	5220	6020	5300	6640
15	4640	8910	8940	12800	---	5660	10900	9660	5150	6040	5400	6280
16	4640	9760	9150	12800	---	6250	10900	9330	5070	6050	5650	5970
17	4660	10100	9410	12600	---	7290	10800	8930	4970	6070	5880	5710
18	4680	10200	9800	12500	---	8640	10600	8530	4790	6070	6010	5280
19	4700	10300	10200	12200	---	10100	10800	8230	4500	6030	6030	4900
20	4690	10200	10500	12000	---	11200	11100	8010	4320	5860	5990	4640
21	4700	10100	10800	11800	---	11900	11400	7760	4240	5530	5950	4630
22	4700	9850	10900	11800	---	12700	11700	7520	4240	5110	5810	4770
23	4690	9390	10800	11800	---	12900	11700	7260	4230	4730	5600	5200
24	4730	8960	10700	11800	12800	12800	11700	6840	4230	4470	5340	5640
25	4830	8640	10600	11800	12800	12600	11700	6560	4310	4340	5120	5860
26	4890	8490	10600	11700	12700	12400	11700	6320	4430	4260	4950	5930
27	5130	8280	11100	11600	12800	12100	11500	6270	4640	4190	4820	6000
28	5460	8100	12200	11600	12600	11900	11200	6460	4780	4190	4730	6090
29	5700	8080	13000	11500	---	11600	10700	6790	4790	4160	4680	6820
30	5680	8200	13000	11600	---	11200	10200	7130	4840	4150	4630	9530
31	5630	---	13000	11500	---	10800	---	7410	---	4210	4590	---
MEAN	4440	7765	10490	12190	---	10710	10530	8396	5463	5338	5123	6388
MAX	5700	10300	13000	13000	---	13000	11700	9970	7650	6070	6030	9530
MIN	3350	5640	8550	11500	---	5620	9210	6270	4230	4150	4380	4480
IN.	4.25	7.19	10.03	11.65	---	10.24	9.74	8.03	5.06	5.10	4.90	5.91

02359051 CHIPOLA RIVER AT COCKRAN LANDING NEAR WEWAHITCHKA, FL--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.36	14.65	17.31	19.82	18.95	19.53	18.36	17.96	16.56	13.77	12.87	13.03
2	11.17	14.87	17.70	19.81	19.00	19.46	18.17	17.70	16.63	14.05	13.08	13.12
3	11.10	14.78	18.09	19.76	19.11	19.42	18.02	17.55	16.62	14.29	13.07	14.57
4	11.32	14.57	18.42	19.73	19.26	19.36	17.89	17.56	16.55	14.45	13.22	15.95
5	11.60	14.66	18.68	19.58	19.43	19.34	17.78	17.49	16.40	14.60	13.44	16.98
6	11.85	14.84	18.82	19.35	19.58	19.30	17.74	17.45	16.03	14.71	13.52	17.25
7	11.99	14.95	18.84	19.15	19.80	19.45	17.73	17.55	15.54	14.72	13.52	17.07
8	12.07	14.96	18.80	19.15	19.57	19.82	17.84	17.74	15.12	14.77	13.54	16.76
9	12.11	15.04	18.70	19.24	19.24	19.46	17.99	17.90	14.83	14.88	13.52	16.67
10	12.09	15.23	18.49	19.38	19.21	18.90	18.13	18.04	14.61	14.92	13.50	16.72
11	12.10	15.25	18.19	19.50	19.30	17.67	18.22	18.12	14.42	14.97	13.72	16.69
12	12.41	15.22	17.80	19.56	19.64	16.14	18.29	18.17	14.28	15.02	13.98	16.48
13	12.85	15.66	17.50	19.67	---	15.06	18.38	18.18	14.16	15.00	14.10	16.12
14	13.12	16.55	17.45	19.72	---	14.54	18.55	18.13	14.05	15.02	14.15	15.69
15	13.25	17.54	17.56	19.72	---	14.60	18.68	18.00	13.96	15.04	14.28	15.31
16	13.25	18.06	17.69	19.69	---	15.27	18.69	17.80	13.85	15.06	14.58	14.97
17	13.28	18.25	17.85	19.62	---	16.32	18.62	17.55	13.71	15.08	14.86	14.65
18	13.32	18.32	18.08	19.54	---	17.37	18.55	17.30	13.47	15.08	15.01	14.12
19	13.34	18.34	18.30	19.41	---	18.24	18.63	17.10	13.05	15.03	15.03	13.62
20	13.33	18.32	18.50	19.29	---	18.84	18.80	16.94	12.78	14.83	14.99	13.26
21	13.34	18.26	18.65	19.20	---	19.25	18.98	16.73	12.66	14.44	14.94	13.24
22	13.34	18.11	18.71	19.17	---	19.64	19.10	16.52	12.65	13.91	14.77	13.44
23	13.33	17.84	18.65	19.19	---	19.74	19.14	16.29	12.64	13.38	14.52	14.02
24	13.38	17.57	18.58	19.18	19.68	19.70	19.15	15.90	12.64	13.01	14.20	14.57
25	13.52	17.37	18.51	19.16	19.68	19.60	19.12	15.61	12.77	12.81	13.92	14.83
26	13.60	17.27	18.56	19.12	19.64	19.49	19.10	15.35	12.95	12.68	13.69	14.92
27	13.93	17.13	18.81	19.08	19.69	19.35	19.03	15.30	13.25	12.58	13.51	15.00
28	14.35	17.01	19.40	19.05	19.61	19.22	18.87	15.50	13.45	12.57	13.39	15.10
29	14.64	17.00	19.81	19.04	---	19.07	18.61	15.85	13.47	12.53	13.31	15.88
30	14.62	17.08	19.82	19.05	---	18.88	18.29	16.17	13.54	12.50	13.24	17.92
31	14.56	---	19.82	19.02	---	18.63	---	16.42	---	12.60	13.19	---
MEAN	12.89	16.49	18.45	19.39	---	18.41	18.48	17.09	14.22	14.14	13.89	15.27
MAX	14.64	18.34	19.82	19.82	---	19.82	19.15	18.18	16.63	15.08	15.03	17.92
MIN	11.10	14.57	17.31	19.02	---	14.54	17.73	15.30	12.64	12.50	12.87	13.03

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL
(National water-quality assessment network station)

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.

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.

REVISIONS.--Daily, monthly discharges and extremes for the water years 1994-97 were revised.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6940	7820	13100	15700	25000	33000	37700	22900	9720	18000	46600	40800
2	7200	9310	13700	16200	27200	39000	41100	22300	10100	18300	47800	38300
3	7380	10900	14400	16200	29100	40900	43000	21900	11800	20800	49000	37200
4	8160	11700	14600	16100	30700	44200	43400	21500	13700	22400	49400	35400
5	8580	12500	14700	15900	32000	48700	42000	20500	15500	22700	47800	33200
6	8330	14400	14600	16100	33000	53000	39400	19700	17400	25200	44300	31800
7	7710	15300	14600	16300	33000	56300	36900	19100	19000	29900	40400	30900
8	7970	16300	14600	16300	32600	58100	34600	18900	20100	40300	37700	30300
9	8430	16700	14700	15900	32100	57500	33400	18900	20400	68700	35700	29900
10	8630	16800	14700	15700	32100	55000	32600	19300	20600	111000	34500	29400
11	8310	16500	14800	15700	33100	51300	31300	19800	21000	133000	34200	29200
12	8310	16100	14700	16000	33600	48500	30000	20300	21000	145000	33800	29500
13	9210	15900	14900	16400	34200	46300	28900	21100	20500	148000	34600	29800
14	10800	16200	15900	16600	35100	44500	27700	21700	18800	146000	36300	29600
15	12300	16800	15800	16400	36600	42200	27600	21800	16800	141000	39500	29800
16	13200	17200	15400	16400	38500	39000	29300	21400	15900	135000	46500	31800
17	13200	16300	15200	17300	40000	34800	31000	20500	15900	131000	43700	32300
18	12900	14600	14900	19600	40700	31000	31600	18300	16500	128000	42900	30900
19	12900	13400	14800	19400	40600	28300	31400	16200	16400	125000	43900	30500
20	13000	12300	14600	19400	39700	26100	30900	15500	16900	122000	44100	31100
21	12900	11600	14200	19200	38600	24300	30600	15400	18300	116000	43100	31900
22	13000	10900	14300	18600	37100	22700	30800	15400	17400	108000	42800	33600
23	12700	10500	14800	18000	35900	21700	31200	15200	17400	98500	43500	36100
24	12700	10200	15200	17600	35800	21200	31400	14300	19500	90200	44200	38500
25	12700	9830	15400	17100	32400	21800	31200	12600	20800	77600	44300	39800
26	12300	8920	15500	16700	30600	22200	30400	11900	21700	64900	44000	40100
27	10500	8140	15600	16500	30500	23000	28800	11400	21200	56300	43800	39400
28	9150	8280	15800	16600	31300	25100	26700	11000	20500	51200	43600	37800
29	8460	9720	15900	16700	---	27700	24900	11000	19500	47400	43900	36400
30	9920	11900	15800	19500	---	30400	23700	10900	18500	45100	44300	35700
31	7850	---	15700	22800	---	33800	---	10500	---	45200	42900	---
MEAN	10180	12900	14930	17190	33970	37150	32450	17460	17760	81670	42360	33700
MAX	13200	17200	15900	22800	40700	58100	43400	22900	21700	148000	49400	40800
MIN	6940	7820	13100	15700	25000	21200	23700	10500	9720	18000	33800	29200
IN.	.61	.75	.90	1.03	1.84	2.23	1.89	1.05	1.03	4.91	2.54	1.96

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1994, BY WATER YEAR (WY)

MEAN	13170	15120	24150	30650	41240	46730	38750	25610	20090	23440	20740	17310
MAX	28270	32420	52700	53720	68390	75080	78430	46350	29450	81670	42360	33700
(WY)	1980	1978	1993	1993	1978	1990	1980	1991	1980	1994	1994	1994
MIN	7326	6577	9808	10380	10130	17090	19300	10940	9984	8042	7384	8441
(WY)	1987	1982	1988	1981	1989	1989	1985	1981	1986	1988	1986	1986

SUMMARY STATISTICS	FOR 1993 CALENDAR YEAR		FOR 1994 WATER YEAR		WATER YEARS 1978 - 1994	
ANNUAL MEAN	24540		29330		26350	
HIGHEST ANNUAL MEAN					35840	1984
LOWEST ANNUAL MEAN					14060	1981
HIGHEST DAILY MEAN	81700	Jan 18	148000	Jul 13	178000	Mar 24 1990
LOWEST DAILY MEAN	6940	Oct 1	6940	Oct 1	5800	Nov 4 1981
ANNUAL SEVEN-DAY MINIMUM	7650	Sep 29	7760	Oct 1	6010	Oct 31 1981
INSTANTANEOUS PEAK FLOW			148000	Jul 13	179000	Mar 24 1990
INSTANTANEOUS PEAK STAGE			15.05	Jul 13	15.05	Jul 13 1994
INSTANTANEOUS LOW FLOW			6940	Oct 1	5800	Nov 4 1981
ANNUAL RUNOFF (INCHES)	17.35		20.74		18.64	
10 PERCENT EXCEEDS	54900		45600		49000	
50 PERCENT EXCEEDS	15500		21700		20000	
90 PERCENT EXCEEDS	9190		11200		9920	

DISCHARGE, MAIN CHANNEL ONLY, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1993 TO SEPTEMBER 1994
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6940	7820	13100	15400	16900	17700	18100	16600	9720	16900	22700	21400
2	7200	9310	13700	15500	17100	18200	18300	16600	10100	17000	22900	20900
3	7380	10900	14400	15600	17300	18300	18500	16500	11800	17700	23200	20600
4	8160	11700	14600	15500	17500	18600	18500	16400	13700	18200	23300	20200
5	8580	12500	14700	15400	17600	18900	18400	16300	15200	18200	22900	19600
6	8330	14400	14600	15500	17700	19100	18200	16200	15900	18900	22200	19300
7	7710	15200	14600	15600	17700	19400	18000	16100	16100	20000	21400	19000
8	7970	15600	14600	15600	17700	19500	17800	16100	16300	21900	20700	18900
9	8430	15700	14600	15400	17600	19500	17700	16100	16300	25400	20200	18800
10	8630	15800	14700	15300	17600	19300	17700	16200	16300	30000	19900	18600
11	8310	15600	14800	15400	17700	19000	17500	16200	16400	33100	19900	18600
12	8310	15500	14700	15500	17700	18800	17400	16300	16400	34400	19800	18700
13	9210	15400	14900	15600	17800	18700	17300	16400	16300	34700	20000	18700
14	10800	15600	15400	15700	17900	18600	17200	16500	16100	34500	20400	18700
15	12300	15800	15400	15600	18000	18400	17200	16500	15800	33900	21100	18700
16	13200	15900	15200	15600	18100	18200	17300	16400	15400	33300	22700	19200
17	13200	15600	15100	15800	18300	17900	17500	16300	15600	32800	22100	19400
18	12900	14600	14900	16200	18300	17500	17600	16000	16100	32400	21900	19000
19	12900	13400	14800	16200	18300	17200	17600	15600	16100	32100	22100	18900
20	13000	12300	14600	16200	18200	17000	17500	15300	16400	31700	22200	19100
21	12900	11600	14200	16100	18200	16800	17500	15200	17000	31000	21900	19300
22	13000	10900	14300	16100	18000	16600	17500	15200	16700	29900	21900	19700
23	12700	10500	14800	16000	17900	16500	17500	15100	16600	28700	22000	20300
24	12700	10200	15100	15900	17900	16400	17600	14300	17300	27600	22200	20900
25	12700	9830	15300	15800	17600	16500	17500	12600	17700	26300	22200	21200
26	12300	8920	15300	15700	17500	16500	17500	11900	18000	25200	22100	21300
27	10500	8140	15300	15700	17500	16600	17300	11400	17800	24300	22100	21100
28	9150	8280	15400	15700	17500	16900	17100	11000	17600	23600	22100	20700
29	8460	9720	15400	15700	---	17200	16900	11000	17400	22900	22100	20400
30	9920	11900	15400	16200	---	17500	16700	10900	17000	22400	22200	20300
31	7850	---	15300	16600	---	17800	---	10500	---	22400	21900	---
MEAN	10180	12620	14810	15750	17750	17910	17610	14960	15840	26500	21750	19720
MAX	13200	15900	15400	16600	18300	19500	18500	16600	18000	34700	23300	21400
MIN	6940	7820	13100	15300	16900	16400	16700	10500	9720	16900	19800	18600

CAL YR 1993 MEAN 14870 MAX 26200 MIN 6940
WTR YR 1994 MEAN 17120 MAX 34700 MIN 6940

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36100	32600	28200	30300	35000	62900	32700	24000	12300	9550	10800	9740
2	40000	30000	30000	30100	35200	60800	32700	23800	15600	9650	9970	9500
3	43000	27600	32200	29500	35200	58500	33000	23500	18500	9700	10000	9400
4	42600	25900	35200	28800	35300	55500	33500	23400	20700	9650	19300	9270
5	45700	25000	38100	27800	35400	52500	33500	23300	28900	9570	19800	9250
6	49000	25000	40000	27200	35700	50900	32700	23200	32000	10000	18800	9250
7	49200	24600	41300	27500	36200	50800	31100	23100	32600	11200	17000	9300
8	47500	23900	41700	27300	36600	52400	29300	23100	34000	12400	17200	9770
9	45900	23700	41900	28100	36500	53900	27800	23100	34700	13100	19900	9720
10	45200	25000	42700	29600	36200	53600	26600	22500	33900	15200	21100	9770
11	46200	26300	44500	31100	35700	52100	26200	22400	31900	17400	21500	10500
12	46100	27200	45500	32000	35200	50600	27400	23200	29800	19100	21600	11900
13	45300	27700	45900	32500	34700	49600	27800	24400	28300	20300	21500	12800
14	43900	27800	45900	33600	36200	48900	28500	25000	27100	19900	20700	13200
15	42700	27700	45400	33900	40500	48900	29500	25400	26200	19400	19800	13500
16	41500	27700	44600	34600	46500	49000	30600	25200	25200	18400	19500	13800
17	40300	27700	43500	36100	53800	48700	30900	24500	23300	17700	19700	14100
18	39200	27700	42000	37200	63500	48000	30300	23200	20100	17800	19300	14600
19	38200	27900	40100	37100	71000	48000	29200	21400	16000	17500	18500	14700
20	37300	28600	38600	36000	75100	47800	27900	19300	12800	15200	18100	14800
21	36500	29500	37600	34800	78200	47900	27100	17700	12100	12200	18000	14600
22	36000	30000	36800	33800	84000	48100	26700	16500	11600	11300	18200	14600
23	36000	29600	36400	34200	88800	47800	26000	15300	10900	10800	18000	13400
24	36400	28300	35900	34500	89500	46400	26200	14400	10700	10700	16900	12000
25	36600	27100	35400	34600	85700	44400	25500	13100	10500	10500	13400	10900
26	36600	26200	34600	34600	77300	42400	24900	12200	10200	10600	12700	10400
27	36300	25500	33300	34700	69900	40800	24700	11800	9890	11000	12000	10000
28	36000	25300	32000	34800	65100	38900	24400	11500	9670	11100	11300	9720
29	35900	25900	31300	34800	---	36000	24200	11300	9620	11800	10500	9770
30	36200	27200	31200	34700	---	32900	24100	11200	9550	11900	9940	9350
31	34800	---	30600	34800	---	32000	---	11200	---	11400	9700	---
MEAN	40720	27140	38140	32600	53140	48420	28500	19780	20290	13420	16600	11450
MAX	49200	32600	45900	37200	89500	62900	33500	25400	34700	20300	21600	14800
MIN	34800	23700	28200	27200	34700	32000	24100	11200	9550	9550	9700	9250
IN.	2.45	1.58	2.29	1.96	2.88	2.91	1.66	1.19	1.18	.81	1.00	.67

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1995, BY WATER YEAR (WY)

MEAN	14700	15790	24930	30760	41900	46820	38180	25290	20100	22890	20510	16990
MAX	40720	32420	52700	53720	68390	75080	78430	46350	29450	81670	42360	33700
(WY)	1995	1978	1993	1993	1978	1990	1980	1991	1980	1994	1994	1994
MIN	7326	6577	9808	10380	10130	17090	19300	10940	9984	8042	7384	8441
(WY)	1987	1982	1988	1981	1989	1989	1985	1981	1986	1988	1986	1986

SUMMARY STATISTICS	FOR 1994 CALENDAR YEAR		FOR 1995 WATER YEAR		WATER YEARS 1978 - 1995	
ANNUAL MEAN	35060		29070		26500	
HIGHEST ANNUAL MEAN					35840	1984
LOWEST ANNUAL MEAN					14060	1981
HIGHEST DAILY MEAN	148000	Jul 13	89500	Feb 24	178000	Mar 24 1990
LOWEST DAILY MEAN	9720	Jun 1	9250	Sep 5	5800	Nov 4 1981
ANNUAL SEVEN-DAY MINIMUM	10700	May 27	9390	Sep 1	6010	Oct 31 1981
INSTANTANEOUS PEAK FLOW			89800	Feb 23	179000	Mar 24 1990
INSTANTANEOUS PEAK STAGE			10.05	Feb 23	15.05	Jul 13 1994
INSTANTANEOUS LOW FLOW			9250	Sep 5	5800	Nov 4 1981
ANNUAL RUNOFF (INCHES)	24.80		20.56		18.75	
10 PERCENT EXCEEDS	46900		47800		48700	
50 PERCENT EXCEEDS	31400		27800		20600	
90 PERCENT EXCEEDS	16500		10700		9970	

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL--Continued

DISCHARGE, MAIN CHANNEL ONLY, IN CUBIC FEET PER SECOND, WATER YEAR
OCTOBER 1994 TO SEPTEMBER 1995
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20300	19500	18300	18900	20100	25000	19500	17100	12300	9550	11800	9740
2	21200	18800	18800	18800	20100	24800	19500	17000	14300	9650	9970	9500
3	21900	18100	19400	18700	20100	24600	19600	16900	15300	9700	10000	9400
4	21800	17700	20100	18400	20200	24300	19700	16900	16000	9650	15600	9270
5	22500	17400	20800	18200	20200	23900	19700	16900	18500	9570	15700	9250
6	23200	17400	21300	18000	20300	23600	19500	16800	19300	10000	15400	9250
7	23200	17300	21600	18100	20400	23500	19100	16800	19500	11200	14800	9300
8	22900	17000	21700	18000	20500	23900	18600	16800	19800	12400	14800	9770
9	22500	17000	21700	18200	20400	24100	18200	16800	20000	13100	15700	9720
10	22400	17400	21900	18700	20400	24100	17900	16600	19800	14100	16200	9770
11	22600	17800	22300	19100	20200	23800	17700	16600	19300	14900	16300	10500
12	22600	18000	22500	19300	20100	23500	18100	16800	18700	15500	16300	11900
13	22400	18200	22600	19500	20000	23300	18200	17200	18300	15900	16300	12800
14	22100	18200	22600	19700	20400	23200	18400	17400	18000	15800	16000	13200
15	21900	18200	22400	19800	21400	23200	18700	17500	17700	15600	15700	13500
16	21600	18100	22300	20000	22700	23200	19000	17400	17400	15300	15600	13600
17	21300	18100	22000	20300	24000	23100	19000	17200	16900	15000	15700	13700
18	21100	18100	21700	20600	25100	23000	18900	16800	15800	15100	15600	13900
19	20900	18200	21300	20600	25800	23000	18600	16300	14400	15000	15300	14000
20	20600	18400	20900	20300	26100	22900	18200	15600	12800	14100	15200	14000
21	20400	18700	20700	20000	26400	23000	18000	15000	12100	12200	15100	13900
22	20300	18800	20500	19800	26900	23000	17900	14600	11600	11300	15200	13900
23	20300	18700	20400	19900	27400	22900	17700	14200	10900	10800	15100	13400
24	20400	18300	20300	20000	27400	22700	17700	13800	10700	10700	14800	12000
25	20500	18000	20200	20000	27000	22200	17500	13100	10500	10500	13400	10900
26	20500	17700	20000	20000	26300	21800	17300	12200	10200	10600	12700	10400
27	20400	17500	19700	20000	25700	21400	17300	11800	9890	11000	12000	10000
28	20300	17500	19300	20000	25200	21000	17200	11500	9670	11100	11300	9720
29	20300	17600	19100	20000	---	20300	17100	11300	9620	11800	10500	9770
30	20400	18000	19100	20000	---	19600	17100	11200	9550	11900	9940	9350
31	20000	---	19000	20000	---	19300	---	11200	---	11400	9700	---
MEAN	21380	17990	20790	19450	22890	22940	18360	15400	14960	12400	14120	11310
MAX	23200	19500	22600	20600	27400	25000	19700	17500	20000	15900	16300	14000
MIN	20000	17000	18300	18000	20000	19300	17100	11200	9550	9550	9700	9250

CAL YR 1994 MEAN 19020 MAX 34700 MIN 9720
WTR YR 1995 MEAN 17650 MAX 27400 MIN 9250

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8990	16300	24000	33200	40300	41400	55100	30400	12000	10500	10000	11000
2	9270	16700	22800	31100	44900	40200	54400	29900	12100	10400	9500	11200
3	9500	17700	21500	28900	49400	38800	53600	30800	13300	10300	9550	12900
4	11200	19300	20400	26700	53500	38000	52800	32100	20500	10300	10000	14200
5	13300	20900	19400	25500	58400	37900	52000	33400	24900	10500	10800	15700
6	11100	22300	18700	24800	64900	38500	51300	33900	27400	11600	11300	17200
7	10600	22800	18600	25000	71600	39100	50600	33700	28700	11800	11400	18300
8	11700	22100	18800	25000	79200	38700	49000	33100	30500	12400	11500	18400
9	19500	20000	20100	26100	86100	37400	46800	32300	32000	15400	11500	16900
10	23900	19500	20000	27800	86600	38100	43900	31700	32400	17700	11600	13700
11	26300	22400	19800	29200	82900	42000	41000	31000	32600	19600	12300	13100
12	28000	25200	20200	31000	78200	50400	38600	30200	32500	21600	12500	12700
13	29300	27700	20500	32100	71600	67900	37100	29300	32300	22300	13300	12200
14	30100	30200	20400	33200	63700	81000	36000	28200	32100	23000	15700	11800
15	29600	32200	20300	34100	56800	82000	36300	27300	31100	23900	17000	11900
16	27600	33700	20400	34300	51500	77100	36500	26500	29900	23700	17800	12800
17	26100	34800	20600	33800	46600	71300	35800	25900	26500	23200	17800	14000
18	24900	35100	21000	32700	42400	67900	34900	25300	22400	22200	17600	14800
19	23800	34800	22400	31500	39400	64200	34400	24800	16800	21200	17200	14900
20	23100	34400	22500	29800	39500	61500	34300	24400	12900	20500	17100	15400
21	21800	34500	23700	28500	38000	61300	34000	24200	e12600	19800	17000	15900
22	20700	34200	26400	27600	37100	62200	33300	24100	e12300	19100	16900	16100
23	20500	33200	29200	27400	37300	62700	32700	23800	e12000	18100	16800	15800
24	19800	32200	31800	28000	38000	61300	31700	23600	e11800	16900	16600	15800
25	18700	30900	34300	28100	38700	58400	30500	23400	e11500	13100	16500	15800
26	18000	29400	36800	28200	39800	56000	30700	23200	e11200	11900	16200	16200
27	17800	28300	38700	28800	41300	52600	31200	22100	10900	11200	13500	17000
28	17600	27500	39700	29300	42500	50900	31400	20100	10600	10900	12900	16700
29	16200	26900	39300	30900	42300	51000	31300	17300	10500	10700	12200	15500
30	15400	25300	37900	33400	---	52700	31700	12800	10500	10300	12300	13200
31	15700	---	35700	36600	---	54900	---	12200	---	10300	11500	---
MEAN	19360	27020	25350	29760	53880	54110	39760	26480	20560	15950	13800	14700
MAX	30100	35100	39700	36600	86600	82000	55100	33900	32600	23900	17800	18400
MIN	8990	16300	18600	24800	37100	37400	30500	12200	10500	10300	9500	11000
IN.	1.16	1.57	1.52	1.79	3.03	3.25	2.31	1.59	1.20	.96	.83	.85

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1996, BY WATER YEAR (WY)

MEAN	14950	16380	24950	30700	42550	47210	38260	25350	20130	22520	20160	16870
MAX	40720	32420	52700	53720	68390	75080	78430	46350	29450	81670	42360	33700
(WY)	1995	1978	1993	1993	1978	1990	1980	1991	1980	1994	1994	1994
MIN	7326	6577	9808	10380	10130	17090	19300	10940	9984	8042	7384	8441
(WY)	1987	1982	1988	1981	1989	1989	1985	1981	1986	1988	1986	1986

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1978 - 1996	
ANNUAL MEAN	26160		28290		26590	
HIGHEST ANNUAL MEAN					35840	1984
LOWEST ANNUAL MEAN					14060	1981
HIGHEST DAILY MEAN	89500	Feb 24	86600	Feb 10	178000	Mar 24 1990
LOWEST DAILY MEAN	8990	Oct 1	8990	Oct 1	5800	Nov 4 1981
ANNUAL SEVEN-DAY MINIMUM	9390	Sep 1	10100	Jul 29	6010	Oct 31 1981
INSTANTANEOUS PEAK FLOW			87300	Feb 9	179000	Mar 24 1990
INSTANTANEOUS PEAK STAGE			9.83	Feb 9	15.05	Jul 13 1994
INSTANTANEOUS LOW FLOW			8990	Oct 1	5800	Nov 4 1981
ANNUAL RUNOFF (INCHES)	18.50		20.06		18.82	
10 PERCENT EXCEEDS	46400		51100		48900	
50 PERCENT EXCEEDS	23300		25300		20900	
90 PERCENT EXCEEDS	10500		11700		10000	

e Estimated

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8990	14500	17100	19600	21300	21600	24200	18900	12000	10500	10000	11000
2	9270	14700	16700	19100	22300	21300	24100	18800	12100	10400	9500	11200
3	9500	15000	16300	18500	23300	21000	24100	19000	13300	10300	9550	12900
4	11200	15600	15900	17900	24000	20800	23900	19400	15900	10300	10000	13800
5	13300	16100	15600	17500	24600	20800	23800	19700	17300	10500	10800	14300
6	11100	16600	15400	17300	25200	20900	23700	19800	18100	11600	11300	14900
7	10600	16700	15300	17400	25800	21000	23500	19800	18400	11800	11400	15200
8	11700	16500	15400	17400	26500	20900	23200	19600	18900	12400	11500	15300
9	15600	15800	15800	17700	27000	20700	22700	19400	19300	14200	11500	14800
10	17100	15600	15800	18200	27100	20800	22100	19200	19400	15000	11600	13600
11	17800	16600	15700	18600	26800	21700	21500	19100	19500	15700	12300	13100
12	18200	17400	15900	19100	26400	23400	20900	18900	19400	16300	12500	12700
13	18600	18200	16000	19300	25800	25500	20600	18600	19400	16600	13300	12200
14	18800	18800	15900	19600	25100	26600	20300	18300	19400	16800	14300	11800
15	18700	19400	15900	19900	24400	26700	20400	18000	19100	17000	14800	11900
16	18100	19800	15900	19900	23700	26300	20400	17800	18800	17000	15100	12800
17	17700	20000	16000	19800	22700	25800	20300	17600	17800	16800	15100	13700
18	17400	20100	16100	19500	21800	25500	20100	17500	16600	16500	15000	14000
19	17000	20000	16600	19200	21100	25100	19900	17300	14700	16200	14900	14000
20	16800	19900	16600	18700	21100	24900	19900	17200	12900	16000	14800	14200
21	16400	20000	17000	18400	20800	24900	19800	17100	e12600	15700	14800	14400
22	16000	19900	17800	18100	20600	25000	19600	17100	e12300	15500	14800	14500
23	16000	19600	18600	18100	20600	25000	19500	17000	e12000	15200	14700	14400
24	15700	19400	19300	18300	20800	24900	19200	17000	e11800	14700	14600	14400
25	15400	19000	19900	18300	21000	24600	18900	16900	e11500	13100	14600	14400
26	15100	18600	20500	18300	21200	24300	19000	16800	e11200	11900	14500	14500
27	15100	18300	21000	18500	21600	23900	19100	16500	10900	11200	13500	14800
28	15000	18100	21200	18600	21800	23600	19200	15800	10600	10900	12900	14700
29	14500	17900	21100	19000	21800	23600	19100	14900	10500	10700	12200	14300
30	14200	17500	20800	19700	---	23900	19200	12800	10500	10300	12300	13200
31	14300	---	20200	20500	---	24200	---	12200	---	10300	11500	---
MEAN	15010	17850	17330	18710	23320	23520	21070	17680	15210	13590	12890	13700
MAX	18800	20100	21200	20500	27100	26700	24200	19800	19500	17000	15100	15300
MIN	8990	14500	15300	17300	20600	20700	18900	12200	10500	10300	9500	11000

CAL YR 1995 MEAN 16800 MAX 27400 MIN 8990
WTR YR 1996 MEAN 17460 MAX 27100 MIN 8990

e Estimated

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13100	15800	18000	17600	38800	64600	25500	30200	18500	29100	24000	15100
2	13300	15600	17000	17100	40100	64900	24600	34700	18200	29800	26400	14800
3	13400	13300	15900	16800	40900	63900	24100	40900	17800	30300	28600	14500
4	13300	12500	e17000	16800	41100	62000	24000	46000	17800	30700	29500	14400
5	13300	11900	e18000	18100	40300	59800	24000	48100	18500	31600	28700	14400
6	16500	11500	19100	19400	38400	57900	24000	47200	20000	32200	27600	13800
7	23600	11400	23900	20300	36400	56600	23700	44700	21800	32800	26300	13400
8	33000	11100	28200	21000	34800	56400	23100	41900	23500	33300	25300	13500
9	33100	10500	30600	e23000	33500	57500	22800	39400	24800	33000	25000	13500
10	32700	10500	32000	e26500	32500	57700	22600	36700	25000	31800	25200	13500
11	31700	10400	32000	e29000	31800	55800	22900	34000	24500	29900	24800	13500
12	29900	10300	30600	e32000	31400	52900	24500	31900	24100	27800	24300	13500
13	27700	10300	28100	e35500	32000	50300	24400	30500	23500	25800	23400	13500
14	25800	10500	25300	e38500	33800	48200	23900	29200	22800	24200	22700	13500
15	24400	11100	22400	e42500	34900	45100	23400	28100	21400	22700	22100	13500
16	23400	12200	20000	e47000	34900	41600	23200	26900	20000	21400	21600	13700
17	22500	12900	19900	50800	36100	38600	23500	25800	19100	20400	20900	13600
18	21700	13000	20000	e50000	39000	36600	23400	24800	18700	19800	20300	13500
19	20100	12700	20800	e48000	43100	34800	22700	24200	18300	20500	19700	13400
20	19300	12500	20500	e45000	47800	33200	21700	23800	18700	20800	19200	13400
21	19000	12600	20600	41900	53100	32100	21000	23300	20600	21400	18700	13100
22	18700	13100	20700	40200	57800	31200	20400	23100	23600	21100	17900	12700
23	18700	13300	20800	38300	58800	30900	19700	23300	26600	21500	17000	11400
24	18000	13800	20900	36400	57300	30900	17800	23800	29300	22300	16400	10500
25	17700	15900	20200	35600	55900	31000	15600	24200	31300	22500	16300	10200
26	17700	16200	19600	34800	55700	31300	13500	24500	32100	22200	15900	10200
27	17500	14100	19200	34100	57900	31200	13900	24400	31800	22300	15600	10500
28	17000	14000	18900	34300	61900	30500	20600	23500	30400	22600	15400	10400
29	16700	14300	18600	35000	---	29600	24400	22000	29000	22300	15200	9740
30	16500	15900	18400	36100	---	28400	26600	20400	28600	22100	14700	9450
31	16100	---	18200	37400	---	27000	---	19100	---	22200	14600	---
MEAN	20820	12770	21790	32870	42860	44270	22180	30340	23340	25500	21400	12810
MAX	33100	16200	32000	50800	61900	64900	26600	48100	32100	33300	29500	15100
MIN	13100	10300	15900	16800	31400	27000	13500	19100	17800	19800	14600	9450
IN.	1.25	.74	1.31	1.97	2.33	2.66	1.29	1.82	1.36	1.53	1.29	.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1997, BY WATER YEAR (WY)

MEAN	15240	16200	24790	30810	42560	47060	37460	25600	20290	22670	20220	16660
MAX	40720	32420	52700	53720	68390	75080	78430	46350	29450	81670	42360	33700
(WY)	1995	1978	1993	1993	1978	1990	1980	1991	1980	1994	1994	1994
MIN	7326	6577	9808	10380	10130	17090	19300	10940	9984	8042	7384	8441
(WY)	1987	1982	1988	1981	1989	1989	1985	1981	1986	1988	1986	1986

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR		FOR 1997 WATER YEAR		WATER YEARS 1978 - 1997	
ANNUAL MEAN	26940		25860		26550	
HIGHEST ANNUAL MEAN					35840	1984
LOWEST ANNUAL MEAN					14060	1981
HIGHEST DAILY MEAN	86600	Feb 10	64900	Mar 2	178000	Mar 24 1990
LOWEST DAILY MEAN	9500	Aug 2	9450	Sep 30	5800	Nov 4 1981
ANNUAL SEVEN-DAY MINIMUM	10100	Jul 29	10100	Sep 24	6010	Oct 31 1981
INSTANTANEOUS PEAK FLOW			65200	Mar 1	179000	Mar 24 1990
INSTANTANEOUS PEAK STAGE			8.67	Mar 1	15.05	Jul 13 1994
INSTANTANEOUS LOW FLOW			9450	Sep 30	5800	Nov 4 1981
ANNUAL RUNOFF (INCHES)	19.10		18.29		18.79	
10 PERCENT EXCEEDS	51100		41900		48500	
50 PERCENT EXCEEDS	22500		23300		21200	
90 PERCENT EXCEEDS	11500		13400		10100	

e Estimated

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL--Continued

DISCHARGE, MAIN CHANNEL ONLY, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13100	14400	15100	15000	21000	25200	17500	18800	15300	18500	17100	14100
2	13300	14300	14800	14800	21300	25200	17200	20000	15200	18700	17800	14000
3	13400	13300	14400	14700	21500	25100	17100	21500	15100	18900	18400	13900
4	13300	12500	e14500	14700	21500	24900	17100	22600	15100	19000	18600	13800
5	13300	11900	e15000	15200	21300	24700	17100	23000	15300	19200	18400	13800
6	14600	11500	15500	15600	20900	24500	17100	22800	15800	19400	18100	13600
7	16900	11400	17000	15900	20400	24400	17000	22300	16400	19500	17800	13400
8	19600	11100	18300	16100	20000	24400	16800	21700	16900	19700	17500	13500
9	19600	10500	18900	e17000	19700	24500	16700	21100	17300	19600	17400	13500
10	19500	10500	19300	e18000	19500	24500	16600	20500	17400	19300	17400	13500
11	19200	10400	19300	e18500	19300	24300	16700	19800	17200	18800	17300	13500
12	18800	10300	18900	e19500	19200	23900	17200	19300	17100	18200	17200	13500
13	18100	10300	18300	e20000	19300	23500	17200	18900	16900	17600	16900	13500
14	17600	10500	17500	e21000	19800	23000	17000	18600	16700	17100	16700	13500
15	17200	11100	16600	e22000	20100	22400	16900	18300	16300	16700	16500	13500
16	16900	12200	15800	e23000	20100	21600	16800	17900	15800	16200	16300	13600
17	16600	12900	15800	23600	20300	20900	16900	17600	15500	15900	16100	13500
18	16400	13000	15800	e23500	21000	20500	16900	17300	15400	15700	15900	13500
19	15800	12700	16100	e23000	22000	20000	16700	17100	15200	16000	15700	13400
20	15600	12500	16000	e22500	22900	19600	16400	17000	15400	16100	15500	13400
21	15500	12600	16000	21700	23900	19300	16100	16900	16000	16200	15400	13100
22	15400	13100	16000	21300	24500	19100	15900	16800	16900	16200	15100	12700
23	15400	13300	16100	20900	24600	19000	15700	16900	17800	16300	14800	11400
24	15100	13600	16100	20400	24500	19000	15100	17000	18600	16500	14600	10500
25	15000	14400	15900	20200	24300	19100	14300	17100	19100	16600	14500	10200
26	15000	14500	15600	20000	24300	19100	13500	17200	19300	16500	14400	10200
27	15000	13700	15500	19800	24500	19100	13700	17200	19300	16600	14300	10500
28	14800	13700	15400	19900	24900	18900	16000	16900	18900	16700	14200	10400
29	14700	13800	15300	20100	---	18700	17200	16400	18500	16600	14200	9740
30	14600	14400	15300	20300	---	18400	17800	15900	18400	16500	14000	9450
31	14500	---	15200	20700	---	18000	---	15500	---	16500	13900	---
MEAN	15930	12480	16300	19320	21660	21770	16470	18710	16800	17460	16190	12670
MAX	19600	14500	19300	23600	24900	25200	17800	23000	19300	19700	18600	14100
MIN	13100	10300	14400	14700	19200	18000	13500	15500	15100	15700	13900	9450

CAL YR 1996 MEAN 17010 MAX 27100 MIN 9500
WTR YR 1997 MEAN 17140 MAX 25200 MIN 9450

e Estimated

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR
OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9170	19900	30400	93500	49900	71300	48700	42900	27400	12800	11100	12200
2	8970	20400	31000	90700	50500	68200	44900	38500	28000	13200	11400	12200
3	8920	20700	33200	87700	53300	65900	42600	35800	28200	13800	11700	25000
4	9350	21400	37200	84100	53000	64300	41100	35000	28000	15400	11800	26200
5	9920	21600	41000	80000	52400	62600	39800	34600	27600	16200	12200	28000
6	10500	21400	43900	74200	54200	61200	39000	33900	26500	17300	12700	30300
7	10700	21100	45400	66000	60400	65400	38700	34000	23900	17800	12900	31500
8	11000	20100	45800	58900	75100	81400	39400	35200	21100	18100	12900	31200
9	11200	20300	45700	51900	90300	e95000	40900	37600	19200	18800	13000	30100
10	11000	21400	44500	49300	96200	e105000	42600	39700	17600	19900	12800	29800
11	11000	22000	41700	51500	98300	e120000	43700	41200	16200	19800	12800	29900
12	11000	22600	38000	57200	97100	e130000	44500	42200	15200	19500	13400	29600
13	12000	25600	34300	63600	93200	140000	45600	42800	14200	19500	14200	28200
14	12900	26900	32000	67900	88500	148000	47900	42900	13600	19800	14500	26400
15	13100	28500	31200	70200	82500	152000	e50000	42100	13400	19800	15300	24300
16	13000	30500	31400	69900	78400	150000	e51000	40200	13300	19800	16800	22300
17	13100	33000	32000	67800	75600	143000	e50000	37800	13000	19800	18500	21500
18	13100	35600	33500	65400	69200	134000	e49000	35300	12500	19900	19800	20400
19	12800	37400	35900	62500	63500	124000	e47000	33100	11600	19900	20400	18400
20	12900	38500	39000	58300	61000	116000	e48000	31500	11200	19300	20300	16400
21	13000	39200	42000	54900	62100	108000	52200	30100	11000	17900	20100	16600
22	13100	39000	44900	52900	67500	102000	55500	28600	10900	16100	19600	16000
23	13100	37600	45900	52500	73500	95700	58500	27200	11000	12800	18700	16300
24	13100	35200	45100	51900	73900	89800	60000	25500	10900	11900	16900	18800
25	14400	32900	43300	50900	73200	83800	60700	23500	11000	11500	14100	19700
26	15200	31600	41300	50300	73400	77500	61000	21700	11400	11200	13300	20200
27	16800	30900	41800	49900	73700	72100	60600	20700	11800	10900	13100	22900
28	16600	30300	46500	49400	73800	67000	58500	21200	12400	10900	12900	23300
29	17700	30200	64300	49000	---	62300	54200	22900	12500	10900	12800	26000
30	18200	30400	87800	49300	---	57800	48400	24800	12500	10800	12600	35800
31	18900	---	94000	50000	---	53200	---	26300	---	10900	12600	---
MEAN	12770	28210	43350	62310	71920	95690	48800	33190	16570	16010	14680	23650
MAX	18900	39200	94000	93500	98300	152000	61000	42900	28200	19900	20400	35800
MIN	8920	19900	30400	49000	49900	53200	38700	20700	10900	10800	11100	12200
IN.	.77	1.64	2.60	3.74	3.90	5.75	2.84	1.99	.96	.96	.88	1.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1998, BY WATER YEAR (WY)

MEAN	15120	16770	25680	32310	43950	49380	38000	25960	20110	22350	19960	17000
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	19300	10940	9984	8042	7384	8441
(WY)	1987	1982	1988	1981	1989	1989	1985	1981	1986	1988	1986	1986

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1978 - 1998	
ANNUAL MEAN	28280		38760		27140	
HIGHEST ANNUAL MEAN					38760	1998
LOWEST ANNUAL MEAN					14060	1981
HIGHEST DAILY MEAN	94000	Dec 31	152000	Mar 15	178000	Mar 24 1990
LOWEST DAILY MEAN	8920	Oct 3	8920	Oct 3	5800	Nov 4 1981
ANNUAL SEVEN-DAY MINIMUM	9360	Sep 29	9650	Oct 1	6010	Oct 31 1981
INSTANTANEOUS PEAK FLOW			152000	Mar 15	179000	Mar 24 1990
INSTANTANEOUS PEAK STAGE			15.36	Mar 15	15.36	Mar 15 1998
INSTANTANEOUS LOW FLOW			8920	Oct 3	5800	Nov 4 1981
ANNUAL RUNOFF (INCHES)	20.00		27.41		19.20	
10 PERCENT EXCEEDS	45700		74600		49700	
50 PERCENT EXCEEDS	24800		31000		21500	
90 PERCENT EXCEEDS	13400		12200		10200	

e Estimated

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL--Continued

DISCHARGE, MAIN CHANNEL ONLY, IN CUBIC FEET PER SECOND, WATER YEAR
OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9170	15700	19100	28000	22200	25400	23100	21900	18100	12800	11100	12200
2	8970	15900	19300	27600	22300	25100	22300	20900	18200	13200	11400	12200
3	8920	16000	19700	27100	22800	24800	21800	20300	18300	13600	11700	17400
4	9350	16300	20400	26700	22700	24600	21500	20100	18300	14000	11800	17700
5	9920	16300	21000	26300	22600	24400	21200	20000	18100	14300	12200	18300
6	10500	16300	21400	25700	23000	24300	21000	19800	17800	14700	12700	18900
7	10700	16200	21600	24800	24100	24700	21000	19800	17000	15000	12900	19200
8	11000	15800	21700	23900	25800	26500	21100	20100	16200	15200	12900	19100
9	11200	15900	21700	22600	27600	e28000	21500	20700	15500	15400	13000	18800
10	11000	16300	21500	22200	28400	e29500	21800	21200	14700	15800	12800	18700
11	11000	16500	21100	22500	28700	e31000	22100	21500	14300	15700	12800	18800
12	11000	16700	20500	23600	28500	e32500	22300	21700	14000	15600	13400	18700
13	12000	17800	19900	24600	28000	33800	22500	21900	13800	15600	13800	18300
14	12900	18200	19500	25000	27300	34700	23000	21900	13500	15700	13900	17800
15	13100	18600	19300	25300	26600	35100	e23400	21700	13400	15700	14000	17200
16	13000	19100	19300	25300	26100	34900	e23800	21300	13300	15700	14300	16600
17	13100	19700	19500	25000	25800	34200	e23500	20700	13000	15700	15300	16300
18	13100	20100	19700	24800	25200	33100	e23200	20100	12500	15800	15700	15900
19	12800	20400	20100	24400	24500	32000	e22800	19600	11600	15800	15900	15300
20	12900	20600	20600	23900	24300	30900	e22300	19200	11200	15600	15900	14300
21	13000	20700	21100	23100	24400	30000	23800	18800	11000	15100	15800	14600
22	13100	20700	21500	22700	25000	29200	24300	18400	10900	13900	15700	14300
23	13100	20400	21700	22600	25600	28300	24600	18000	11000	12800	15400	14300
24	13100	20000	21600	22500	25700	27500	24700	17500	10900	11900	14500	15400
25	13800	19600	21300	22400	25600	26800	24800	16900	11000	11500	13700	15700
26	13800	19400	21000	22300	25600	26300	24800	16400	11400	11200	13300	15900
27	14600	19200	21100	22200	25700	25900	24800	16000	11800	10900	13100	16800
28	14600	19100	21800	22200	25700	25400	24600	16200	12400	10900	12900	16900
29	14800	19100	24500	22100	---	25000	24100	16700	12500	10900	12800	17600
30	15200	19100	27200	22200	---	24500	23100	17300	12500	10800	12600	20300
31	15400	---	28100	22200	---	24000	---	17800	---	10900	12600	---
MEAN	12260	18190	21220	24060	25350	28460	22960	19500	13940	13930	13550	16780
MAX	15400	20700	28100	28000	28700	35100	24800	21900	18300	15800	15900	20300
MIN	8920	15700	19100	22100	22200	24000	21000	16000	10900	10800	11100	12200

CAL YR 1997 MEAN 17710 MAX 28100 MIN 8920
WTR YR 1998 MEAN 19150 MAX 35100 MIN 8920

e Estimated

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL--Continued

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.76	5.24	6.46	10.39	7.85	9.02	7.67	7.26	6.01	4.27	3.54	4.08
2	2.69	5.30	6.53	10.13	7.89	8.86	7.41	6.94	6.06	4.45	3.70	4.31
3	2.68	5.33	6.72	9.86	8.06	8.75	7.24	6.72	6.08	4.62	3.80	5.77
4	2.83	5.41	7.02	9.66	8.05	8.66	7.13	6.66	6.06	4.74	3.90	5.89
5	3.05	5.43	7.29	9.46	8.01	8.57	7.03	6.63	6.02	4.84	4.09	6.07
6	3.25	5.41	7.48	9.16	8.11	8.50	6.97	6.58	5.92	4.96	4.23	6.27
7	3.34	5.38	7.58	8.75	8.46	8.72	6.95	6.58	5.67	5.02	4.29	6.37
8	3.47	5.26	7.61	8.38	9.21	9.53	7.00	6.68	5.38	5.05	4.32	6.34
9	3.60	5.29	7.60	7.97	10.10	---	7.12	6.87	5.17	5.13	4.31	6.25
10	3.58	5.41	7.52	7.82	10.63	---	7.24	7.03	4.99	5.24	4.22	6.23
11	3.49	5.48	7.33	7.95	10.81	---	7.32	7.14	4.84	5.24	4.29	6.23
12	3.70	5.54	7.08	8.28	10.71	---	7.38	7.21	4.72	5.20	4.50	6.20
13	4.11	5.92	6.81	8.63	10.36	14.37	7.45	7.26	4.62	5.20	4.61	6.08
14	4.29	6.08	6.63	8.85	9.94	15.05	7.61	7.26	4.54	5.23	4.66	5.91
15	4.35	6.26	6.56	8.97	9.58	15.33	---	7.20	4.49	5.24	4.73	5.70
16	4.36	6.48	6.57	8.95	9.38	15.19	---	7.07	4.44	5.24	4.90	5.50
17	4.36	6.71	6.64	8.85	9.23	14.62	---	6.88	4.35	5.24	5.09	5.42
18	4.37	6.90	6.75	8.72	8.92	13.85	---	6.68	4.20	5.24	5.23	5.29
19	4.33	7.04	6.93	8.57	8.62	13.06	---	6.50	3.88	5.25	5.30	5.08
20	4.27	7.12	7.15	8.35	8.49	12.32	---	6.37	3.61	5.18	5.29	4.86
21	4.30	7.16	7.35	8.15	8.55	11.67	7.89	6.25	3.49	5.02	5.27	4.88
22	4.36	7.15	7.55	8.03	8.83	11.13	8.10	6.12	3.47	4.82	5.21	4.81
23	4.35	7.05	7.61	8.01	9.13	10.58	8.28	5.99	3.48	4.41	5.11	4.85
24	4.52	6.87	7.56	7.98	9.15	10.05	8.37	5.83	3.50	3.96	4.92	5.12
25	4.65	6.70	7.44	7.92	9.12	9.65	8.42	5.63	3.57	3.69	4.67	5.22
26	4.71	6.60	7.31	7.88	9.13	9.33	8.43	5.44	3.68	3.54	4.48	5.28
27	4.91	6.52	7.34	7.86	9.14	9.05	8.41	5.34	3.87	3.45	4.36	5.57
28	4.88	6.46	7.64	7.83	9.14	8.77	8.28	5.38	4.06	3.45	4.27	5.61
29	5.00	6.45	8.65	7.80	---	8.51	8.02	5.56	4.09	3.39	4.23	5.86
30	5.06	6.47	9.93	7.82	---	8.24	7.64	5.76	4.11	3.36	4.18	6.73
31	5.14	---	10.43	7.86	---	7.96	---	5.90	---	3.42	4.16	---
TOTAL	124.76	184.42	229.07	264.84	254.60	---	---	200.72	138.37	143.09	139.86	167.78
MEAN	4.02	6.15	7.39	8.54	9.09	---	---	6.47	4.61	4.62	4.51	5.59
MAX	5.14	7.16	10.43	10.39	10.81	---	---	7.26	6.08	5.25	5.30	6.73
MIN	2.68	5.24	6.46	7.80	7.85	---	---	5.34	3.47	3.36	3.54	4.08

02359170 APALACHICOLA RIVER NEAR SUMATRA, FL.--Continued
(National water-quality assessment network station)
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 1997 TO SEPTEMBER 1998

NOV 1997						
10...	1005	95.0	16600	5.40	36	66
10...	1009	95.0	16600	5.40	33	79
10...	1011	180	16600	5.40	31	68
10...	1012	180	16600	5.40	35	62
10...	1015	260	16600	5.40	54	45
10...	1017	260	16600	5.40	43	51
10...	1018	350	16600	5.40	31	66
10...	1020	350	16600	5.40	38	62
10...	1022	460	16600	5.40	22	87
10...	1024	460	16600	5.40	11	78
DEC						
16...	0948	100	19300	6.57	15	98
16...	0951	100	19300	6.57	14	94
16...	0953	170	19300	6.57	17	91
16...	0955	170	19300	6.57	19	84
16...	0957	256	19300	6.57	17	97
16...	1000	256	19300	6.57	23	68
16...	1012	326	19300	6.57	14	86
16...	1015	326	19300	6.57	18	72
16...	1018	440	19300	6.57	14	98
16...	1020	440	19300	6.57	21	75
JAN 1998						
09...	1410	64.0	22400	7.93	23	72
09...	1413	64.0	22400	7.93	27	72
09...	1416	136	22400	7.93	27	80
09...	1418	136	22400	7.93	22	79
09...	1420	216	22400	7.93	24	78
09...	1424	216	22400	7.93	20	89
09...	1426	318	22400	7.93	22	85
09...	1429	318	22400	7.93	20	91
09...	1431	441	22400	7.93	22	76
09...	1435	441	22400	7.93	22	80
APR						
21...	0929	102	23400	7.77	41	82
21...	0931	136	23500	7.78	43	79
21...	0933	136	23500	7.78	51	72
21...	0935	226	23500	7.79	72	47
21...	0942	326	23600	7.81	38	85
21...	0944	440	23600	7.82	35	71
21...	0946	440	23600	7.83	34	86
JUN						
11...	1108	100	14600	4.85	30	100
11...	1111	100	14600	4.85	33	97
11...	1116	195	14500	4.84	35	95
11...	1120	195	14500	4.84	35	95
11...	1124	287	14500	4.84	33	96
11...	1128	287	14500	4.84	37	92
11...	1133	381	14500	4.84	32	100
11...	1136	381	14500	4.84	33	100
11...	1140	502	14500	4.84	30	100
11...	1144	502	14500	4.84	32	100
AUG						
27...	0902	100	13300	4.40	21	76
27...	0905	100	13300	4.40	18	97
27...	0909	195	13300	4.40	21	86
27...	0912	195	13300	4.40	20	87
27...	0916	288	13300	4.40	51	32
27...	0919	288	13300	4.41	21	82
27...	0927	385	13300	4.41	21	83
27...	0930	502	13300	4.41	18	91

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 (REVISED).--May 1957, April 1960 and October 1975 to June 1976 (gage height and discharge measurements only), July 1976 to September 1981, October 1996 to current year (gage height and discharge measurements only).

GAGE.--Water-stage recorder. Datum of gage is 51.83 ft National Geodetic Vertical Datum of 1929 (levels by Northwest Florida Water Management District). Prior to Sept. 15, 1976, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--5 years (water years 1977-81), 5,363 ft^3/s, 22.69 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 64,700 ft^3/s Jan. 28, 1978, gage height, 28.56 ft, from floodmark, from rating curve extended above 44,700 ft^3/s; minimum, 687 ft^3/s Sept. 30, 1981, gage height, 5.88 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Minimum discharge, 550 ft^3/s, part of each day Oct. 5, 8, 9, 1981.

NO DISCHARGE MEASUREMENTS MADE, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

02365500 CHOCTAWHATCHEE RIVER AT CARYVILLE, FL

LOCATION.--Lat 30°46'32", long 85°49'40", in NW¼ sec.10, T.4 N., R.16 W., Holmes County, Hydrologic Unit 03140203, near right bank on downstream side of bridge on U.S. Highway 90, 300 ft downstream from Louisville and Nashville Railroad bridge, 0.8 mi west of Caryville, 1.8 mi downstream from Wrights Creek, and 64 mi upstream from mouth.

DRAINAGE AREA.--3,499 mi^2.

PERIOD OF RECORD.--August 1929 to September 1994. October 1994 to September 1996, gage height only. October 1996 to September 1997. October 1997 to September 1998, gage height only. Gage-height records collected at same site from 1928 to August 1929 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 39.02 ft above National Geodetic Vertical Datum of 1929. Aug. 17 to Oct. 11, 1929, nonrecording gage at same site and datum; Oct. 12, 1929 to Sept. 11, 1951, water-stage recorder at same site and datum; Sept. 12, 1951 to Aug.11, 1976, nonrecording gage at same site and datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 164,000 ft^3/s, July 9, 1994, gage height, 23.85 ft; minimum discharge, 604 ft^3/s, Sept. 15, 16, 1968; minimum gage height, -.82 ft, Sept. 6, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1850 (from information furnished by U.S. Army Corps of Engineers, Mobile District) 27.1 ft Mar. 17, 1929, from National Weather Service records and floodmarks; discharge, 206,000 ft^3/s from rating curve extended above 160,000 ft^3/s on basis of slope-area determination of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 19.65 ft, Mar. 11; minimum gage height, .94 ft, Oct. 15-16, 21-22.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.74	7.32	9.89	11.51	9.61	11.77	9.14	7.44	4.19	3.05	6.10	2.20
2	2.48	6.44	11.34	10.87	9.32	12.02	9.07	7.56	4.41	2.80	6.14	2.28
3	2.24	5.87	12.44	9.93	9.33	11.94	9.27	7.61	3.96	2.55	4.99	4.21
4	2.02	5.97	12.74	9.12	10.79	11.53	9.73	7.50	3.50	2.37	4.16	7.32
5	1.84	5.85	12.61	8.66	12.24	10.97	9.99	7.35	3.10	2.93	3.74	8.83
6	1.60	5.74	12.18	9.08	12.92	10.48	9.95	7.59	2.92	5.13	3.41	9.50
7	1.45	5.41	11.56	10.48	13.17	10.57	9.66	7.71	2.83	6.30	3.05	9.06
8	1.37	4.92	10.64	11.89	12.98	12.14	9.34	7.44	3.76	5.93	2.86	7.37
9	1.26	4.64	9.41	12.97	12.57	14.86	9.00	7.10	5.14	5.90	3.25	6.00
10	1.24	4.44	8.72	13.41	12.10	17.85	9.17	6.75	5.02	6.22	4.20	5.19
11	1.18	4.18	9.05	13.46	11.64	19.45	10.13	6.45	4.45	6.62	4.36	4.54
12	1.13	4.14	9.53	13.12	11.01	19.13	10.85	6.23	3.92	6.30	4.64	4.12
13	1.11	5.98	9.84	12.56	10.36	17.66	10.78	5.97	3.60	5.80	5.23	3.88
14	1.00	8.17	10.03	11.92	9.93	16.11	10.22	5.70	3.36	5.12	5.42	3.75
15	.96	9.17	10.11	11.39	9.60	15.06	9.52	5.44	3.12	4.40	5.83	3.63
16	.99	9.67	10.05	11.09	9.50	14.27	8.74	5.20	2.91	3.89	6.04	3.46
17	1.02	9.76	9.92	11.21	10.19	13.55	8.10	5.00	2.76	3.64	6.60	3.29
18	.98	9.56	9.59	11.49	11.71	12.90	7.87	4.82	2.60	3.51	7.25	3.20
19	1.06	9.16	9.11	11.58	12.74	12.27	7.92	4.67	2.49	3.34	6.92	3.25
20	1.07	8.37	8.63	11.27	12.98	11.88	8.83	4.51	2.50	3.40	6.28	3.35
21	.99	7.48	8.23	10.81	12.69	11.84	10.24	4.34	2.73	3.32	5.72	3.56
22	.97	6.70	7.94	10.51	12.24	11.88	11.52	4.18	2.88	3.46	4.96	5.23
23	1.01	6.39	7.77	10.50	11.88	11.72	11.95	4.04	2.89	3.51	4.33	7.06
24	1.02	6.53	8.17	10.88	11.80	11.35	11.78	3.89	2.79	3.68	3.83	7.53
25	1.29	6.36	9.45	11.25	11.85	10.91	11.22	3.77	2.71	3.89	3.50	7.16
26	3.95	6.18	10.77	11.38	11.78	10.52	10.32	3.63	2.71	3.60	3.23	6.34
27	7.00	6.20	11.81	11.13	11.57	10.18	9.37	3.54	3.26	3.56	2.99	5.58
28	8.13	6.57	12.29	10.70	11.55	9.89	8.52	3.51	3.70	4.21	2.78	5.41
29	8.55	6.81	12.24	10.39	---	9.67	7.91	3.43	3.26	6.08	2.58	8.15
30	8.63	8.15	12.03	10.23	---	9.49	7.59	3.46	2.95	6.72	2.41	11.85
31	8.22	---	11.80	9.96	---	9.31	---	3.48	---	5.43	2.28	---
TOTAL	78.50	202.13	319.89	344.75	320.05	393.17	287.70	169.31	100.42	136.66	139.08	166.30
MEAN	2.53	6.74	10.32	11.12	11.43	12.68	9.59	5.46	3.35	4.41	4.49	5.54
MAX	8.63	9.76	12.74	13.46	13.17	19.45	11.95	7.71	5.14	6.72	7.25	11.85
MIN	.96	4.14	7.77	8.66	9.32	9.31	7.59	3.43	2.49	2.37	2.28	2.20

CAL YR 1997 TOTAL 2417.70 MEAN 6.62 MAX 13.00 MIN .89
WTR YR 1998 TOTAL 2657.96 MEAN 7.28 MAX 19.45 MIN .96

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 mi2.

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.--Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929. Prior to Apr. 1, 1983, water-stage recorder at same site at datum 3.94 ft lower. Prior to Apr. 6, 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3000	6020	6040	18500	12600	18800	9550	7930	3020	2420	3150	2380
2	2810	6550	6630	17700	12000	17700	9270	7470	3130	2400	3320	e2290
3	2590	6840	7660	16800	11900	19700	8930	6740	3300	2410	3210	e2360
4	2440	6790	9780	15000	12000	19900	8710	6570	3290	2930	3210	e2660
5	2370	6360	14000	13000	12500	19300	8550	6560	3180	2400	3320	e5000
6	2290	6010	18400	12200	14900	18300	8630	6530	2960	2420	3390	6010
7	2240	5610	19400	11000	18100	17400	9020	6410	2800	2440	3740	6500
8	2120	5270	18100	11200	25300	19500	9380	6300	2700	2480	3520	7220
9	2070	5120	16900	13800	27000	24500	9620	6260	2830	2460	3500	7430
10	2040	4640	14500	16900	25600	38300	9870	6250	3050	2420	3370	7520
11	2010	4340	12000	24200	22900	53900	9740	5980	3300	2520	2980	7680
12	1990	4310	10900	27400	21100	86100	9450	5840	3070	2840	3020	6630
13	1970	4660	9730	29700	18200	93900	9370	5310	2850	3290	3060	5250
14	1960	5280	9800	28300	16700	93100	10200	5010	2730	3870	3500	3030
15	1930	5900	10200	24900	14300	73400	11200	4880	2660	4090	3360	2700
16	1880	6440	10700	21800	13800	60100	10900	4440	2570	4120	3540	2510
17	1880	7540	11200	18700	13400	44500	10300	4330	2350	4200	4040	2470
18	1900	8530	11300	17800	13500	35600	9220	3980	2310	4330	4490	2290
19	1890	9350	11300	17400	15100	30600	8530	3860	2290	4360	4610	2230
20	1870	9670	10800	17100	18800	25400	7970	3710	2270	4230	4850	2250
21	1840	9500	10100	17000	25100	21500	7560	3560	2290	3580	4970	2290
22	1830	9130	9440	16300	26900	19100	7390	3470	2370	3370	4720	2310
23	1790	8190	8810	15800	24800	17500	8470	3320	2380	3180	4460	2280
24	1790	7490	8490	15200	23300	16900	13100	3260	e2380	2990	3930	3880
25	1950	6360	8180	15000	20600	16400	16100	3180	e2310	2950	3820	4720
26	2140	6070	8290	15100	19300	15600	17300	3100	2190	2910	3300	5120
27	3000	5570	9010	15600	18800	14200	15500	3040	2390	2880	2900	5660
28	3470	5390	11900	15900	19000	12900	14000	3010	2520	2880	2730	6550
29	4180	5250	14600	15600	---	11500	11400	2960	2500	2970	2620	8320
30	4820	5880	18400	14500	---	11000	9510	2960	2460	3240	2500	12200
31	5450	---	18900	13200	---	10100	---	3030	---	3060	2410	---
MEAN	2436	6469	11790	17500	18480	31510	10290	4815	2682	3117	3534	4658
MAX	5450	9670	19400	29700	27000	93900	17300	7930	3300	4360	4970	12200
MIN	1790	4310	6040	11000	11900	10100	7390	2960	2190	2400	2410	2230
IN.	.64	1.65	3.10	4.60	4.39	8.29	2.62	1.27	.68	.82	.93	1.19

e Estimated

02366500 CHOCTAWHATCHEE RIVER NEAR BRUCE, FL--Continued.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1998, BY WATER YEAR (WY)

MEAN	4247	4393	6439	9243	10740	12460	11020	6469	5194	5655	5922	4620
MAX	20840	13870	25970	29400	20460	31510	27220	20870	18080	48020	26770	24000
(WY)	1976	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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1931 - 1998	
ANNUAL MEAN	7084		9743		7180	
HIGHEST ANNUAL MEAN					11620	1948
LOWEST ANNUAL MEAN					3454	1956
HIGHEST DAILY MEAN	22400	Feb 21	93900	Mar 13	164000	Jul 11 1994
LOWEST DAILY MEAN	1790	Oct 23	1790	Oct 23	1300	Oct 27 1968
ANNUAL SEVEN-DAY MINIMUM	1840	Oct 18	1840	Oct 18	1310	Oct 27 1968
INSTANTANEOUS PEAK FLOW			95300	Mar 13	165000	Jul 11 1994
INSTANTANEOUS PEAK STAGE			22.61	Mar 13	26.76	Jul 11 1994
INSTANTANEOUS LOW FLOW			1780	Oct 24	1290	Oct 27 1968
ANNUAL RUNOFF (INCHES)	21.94		30.18		22.25	
10 PERCENT EXCEEDS	14400		19000		14200	
50 PERCENT EXCEEDS	6020		6250		5050	
90 PERCENT EXCEEDS	2170		2370		2320	

02368000 YELLOW RIVER AT MILLIGAN, FL

LOCATION.--Lat 30°45'10", long 86°37'45" in SE¼ sec. 15, T.3 N., R.24 W., Okaloosa County, Hydrologic Unit 03140103, near center on downstream side of bridge on U.S. Highway 90, 0.5 mi east of Milligan, 0.5 mi upstream from Trammel Creek, 6.7 mi upstream from Shoal River, and 40 mi upstream from mouth.

DRAINAGE AREA.--624 mi^2

PERIOD OF RECORD.--July 1938 to September 1993; October 1996 to September 1998 (discontinued).

REVISED RECORDS.--WSP 892: 1938-39. WSP 1384: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 45.00 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 6, 1939, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Maximum discharge, 82,800 ft^3/s, Sept. 30, stage rising, peak occurred Oct. 1, 1998; discharge, 80,700 ft^3/s, gage height, 24.09 ft (backwater from Shoal River); maximum independent peak discharge, 55,600 ft^3/s, Mar. 10, gage height, 20.32 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1929 reached a stage of 26.2 ft. from information by local residents, discharge 137,000 ft^3/s, from rating extended above 46,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	342	507	1930	1700	1300	2400	1330	1070	459	269	496	318
2	312	646	2260	1440	1270	3450	1380	1090	422	268	542	446
3	291	600	2820	1230	1550	4210	1640	1080	405	280	448	1750
4	278	572	3530	1110	1780	3570	1980	1110	393	445	391	1520
5	267	565	3190	1080	2010	2390	2030	1050	369	421	345	994
6	258	519	2180	1460	2270	2040	1880	961	460	352	314	965
7	248	474	1420	2250	2450	2410	1620	1010	444	331	288	764
8	241	436	1130	3290	2410	7510	1380	1010	404	307	282	591
9	238	412	1010	4250	2010	16700	1250	868	427	289	313	503
10	237	416	1330	4840	1570	50800	1200	777	431	308	333	456
11	233	403	1130	5360	1400	35800	1320	719	389	367	350	425
12	230	527	1260	4740	1340	16000	1540	672	363	337	365	415
13	231	1260	1430	3660	1350	8770	1680	630	358	426	475	415
14	230	1420	1560	2660	1370	5620	1350	597	340	545	882	387
15	231	1430	1580	2240	1330	3980	1070	566	327	816	1390	371
16	230	1450	1470	2200	1590	3030	994	541	313	712	1650	389
17	230	1460	1280	2290	2220	2540	977	524	301	622	1800	382
18	231	1400	1100	2450	3020	2350	963	503	291	524	1690	374
19	227	985	971	2550	4690	2300	1210	484	284	460	1310	379
20	223	751	883	2380	6020	2260	1840	471	294	417	946	431
21	222	660	825	2020	5640	2240	2740	456	299	373	779	606
22	226	692	815	1820	4490	2270	5740	444	291	362	649	845
23	229	760	861	2170	3170	2230	5490	433	305	385	546	821
24	309	781	1240	2390	2540	2050	3590	423	349	351	479	716
25	555	745	1660	2480	2630	1830	2180	413	349	346	428	624
26	602	663	2060	2490	2690	1690	1570	404	321	384	392	548
27	1030	601	2440	2380	2690	1590	1290	399	311	377	369	825
28	925	557	2760	2070	2360	1520	1160	403	291	492	350	6060
29	776	732	2820	1720	---	1460	1090	411	283	636	333	28100
30	668	1470	2480	1540	---	1410	1060	484	279	737	316	65000
31	552	---	2020	1410	---	1370	---	518	---	495	318	---
MEAN	358	796	1724	2441	2470	6380	1818	662	352	433	631	3881
MAX	1030	1470	3530	5360	6020	50800	5740	1110	460	816	1800	65000
MIN	222	403	815	1080	1270	1370	963	399	279	268	282	318
IN.	.66	1.42	3.19	4.51	4.12	11.79	3.25	1.22	.63	.80	1.17	6.94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

MEAN	622	734	1175	1463	1682	2071	1718	1070	904	851	946	856
MAX	4045	2737	6232	3375	3066	6380	5322	4173	3733	3191	5434	4305
(WY)	1976	1990	1954	1990	1979	1998	1975	1978	1970	1940	1975	1975
MIN	153	201	286	371	567	405	457	317	211	265	237	179
(WY)	1955	1955	1955	1955	1950	1955	1967	1967	1988	1968	1954	1972

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1938 - 1998	
ANNUAL MEAN	1040		1825		1170	
HIGHEST ANNUAL MEAN					2206	1975
LOWEST ANNUAL MEAN					231	1994
HIGHEST DAILY MEAN	4380	Feb 19	65000	Sep 30	65000	Sep 30 1998
LOWEST DAILY MEAN	222	Oct 21	222	Oct 21	136	Jun 23 1967
ANNUAL SEVEN-DAY MINIMUM	227	Oct 17	227	Oct 17	146	Oct 22 1954
INSTANTANEOUS PEAK FLOW			82800	Sep 30	82800	Sep 30 1998
INSTANTANEOUS PEAK STAGE			23.92	Sep 30	23.92	Sep 30 1998
INSTANTANEOUS LOW FLOW			221	Oct 20	131	Jun 23 1967
ANNUAL RUNOFF (INCHES)	22.63		39.71		25.48	
10 PERCENT EXCEEDS	2030		2710		2280	
50 PERCENT EXCEEDS	846		845		759	
90 PERCENT EXCEEDS	309		303		318	

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	534	698	2790	1080	1190	3290	1170	881	759	326	809	548
2	503	1090	2520	978	1220	2420	1250	835	583	351	745	817
3	477	1310	1410	936	1870	1790	1630	778	508	442	655	3020
4	463	987	1040	906	2790	1570	2110	850	472	549	526	5720
5	449	721	1030	911	3060	1460	1910	1020	450	674	479	5530
6	442	660	958	1630	2610	1910	1380	921	508	497	518	3120
7	433	747	873	3620	1820	3100	1180	797	609	424	466	1430
8	424	710	830	5270	1500	5980	1120	762	523	414	611	1050
9	414	645	823	6230	1340	13700	1130	729	469	371	747	949
10	406	604	1130	5720	1240	14700	1110	698	536	437	693	871
11	403	581	2160	3370	1220	8070	1020	670	577	481	575	818
12	392	674	2250	2100	1390	4670	965	641	472	429	487	796
13	392	1430	2050	1990	1370	3170	939	621	429	465	522	815
14	388	2180	1790	2440	1200	2650	924	603	411	583	867	787
15	390	1850	1390	2720	1130	2380	927	589	397	719	1350	728
16	385	1080	1160	2920	2160	2220	928	585	385	711	1140	759
17	388	855	1010	3080	4010	2120	928	572	378	799	1310	759
18	391	771	937	2640	5700	2050	932	552	370	762	1600	726
19	383	744	889	1920	5510	2080	991	531	367	598	1320	716
20	374	738	852	1630	3420	2150	1460	520	380	523	860	778
21	370	712	825	1460	2200	2020	1780	513	410	535	722	1060
22	370	738	818	1570	2080	1800	1270	502	390	485	666	1600
23	379	887	856	2900	2710	1650	970	495	391	444	626	1920
24	558	919	1150	3930	3010	1560	906	486	482	427	672	1360
25	920	798	2050	3860	2550	1480	866	476	450	453	583	935
26	1130	707	2500	2520	1920	1410	833	467	402	509	525	839
27	1780	670	1940	1850	2390	1360	809	464	373	486	490	1240
28	1840	647	1450	1680	3080	1300	796	482	353	570	464	6910
29	1060	758	1380	1530	---	1250	795	487	339	761	446	29000
30	753	1800	1450	1380	---	1210	817	508	331	1270	439	55500
31	665	---	1280	1270	---	1180	---	731	---	1100	520	---
MEAN	589	924	1406	2453	2346	3152	1128	638	450	568	724	4370
MAX	1840	2180	2790	6230	5700	14700	2110	1020	759	1270	1600	55500
MIN	370	581	818	906	1130	1180	795	464	331	326	439	548
IN.	1.43	2.17	3.42	5.97	5.16	7.67	2.66	1.55	1.06	1.38	1.76	10.29

02369000 SHOAL RIVER NEAR CRESTVIEW, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1998, BY WATER YEAR (WY)

MEAN	824	848	1023	1252	1408	1521	1331	1002	1002	1094	1127	1082
MAX	3163	2252	3601	2606	2974	3327	3056	2752	4421	5436	4385	4370
(WY)	1976	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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1938 - 1998	
ANNUAL MEAN	1068		1554		1126	
HIGHEST ANNUAL MEAN					1781	1978
LOWEST ANNUAL MEAN					551	1955
HIGHEST DAILY MEAN	5600	Feb 17	55500	Sep 30	55500	Sep 30 1998
LOWEST DAILY MEAN	370	Oct 21	326	Jul 1	240	Oct 17 1972
ANNUAL SEVEN-DAY MINIMUM	379	Oct 17	354	Jun 26	241	Oct 13 1972
INSTANTANEOUS PEAK FLOW			59100	Sep 30	59100	Sep 30 1998
INSTANTANEOUS PEAK STAGE			21.40	Sep 30	21.40	Sep 30 1998
INSTANTANEOUS LOW FLOW			321	Jul 1	240	Oct 17 1972
ANNUAL RUNOFF (INCHES)	30.60		44.52		32.26	
10 PERCENT EXCEEDS	1840		2670		2050	
50 PERCENT EXCEEDS	890		866		840	
90 PERCENT EXCEEDS	470		426		431	

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	164	1620	426	385	946	313	243	203	101	204	89
2	103	253	944	373	373	652	349	243	169	106	184	121
3	100	269	638	341	488	518	945	225	152	119	158	563
4	99	209	538	317	1040	443	767	255	142	160	140	372
5	97	165	462	337	828	424	538	253	136	161	129	216
6	96	150	390	987	624	801	416	222	141	134	122	160
7	95	152	339	1720	515	1100	357	211	144	117	116	136
8	94	151	309	3270	451	4900	328	205	139	109	118	125
9	93	143	299	3140	408	15300	323	196	134	107	208	115
10	92	136	e290	1680	380	6160	304	188	132	140	231	108
11	92	131	e280	1000	387	3080	277	181	131	132	168	103
12	91	210	e285	793	455	1690	258	175	125	116	191	106
13	91	775	e295	888	420	1140	245	170	120	119	217	114
14	92	754	e300	876	366	949	238	166	119	157	247	109
15	94	508	e305	959	339	826	235	161	116	229	381	100
16	95	354	e295	1300	593	735	232	158	114	199	512	96
17	96	273	e280	1070	1580	665	228	156	112	202	472	97
18	96	233	265	803	1380	628	227	152	109	195	432	99
19	95	216	249	649	944	658	426	148	111	169	321	100
20	94	206	236	556	700	638	968	145	134	141	220	137
21	93	192	226	494	565	582	798	143	167	130	175	765
22	95	198	249	730	618	518	525	140	151	128	148	1210
23	96	254	322	1820	929	466	393	138	137	125	132	597
24	166	240	824	1450	758	429	329	136	133	129	128	356
25	214	206	1580	948	596	402	291	134	120	147	116	250
26	300	186	1160	713	489	381	265	132	116	249	106	207
27	416	174	805	612	775	363	247	134	112	205	99	584
28	270	166	673	563	1280	349	235	141	108	206	93	9800
29	188	364	628	506	---	335	231	162	105	285	90	23900
30	159	1600	598	459	---	323	234	239	103	428	87	17900
31	150	---	505	419	---	311	---	244	---	269	86	---
MEAN	131	301	522	974	667	1507	384	181	131	168	195	1955
MAX	416	1600	1620	3270	1580	15300	968	255	203	428	512	23900
MIN	91	131	226	317	339	311	227	132	103	101	86	89
IN.	.74	1.64	2.94	5.48	3.39	8.48	2.09	1.02	.71	.95	1.09	10.64

e Estimated

02370000 BLACKWATER RIVER NEAR BAKER, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1998, BY WATER YEAR (WY)

MEAN	202	228	365	451	534	573	453	312	310	250	288	317
MAX	941	1142	2029	1200	1158	1661	1223	1438	1845	958	1772	1955
(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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1950 - 1998	
ANNUAL MEAN	331		591		357	
HIGHEST ANNUAL MEAN					738	1975
LOWEST ANNUAL MEAN					149	1968
HIGHEST DAILY MEAN	1930	Feb 15	23900	Sep 29	23900	Sep 29 1998
LOWEST DAILY MEAN	91	Oct 12	86	Aug 31	61	Sep 3 1954
ANNUAL SEVEN-DAY MINIMUM	92	Oct 8	92	Oct 8	61	Sep 2 1954
INSTANTANEOUS PEAK FLOW			26500	Sep 29	26500	Sep 29 1998
INSTANTANEOUS PEAK STAGE			25.68	Sep 29	25.68	Sep 29 1998
INSTANTANEOUS LOW FLOW			85	Aug 30	60	Sep 7 1954
ANNUAL RUNOFF (INCHES)	21.93		39.16		23.63	
10 PERCENT EXCEEDS	639		944		672	
50 PERCENT EXCEEDS	246		238		203	
90 PERCENT EXCEEDS	112		104		96	

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 September 1998. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e272	465	2940	448	595	1080	567	567	467	165	e500	307
2	e268	479	1190	416	590	772	617	533	403	192	e420	343
3	e265	436	711	398	1050	656	1570	494	373	259	e370	635
4	e263	366	629	389	1780	600	1980	501	356	224	e340	570
5	e260	333	573	425	1390	577	1060	535	348	216	e330	404
6	e258	327	503	966	885	843	766	485	365	200	e320	344
7	e256	334	463	e1900	741	1360	679	463	381	187	e310	323
8	e254	322	443	e3900	672	5400	643	459	337	178	e300	313
9	e253	316	e440	e3700	624	17900	639	433	318	175	e430	299
10	e251	311	e430	e2000	596	7200	595	420	333	229	e640	289
11	e249	309	e410	e1170	639	1830	543	424	e332	224	e880	287
12	e248	453	e420	e920	804	1290	516	408	e332	195	e780	297
13	e251	1300	e430	e1040	670	1160	500	398	e327	272	686	310
14	e254	1190	e440	e1020	586	1070	498	389	e321	500	555	300
15	269	759	e450	e1130	563	993	503	380	e316	362	559	284
16	271	547	e430	e1520	897	926	496	376	e311	355	658	278
17	266	460	e390	e1150	1630	875	495	379	e306	326	752	276
18	263	415	e375	e820	1890	856	505	380	e300	275	600	277
19	259	398	e355	e640	1050	876	838	374	e305	233	504	288
20	255	388	e330	586	807	857	1480	369	e345	211	416	357
21	252	379	e315	541	705	788	994	366	e430	224	368	635
22	259	446	e350	963	732	732	665	361	e360	239	341	1040
23	273	546	e470	2530	1040	695	586	358	e290	220	335	946
24	386	463	e960	2330	878	671	551	355	e250	213	324	549
25	506	405	e1900	1170	681	646	523	348	223	246	311	417
26	617	375	e1350	872	609	624	512	341	201	383	298	378
27	697	360	e930	821	1230	606	505	347	189	540	287	632
28	478	350	e780	881	1960	596	495	386	180	384	279	7090
29	387	844	e660	763	---	587	520	394	174	e620	273	23000
30	353	2580	e570	679	---	574	560	577	169	e840	266	19700
31	386	---	499	627	---	563	---	545	---	e680	298	---
TOTAL	9779	16656	21136	36715	26294	54203	21401	13145	9342	9567	13730	61168
MEAN	315	555	682	1184	939	1748	713	424	311	309	443	2039
MAX	697	2580	2940	3900	1960	17900	1980	577	467	840	880	23000
MIN	248	309	315	389	563	563	495	341	169	165	266	276
AC-FT	19400	33040	41920	72820	52150	107500	42450	26070	18530	18980	27230	121300
CFSM	1.33	2.34	2.88	5.00	3.96	7.38	3.01	1.79	1.31	1.30	1.87	8.60
IN.	1.53	2.61	3.32	5.76	4.13	8.51	3.36	2.06	1.47	1.50	2.16	9.60

e Estimated

BLACKWATER RIVER BASIN
02370000 BIG COLDWATER CREEK NEAR MILTON, FL

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1998, BY WATER YEAR (WY)

MEAN	409	445	524	607	650	755	629	497	575	537	553	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 WATER YEAR		WATER YEARS 1939 - 1998	
ANNUAL TOTAL	293136			
ANNUAL MEAN	803		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	25700	Sep 29	36900	Mar 17 1990
INSTANTANEOUS PEAK STAGE	19.86	Sep 29	22.98	Mar 17 1990
INSTANTANEOUS LOW FLOW	162	Jul 1	156	Jun 10 1956
ANNUAL RUNOFF (AC-FT)	581400		404700	
ANNUAL RUNOFF (CFSM)	3.39		2.36	
ANNUAL RUNOFF (INCHES)	46.01		32.03	
10 PERCENT EXCEEDS	1140		896	
50 PERCENT EXCEEDS	459		416	
90 PERCENT EXCEEDS	259		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.--No estimated daily discharges. Records good. 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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1520	3110	26600	20100	9320	19400	7490	6420	3660	1490	3780	1470
2	1340	3250	26900	17400	8300	17400	9120	5800	3530	1750	2690	1830
3	1300	3680	23700	12300	9880	14500	11200	5520	2960	2450	2450	2020
4	1250	3010	19000	8760	15700	12000	11500	5340	2630	2580	2210	2010
5	1330	3010	15300	7620	19400	10700	10600	5860	2180	2230	2030	2020
6	1200	3130	13100	9820	20300	11200	9090	7110	2260	1890	1860	1730
7	1190	2890	12100	16100	19600	14000	8020	6280	2420	1760	1810	1610
8	1200	2870	11000	35100	17800	46800	7490	5580	2470	1690	1780	1640
9	1160	2360	9600	41500	16100	103000	9230	5400	2380	1440	2020	1580
10	1130	2060	8870	37200	16100	92400	12500	4930	2180	1700	2390	1490
11	1180	2010	9290	33100	16600	78200	11700	4390	2200	2760	2340	1530
12	1090	2360	9110	30200	15700	70000	9150	3770	2040	3100	2140	1480
13	1040	5880	8530	29400	12900	65300	7960	3840	1940	2900	2990	1480
14	1130	8630	7860	28100	10200	63200	7390	3810	1830	3930	3010	1540
15	1200	8520	7160	26000	8760	58000	7070	3370	1780	5060	3530	1570
16	1280	7140	6780	25000	8740	49000	6600	3250	1710	4170	3820	1500
17	1190	5870	6240	22600	12000	41700	6110	3090	1680	3610	3580	1460
18	1230	5020	5780	19500	15600	34600	7850	2950	1690	3470	3000	1440
19	1130	4630	5510	15700	17400	26400	13200	2900	1490	3330	2940	1540
20	1070	4330	5310	12600	16900	19000	17700	2710	1520	2410	2660	1550
21	1150	3820	4940	10800	15400	15500	18300	2580	1550	2170	2440	2290
22	1110	4010	4840	10900	14300	13600	14700	2570	1820	2260	2310	3180
23	1100	4820	5010	15200	16100	11900	11300	2440	1880	2450	2140	3150
24	1360	4340	7180	19900	18200	11000	9770	2410	1700	2230	1900	2560
25	1920	3970	12400	21500	18100	10300	8930	2310	1690	2300	1820	2030
26	2810	4240	17800	20700	16100	9450	8240	2350	2010	2690	1770	2220
27	3100	4330	20600	19500	16800	8790	7550	2250	1890	2820	1610	3250
28	3080	4610	21200	17700	18700	8330	6720	2470	1550	2770	1500	17500
29	3120	6960	20800	15400	---	8120	6840	2680	1510	3270	1530	68100
30	3200	18300	19900	13100	---	7650	7020	2940	1480	3880	1460	106000
31	3350	---	20100	11100	---	7510	---	3340	---	4330	1500	---
MEAN	1595	4772	12660	20130	15040	30930	9678	3892	2054	2738	2355	8092
MAX	3350	18300	26900	41500	20300	103000	18300	7110	3660	5060	3820	106000
MIN	1040	2010	4840	7620	8300	7510	6110	2250	1480	1440	1460	1440
IN.	.48	1.40	3.83	6.08	4.10	9.35	2.83	1.18	.60	.83	.71	2.37

02375500 ESCAMBIA RIVER NEAR CENTURY, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1998, BY WATER YEAR (WY)

MEAN	2694	3228	5675	8638	10400	12740	11270	5954	4419	3998	4043	3180
MAX	17070	14740	24600	31530	21160	30930	31430	19520	22500	20850	23560	12010
(WY)	1976	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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1935 - 1998	
ANNUAL MEAN	5817		9486		6332	
HIGHEST ANNUAL MEAN					11690	1975
LOWEST ANNUAL MEAN					2889	1968
HIGHEST DAILY MEAN	26900	Dec 2	106000	Sep 30	106000	Sep 30 1998
LOWEST DAILY MEAN	1040	Oct 13	1040	Oct 13	582	Oct 23 1968
ANNUAL SEVEN-DAY MINIMUM	1130	Oct 8	1130	Oct 8	605	Oct 15 1972
INSTANTANEOUS PEAK FLOW			117000	Sep 30	117000	Sep 30 1998
INSTANTANEOUS PEAK STAGE			24.11	Sep 30	24.35	Mar 18 1990
INSTANTANEOUS LOW FLOW			1040	Oct 13	578	Oct 23 1968
ANNUAL RUNOFF (INCHES)	20.69		33.74		22.54	
10 PERCENT EXCEEDS	12600		19900		14500	
50 PERCENT EXCEEDS	4150		4170		3710	
90 PERCENT EXCEEDS	1310		1500		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 instataneous 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.--Records fair, except for estimated daily discharges, which are poor. Fow generally affected by tide when discharge is less than 5,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1760	3590	10600	20600	16500	e18000	8800	8030	3100	1920	4660	2260
2	1730	3820	15700	20500	14600	e19500	8370	7600	3220	1950	4630	2690
3	1720	3430	22700	20400	13400	e18500	8480	7120	3310	2010	3990	3230
4	1760	3200	25000	19500	12900	e16500	10400	6600	3230	2220	3110	2950
5	1700	3330	24000	17000	13000	e14500	9850	6150	2890	2410	2720	2670
6	1780	3130	21800	14200	16200	e13000	13500	5790	2670	2350	2420	2550
7	1730	2880	19400	e18000	19800	e12500	13300	5880	2430	2270	2280	2440
8	1800	2800	17100	e30000	21200	e17000	12000	6390	2360	2160	2290	2310
9	1890	2800	15500	e40000	21300	e45000	10500	6430	2340	2100	2550	2280
10	1860	2740	14200	e47000	20600	e95300	9090	6030	2370	2050	2580	2270
11	1810	2370	12800	e42000	20200	e100000	9200	5660	2280	2100	2690	2370
12	1960	2730	11700	e37000	19900	e90700	11900	5090	2230	2340	3170	2430
13	2090	3850	10900	e33000	19800	e81000	13700	4510	2220	2620	3450	2410
14	1750	e7400	10500	e31500	19100	74900	12600	3930	2110	2820	3990	2480
15	1600	e10500	9860	e30000	17300	70900	10600	3700	2170	2930	3990	2400
16	1700	e10300	e9730	27300	15600	65900	8940	3560	2140	3000	4140	2390
17	1750	e8900	e9000	25800	15000	57200	8050	3320	2060	2990	4380	2540
18	1710	e7400	e8040	24200	13800	47000	7360	3160	1990	2950	4420	2460
19	1620	e6300	e7080	22700	e18300	38200	7800	3080	2020	2910	4130	2430
20	1540	e5800	6640	21000	e20500	31100	9170	2950	2000	2870	3680	2520
21	1600	e5400	6340	18900	e20000	25600	12900	2770	2120	2770	3430	2550
22	1670	e4800	6250	17600	e18500	21900	17800	2630	2120	2750	3170	2870
23	1680	e5000	5830	17200	e16000	19300	20300	2620	2100	2500	2960	3440
24	2280	4590	6070	16200	e18000	17200	19500	2540	2180	2780	2810	3560
25	2330	4620	6450	17000	e19000	15400	16800	2270	2140	2770	2540	3310
26	2880	4580	7430	19500	e20000	14000	14000	2170	2090	2690	2390	2790
27	2980	4390	10900	21300	e19500	12900	11800	e2300	2160	2850	2320	3660
28	2970	4370	16400	21600	e18500	11800	10400	2420	2150	3000	2220	15700
29	3030	5650	20600	21100	---	10700	9280	2200	2010	3430	2200	29400
30	3030	8250	21700	20000	---	9850	8540	2910	1960	3630	2210	56900
31	3260	---	20900	18400	---	9270	---	2960	---	4200	2200	---
MEAN	2031	4964	13260	24210	17800	35310	11500	4283	2339	2656	3152	5809
MAX	3260	10500	25000	47000	21300	100000	20300	8030	3310	4200	4660	56900
MIN	1540	2370	5830	14200	12900	9270	7360	2170	1960	1920	2200	2260
IN.	.56	1.34	3.69	6.73	4.47	9.82	3.09	1.19	.63	.74	.88	1.56

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

MEAN	2434	4572	6729	11390	12160	16310	8882	5973	6071	6794	3727	3922
MAX	3444	8956	18920	24210	19080	37410	13870	14530	19160	22110	9523	9067
(WY)	1990	1993	1993	1998	1992	1990	1989	1991	1989	1994	1994	1988
MIN	1521	1961	2212	3126	2650	6373	5119	2076	1466	2300	2014	1811
(WY)	1988	1991	1991	1989	1989	1989	1992	1988	1988	1988	1990	1990

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1988 - 1998	
ANNUAL MEAN	6596		10600		7383	
HIGHEST ANNUAL MEAN					10680	1990
LOWEST ANNUAL MEAN					5040	1988
HIGHEST DAILY MEAN	25000	Dec 4	100000	Mar 11	111000	Mar 22 1990
LOWEST DAILY MEAN	1540	Oct 20	1540	Oct 20	1310	Oct 12 1987
ANNUAL SEVEN-DAY MINIMUM	1650	Oct 15	1650	Oct 15	1370	Jun 16 1988
INSTANTANEOUS PEAK FLOW			102000	Mar 11	113000	Mar 23 1990
INSTANTANEOUS PEAK STAGE			15.07	Mar 11	15.72	Mar 23 1990
INSTANTANEOUS LOW FLOW			1230	Oct 20	1040	Aug 30 1990
ANNUAL RUNOFF (INCHES)	21.60		34.70		24.19	
10 PERCENT EXCEEDS	15300		21200		17000	
50 PERCENT EXCEEDS	4800		4580		4210	
90 PERCENT EXCEEDS	1850		2100		1990	

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	82	e450	80	90	107	80	86	76	59	69	84
2	62	121	e350	80	103	98	81	79	72	58	67	203
3	59	75	e280	78	426	94	76	81	71	60	63	298
4	61	63	e200	80	207	90	79	77	68	60	61	109
5	58	66	e150	262	118	92	75	76	70	60	62	83
6	58	69	e120	431	105	108	75	77	87	61	62	76
7	59	69	e110	972	98	1120	84	76	74	60	59	71
8	58	65	e100	509	93	2860	89	77	70	56	65	67
9	61	61	e100	228	90	e1400	85	77	70	63	75	65
10	61	62	e140	168	88	e800	83	75	67	66	76	67
11	62	61	e200	130	107	e500	78	74	65	63	68	69
12	60	218	e180	143	100	e350	79	73	68	59	144	79
13	59	418	e150	291	90	e250	79	75	68	70	278	75
14	59	125	e110	336	82	e210	80	74	68	76	266	66
15	58	88	e95	389	87	e190	82	72	65	65	145	45
16	59	76	81	279	295	e170	78	73	64	62	101	64
17	60	73	79	164	470	e160	79	72	65	60	92	65
18	59	70	81	137	151	e160	79	70	65	61	83	67
19	59	73	79	118	115	e180	232	69	65	59	108	83
20	60	70	78	109	104	e170	142	69	65	73	98	78
21	53	68	79	103	98	e150	87	68	68	70	119	75
22	48	157	97	756	149	e140	83	70	76	65	80	72
23	46	159	92	560	149	e130	78	71	65	65	71	67
24	78	87	331	202	109	e120	76	70	60	78	66	65
25	68	e70	174	142	100	e110	78	69	64	81	67	72
26	128	e84	104	124	105	e100	76	67	62	88	66	71
27	136	76	112	130	354	e90	76	71	62	137	66	585
28	75	74	99	112	134	e85	80	74	59	93	64	e8000
29	71	666	112	102	---	e85	92	75	53	87	64	e2200
30	66	e650	94	99	---	e88	101	127	63	73	64	e700
31	67	---	85	94	---	85	---	95	---	67	64	---
MEAN	65.5	137	146	239	151	332	88.1	76.1	67.2	69.5	91.4	457
MAX	136	666	450	972	470	2860	232	127	87	137	278	8000
MIN	46	61	78	78	82	85	75	67	53	56	59	45

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1998, BY WATER YEAR (WY)

MEAN	87.2	106	92.7	123	112	154	102	85.3	110	120	98.1	126
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	64.9	51.1	57.6	66.7	58.8	53.1
(WY)	1991	1991	1991	1989	1989	1992	1990	1988	1988	1990	1990	1990

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1988 - 1998	
ANNUAL MEAN	113		160		110	
HIGHEST ANNUAL MEAN					160	1998
LOWEST ANNUAL MEAN					76.8	1992
HIGHEST DAILY MEAN	1370	Jul 19	8000	Sep 28	8000	Sep 28 1998
LOWEST DAILY MEAN	46	Oct 23	45	Sep 15	33	Aug 24 1989
ANNUAL SEVEN-DAY MINIMUM	55	Oct 17	55	Oct 17	42	Nov 2 1990
INSTANTANEOUS PEAK FLOW			12800	Sep 28	12800	Sep 28 1998
INSTANTANEOUS PEAK STAGE			16.94	Sep 28	16.94	Sep 28 1998
INSTANTANEOUS LOW FLOW			45	Sep 15	29	Aug 25 1989
10 PERCENT EXCEEDS	185		230		151	
50 PERCENT EXCEEDS	75		79		74	
90 PERCENT EXCEEDS	61		61		59	

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 for period of record from rating curve extension, based on a slope-area study made in 1955.

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 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	379	649	3280	720	940	1330	787	1230	628	384	1620	387
2	364	726	2860	662	880	1150	922	984	536	385	859	512
3	355	656	2090	620	1840	1010	1690	835	472	410	619	615
4	349	576	1390	594	2360	900	2250	875	430	430	511	498
5	343	529	1070	772	2170	851	2200	886	410	473	466	433
6	340	510	888	2180	2090	971	1440	772	519	523	436	404
7	335	488	797	4910	1550	2030	1000	691	662	480	418	392
8	333	473	740	10700	1180	7760	890	640	655	428	466	385
9	328	462	721	10100	1030	24200	880	601	625	421	683	378
10	322	453	853	5380	950	14600	802	564	589	547	756	373
11	318	448	1140	2870	1110	4960	743	533	502	468	711	379
12	315	620	1090	1810	1240	2740	695	515	445	447	792	451
13	312	1680	1040	2410	1090	1890	665	500	421	453	871	460
14	321	1880	901	2450	993	1550	653	484	406	550	1740	422
15	406	1730	808	2470	933	1380	652	472	395	706	2480	397
16	476	1340	730	2940	1600	1270	642	466	388	766	1770	387
17	435	919	674	2760	2460	1200	640	460	381	693	1120	397
18	382	720	637	2390	2510	1180	698	446	374	593	1000	388
19	358	620	608	1680	2350	1230	1380	434	372	505	908	391
20	345	576	587	1280	1760	1230	1360	427	406	457	763	433
21	338	550	575	1120	1240	1210	1230	418	635	590	633	553
22	339	1070	576	1830	1300	1170	1080	413	870	756	536	683
23	350	1150	583	3610	1780	1070	863	413	1070	794	490	689
24	449	1050	974	3070	1550	973	729	408	1040	1070	473	542
25	783	1060	1460	2710	1350	916	653	405	727	831	445	457
26	863	875	1740	1900	1240	875	612	399	538	949	423	436
27	820	702	1740	1760	2060	843	592	401	468	1010	408	967
28	684	600	1210	1860	1790	821	763	414	432	995	396	22200
29	592	2050	967	1620	---	806	1500	414	410	1370	386	e40800
30	519	4860	878	1400	---	789	1540	515	395	1700	378	e28000
31	508	---	794	1130	---	770	---	719	---	1980	375	---
MEAN	431	1001	1110	2636	1548	2699	1018	572	540	715	772	3460
MAX	863	4860	3280	10700	2510	24200	2250	1230	1070	1980	2480	40800
MIN	312	448	575	594	880	770	592	399	372	384	375	373
IN.	1.26	2.83	3.25	7.71	4.09	7.90	2.88	1.67	1.53	2.09	2.26	9.80

e Estimated

02376500 PERDIDO RIVER AT BARRINEAU PARK, FL--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1998, BY WATER YEAR (WY)

MEAN	501	615	724	966	994	1138	1042	728	667	708	720	754
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 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1941 - 1998	
ANNUAL MEAN	923		1372		795	
HIGHEST ANNUAL MEAN					1372	1998
LOWEST ANNUAL MEAN					371	1968
HIGHEST DAILY MEAN	7000	Jul 22	40800	Sep 29	40800	Sep 29 1998
LOWEST DAILY MEAN	312	Oct 13	312	Oct 13	188	Oct 13 1972
ANNUAL SEVEN-DAY MINIMUM	321	Oct 8	321	Oct 8	190	Oct 11 1972
INSTANTANEOUS PEAK FLOW			44000	Sep 29	44000	Sep 29 1998
INSTANTANEOUS PEAK STAGE			26.30	Sep 29	26.30	Sep 29 1998
INSTANTANEOUS LOW FLOW			312	Oct 13	188	Oct 12 1972
ANNUAL RUNOFF (INCHES)	31.81		47.29		27.40	
10 PERCENT EXCEEDS	1760		2070		1450	
50 PERCENT EXCEEDS	676		721		516	
90 PERCENT EXCEEDS	374		390		297	

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	TEMPERATURE WATER (DEG C) (00010)	TEMPERATURE AIR (DEG C) (00020)	DISCHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	TURBIDITY (NTU) (00076)	SPECIFIC CONDUCTANCE (US/CM) (00095)	OXYGEN, DISSOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	ANC WATER UNFLTRD FET FIELD MG/L AS CACO3 (00410)	CARBONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
DEC												
18...	10.2	13.2	640	3.35	1.7	24	10.2	5.4	5.8	2	0	2
FEB												
23...	13.0	16.0	1830	6.54	7.3	21	10.0	5.6	5.4	2	0	1
MAY												
27...	24.6	28.6	402	2.54	2.7	23	7.1	6.2	6.2	4	0	3
SEP												
11...	22.5	--	370	2.26	3.0	24	9.3	6.3	6.2	4	0	2

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	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)
DEC											
18...	.027	<.010	<.20	.260	.040	.040	<.010	.70	.58	2.0	.40
FEB											
23...	<.010	<.010	.89	.150	<.020	<.020	.010	.70	.50	1.6	.30
MAY											
27...	.014	<.010	.26	.270	<.020	<.020	<.010	.80	.60	1.7	.30
SEP											
11...	.029	<.010	<.20	.280	<.020	<.020	<.010	.80	.60	1.6	.30

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)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	COBALT, DISSOLVED (UG/L AS CO) (01035)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SILVER, DISSOLVED (UG/L AS AG) (01075)
DEC											
18...	3.5	1.8	<.10	7.6	18	<1.0	130	25	<2.0	<1.0	<1.0
FEB											
23...	2.7	1.8	<.10	4.5	15	<1.0	190	24	<2.0	<1.0	<1.0
MAY											
27...	3.6	.70	<.10	7.0	18	<1.0	310	12	<2.0	<1.0	<1.0
SEP											
11...	3.7	.80	<.10	8.1	19	<1.0	280	11	<2.0	<1.0	<1.0

02376500 PERDIDO RIVER AT BARRINEAU PARK, FL--Continued

DATE	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)
DEC 18...	7.0	<1	56	<4	<1	K15	71	1	20	25	5.1
FEB 23...	5.0	<1	120	<4	<1	1100	260	1	20	22	3.7
MAY 27...	8.0	<1	51	<4	<1	83	K53	2	26	23	6.3
SEP											

Miscellaneous sites

Discharge measurements in the following table were made at miscellaneous sites throughout the North Florida Area.

Discharge measurements made at special study and miscellaneous sites during water year 1998

Station No.	Station Name	Location	Drainage area (mi)	Measured previously (water years)	Measurements	
					Date	Discharge (ft/s)
		ALACHUA COUNTY				
02321970	Hornsby Springs near High Springs, Fl.	Lat 29°50'59", long 82°35'36", in SE$^1/_4$ sec. 27, T. 7 S., R. 17 E., Alachua County, Hydrologic Unit 03110206, 0.9 mi upstream from confluence with Santa Fe River, and 1.6 mi north of High Springs, Fl.	I	1972 1975 1985 1990-91 1995-96	05-15-98 05-19-98 05-29-98 05-29-98 06-02-98 06-10-98 06-16-98 06-30-98	b73.1 b71.4 b63.6 a310 a282 a274 a259 a252
02322140	Poe Springs near High Springs Fl.	Lat 29°49'33", long 82°38'58", in NE$^1/_4$ sec. 6, T. 8 S., R. 17 E., Alachua County, Hydrologic Unit 03110206, on left bank of Santa Fe River, 2.8 mi west of High Springs, Fl.	I	1917 1929 1932 1942 1946 1956 1961 1972 1995-96	05-15-98 05-19-98	75.1 79.3
		GILCHRIST COUNTY				
02322400	Ginnie Spring near Fort White, Fl.	Lat 29°50'10", long 82°42'01", in NW$^1/_4$ sec. 34, T. 7 S., R. 16 E., Gilchrist County, Hydrologic Unit 03110206, 0.1 mi upstream from Santa Fe River, 5.3 mi downstream from U. S. Highway 27, 6.0 mi south of Fort White, and 20 mi upstream from the mouth of the Santa Fe River.	I	1975 1977 1993 1995-96	05-15-98 05-20-98 06-02-98 06-16-98	51.9 54.8 48.8 50.8
02322997	Rock Bluff Spring near Bell, Fl.	Lat 29°47'50", long 82°55'10", in SW$^1/_4$ sec. 9 T. 8 S., R. 14 E., Gilchrist County, Hydrologic Unit 03110205, on left bank of Suwannee River, and 4.4 mi northwest of Bell, Fl.	I	1943 1956 1961 1973 1977 1990-91 1993 1995-96	05-14-98 05-28-98 06-08-98 06-30-98	59.4 62.7 52.9 50.6
02323150	Hart Springs near Wilcox, Fl.	Lat 29°40'30", long 82°57'07", in NW$^1/_4$ sec. 30, T. 9 S, R. 14 E., Gilchrist County, Hydrologic Unit 03110205, on left bank of Suwannee River, and 4.8 mi north of Wilcox, Fl.	I	1932 1946 1956 1961 1973 1977 1995-96	05-14-98 05-18-98 06-03-98 06-18-98 06-30-98	88.6 96.0 90.0 88.2 78.4
		HAMILTON COUNTY				
02315503	White Sulphur Springs at White Springs, Fl.	Lat 30°19'47", long 82°45'40", in SW$^1/_4$ sec. 7, T. 2 S., R. 16 E., Hamilton County, Hydologic Unit 03110201, on the north bank of the Suwannee River, 0.1 mi west of State Highway 136 on U.S. Highway 41 at White Springs, Fl.	I	1907 1927 1932 1946 1956 1960 1975	05-11-98 05-18-98 05-26-98 06-08-98 06-16-98	84.4 77.7 78.7 60.5 43.4

Station No.	Station Name	Location	Drainage area (mi)	Measured previously (water years)	Measurements	
					Date	Discharge (ft/s)
02315620	Holton Springs near Fort Union, Fl.	Lat 30°26'15", long 83°03'27", in SW$^1/_4$ sec. 31, T. 1 S., R. 13 E., Hamilton County, Hydrologic Unit 03110201, at spring at head of Holton Creek, 0.7 mi upstream from mouth, 2.2 mi north of Fort Union, and 139 mi upstream from the mouth of the Suwannee River.	I	1976 1985 1995-96	05-11-98 05-20-98 06-01-98 06-08-98 06-16-98	501 496 185 167 105
		LAFAYETTE COUNTY				
02319950	Blue Spring near Dell, Fl.	Lat 30°07'33", long 83°13'34", in NW$^1/_4$ sec. 21, T. 4 S., R. 11 E., Lafayette County, Hydrologic Unit 03110205, on west bank of the Suwannee River, 1.1 mi southeast of Dell, 5.3 mi nortwest of Mayo, and 102 mi upstream from the mouth of the Suwannee River.	I	1974 1977 1992-93 1995-96	05-12-98 05-19-98 05-27-98 06-01-98 06-08-98 06-15-98 06-29-98	257 224 192 175 171 162 151
02320050	Troy Spring near Branford, Fl.	Lat 30°00'21", long 82°59'51", in SE$^1/_4$ sec. 34, T. 5 S., R. 13 E., Lafayette County, Hydrologic Unit 03110205, on right bank of Suwannnee River, and 5.3 mi northwest of Branford, Fl.	I	1942 1961 1963 1974 1977 1985 1990 1993 1995-96	05-13-98 05-19-98 05-28-98 06-02-98 06-08-98 06-16-98 06-29-98	114 155 178 192 206 163 192
		LEVY COUNTY				
02323502	Fannin Spring near Wilcox, Fl.	Lat 29°35'20", long 82°56'00", in NW$^1/_4$ sec. 29, T. 10 S., R. 14 E., Levy County, Hydrologic Unit 03110205, on left bank of the Suwannee River, and 1.8 mi southwest of Wilcox, Fl.	I	1931-32 1943 1956 1961 1963 1972-73 1977 1985 1990 1995-96	05-12-98 05-18-98 06-03-98 06-09-98 06-17-98 06-30-98	62.0 69.2 116 103 109 106
02323566	Manatee Spring near Chiefland, Fl.	Lat 29°29'22", long 82°58'37", in SE$^1/_4$ sec. 26, T. 11 S., R. 13 E., Levy County, Hydrologic Unit 03110205, on left bank of the Suwannee River, and 7.2 mi west of Chiefland, Fl.	I	1932 1943 1946 1956 1961 1963 1972 1977 1985 1990 1995-96	05-12-98 05-18-98 06-03-98 06-09-98 06-17-98 06-30-98	229 204 251 268 239 238

Station No.	Station Name	Location	Drainage area (mi)	Measured previously (water years)	Measurements	
					Date	Discharge (ft/s)
		MADISON COUNTY				
02319302	Blue Spring near Madison, Fl.	Lat 30°28'49", long 83°14'40", in SW$^1/_4$ sec. 17, T. 1 N., R. 11 E., Madison County, Hydrologic Unit 03110203, on right bank of the Withlacoochee River, and 10.2 mi east of Madison, Fl.	I	1932 1946 1956 1961 1963 1974 1977 1985 1990-91 1993 1995-96	05-11-98 05-18-98 05-26-98 06-01-98 06-16-98	187 197 160 161 141
		SUWANNEE COUNTY				
02315600	Suwannee Springs near Live Oak, Fl.	Lat 30°23'39", long 82°56'04", in SE$^1/_4$ sec. 17, T. 1 S., R. 14 E., Suwannee County, Hydrologic Unit 03110205, on left bank of Suwannee at town of Suwannee Springs, 0.1 mi upstream from U.S. Highway 129 bridge, and 7.4 mi north of Live Oak, Fl.	I	1906 1932 1946 1956 1961-70 1974 1978 1995	05-11-98 05-18-98 05-26-98 06-08-98 06-16-98	42.4 55.4 40.0 30.7 34.3
02319900	Charles Springs near Dell, Fl.	Lat 30°10'02", long 83°13'50", in NW$^1/_4$ sec. 4, T. 4 S., R. 11 E., Suwannee County, Hydrologic Unit 03110205, on left bank of the Suwannee River, and 2.2 mi north of Dell, Fl.	I	1942 1956 1961 1974 1977 1995-96	05-12-98 05-18-98 05-27-98 06-08-98	35.9 47.6 48.9 43.0
02320003	Telford Spring at Luraville, Fl.	Lat 30°06'24", long 83°09'57", in SE$^1/_4$ sec. 25, T. 4 S., R. 11 E., Suwannee County, Hydrologic Unit 03110205, on left bank of the Suwannee River, 1.0 mi south of Luraville, and 10.4 mi southeast of Dowling Park, Fl.	I	1942 1961 1985 1990-91 1995-96	05-12-98 05-19-98 05-27-98 06-01-98 06-17-98	107 74.4 69.6 68.7 51.2
02320130	Royal Spring near Alton, Fl.	Lat 30°05'01", long 82°04'30", in NW$^1/_4$ sec. 1, T. 5 S., R. 12 E., Suwannee County, Hydrologic Unit 03110205, on left bank of Suwannee River, 4.2 mi northeast of Alton, 6.2 mi northeast of Mayo, and 89 mi upstream from the mouth of the Suwannee River.	I	1977 1995	05-13-98 05-19-98	29.1 25.7
02320400	Little River Springs near Branford, Fl.	Lat 29°59'47", long 82°57'59", in NE$^1/_4$ sec. 1, T. 6 S., R. 13 E., Suwannee County, Hydrologic Unit 03110205, on left bank of the Suwannee River, 3.2 southwest of O'Brien, 3.4 mi northwest of Branford, and 79 mi upstream from the mouth of the Suwannee River.	I	1974 1977 1993 1995-96	05-13-98 05-28-98 06-02-98 06-08-98 06-16-98 06-29-98	217 197 171 152 158 114
02320502	Branford Springs at Branford, Fl.	Lat 29°57'17", long 82°55'44", in NE$^1/_4$ sec. 20, T. 6 S., R. 14 E., Suwannee County, Hydrologic Unit 03110205, on left bank of the Suwannee River, 150 ft downstream from bridge on U. S. Highway 27 at Branford, 10.2 mi upstream from Santa Fe River, and 75 mi downstream from mouth.	I	1927 1932 1956 1961 1973	05-14-98 05-19-98 05-28-98 06-30-98	82.5 45.9 39.9 38.3

Station No.	Station Name	Location	Drainage area (mi)	Measured previously (water years)	Measurements	
					Date	Discharge (ft/s)
		SUWANNEE COUNTY--Continued				
02322700	Ichetucknee Springs near Hildreth, Fl.	Lat 29°57'09", long 82°47'10", in NW$^1/_4$ 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 springs.	I	1917 1929-83 1989 1991 1995-97	05-19-97 05-23-97 05-15-98 05-19-98 06-02-98 06-10-98 06-18-98	416 481 520 486 424 479 444
300718083 075701	Peacock Springs near Luraville, Fl.	Lat 30°07'18", long 83°07'57", in NW$^1/_4$ sec. 20, T. 4 S., R. 12 E., Suwannee County, Hydrologic Unit 03110205, at the head of Peacock Slough, 1.5 mi upstream from mouth, and 2.2 mi east of Luraville, Fl.	I	1974	05-12-98 05-19-98 05-28-98 06-02-98 06-08-98 06-17-98	201 158 141 120 109 91.2

a- measured above sinkhole
b- measured below sinkhole
I- indeterminate

ELEVATION OF LAKES

OCHLOCKONEE RIVER BASIN
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, 86.20 ft, Mar. 25; minimum observed 83.30 ft, Oct. 21.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY INSTANTANEOUS VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	86.12	---	---	---	---	---
2	---	---	---	84.09	---	---	---	---	---	83.90	---	---
3	83.80	83.72	---	---	---	---	---	---	---	---	---	84.24
4	---	---	84.12	---	---	---	---	---	---	---	---	---
5	---	---	---	---	84.58	85.04	---	---	84.76	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	84.04	---
8	---	---	---	84.24	---	---	---	85.50	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	83.72	---	---	---	---	86.04	---	---	---	---	---
11	---	---	84.04	---	---	---	---	---	84.54	---	---	84.22
12	---	---	---	---	84.58	85.92	---	---	---	---	---	---
13	83.50	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	84.10	83.90	---
15	---	---	---	84.32	---	---	85.96	85.40	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	84.04	---	---	---	---	---	---	---	---	84.06
19	---	84.12	---	---	---	---	---	---	84.40	---	---	---
20	---	---	---	---	84.80	86.14	---	85.24	---	---	---	---
21	83.30	---	---	---	---	---	---	---	---	---	83.94	---
22	---	---	---	84.31	---	---	---	85.18	---	---	---	---
23	---	---	---	---	---	---	85.82	---	---	---	---	---
24	---	---	84.12	---	---	---	---	---	---	84.06	---	---
25	---	84.02	---	---	---	86.20	---	---	---	---	---	84.20
26	---	---	---	---	---	---	---	---	84.16	---	---	---
27	83.46	---	---	---	85.10	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	83.76	---
29	---	---	---	84.36	---	---	---	84.96	---	---	---	---
30	---	---	---	---	---	---	85.72	---	---	84.14	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---	---	---	---
MEAN	---	---	---	---	---	---	---	---	---	---	---	---
MAX	---	---	---	---	---	---	---	---	---	---	---	---
MIN	---	---	---	---	---	---	---	---	---	---	---	---

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, 72,000 acre-ft, Oct. 1, elevation, 68.71 ft; minimum daily contents, unknown, Jan. 8, elevation, 57.75 ft.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68.71	68.49	68.36	58.61	58.47	58.48	61.24	62.60	62.74	62.90	67.48	68.49
2	68.60	68.64	68.15	58.49	58.44	58.49	61.93	62.57	62.75	62.90	67.75	68.44
3	68.47	68.63	67.54	58.52	58.37	58.45	62.49	62.58	62.76	62.89	67.89	68.47
4	68.41	68.56	66.74	58.49	58.49	58.45	62.76	62.54	62.76	62.87	67.98	68.52
5	68.44	68.41	65.77	58.81	58.50	58.45	62.64	62.56	62.76	62.88	68.07	68.39
6	68.44	68.41	64.76	58.57	58.46	58.46	62.46	62.56	62.76	62.85	68.13	68.45
7	68.45	68.45	63.75	58.49	58.52	58.51	62.48	62.51	62.79	62.82	68.16	68.41
8	68.45	68.48	62.70	57.93	58.48	59.13	62.51	62.50	62.77	62.80	68.21	68.43
9	68.45	68.46	61.68	58.12	58.50	62.34	62.49	62.53	62.75	62.85	68.26	68.55
10	68.44	68.46	60.72	58.50	58.50	63.99	62.50	62.48	62.74	62.91	68.32	68.55
11	68.43	68.49	59.62	58.45	58.47	63.49	62.48	62.50	62.73	62.88	68.40	68.52
12	68.42	68.56	58.99	58.48	58.51	63.88	62.45	62.49	62.71	62.87	68.45	68.50
13	68.41	68.48	58.49	58.48	58.49	64.69	62.54	62.47	62.68	62.91	68.50	68.51
14	68.41	68.45	58.54	58.43	58.49	64.49	62.69	62.50	62.67	63.11	68.54	68.49
15	68.41	68.52	58.49	58.45	58.46	63.32	62.80	62.58	62.63	63.54	68.61	68.47
16	68.41	68.30	58.47	58.47	58.39	62.02	62.77	62.66	62.62	63.78	68.66	68.51
17	68.39	68.31	58.48	58.42	58.48	60.28	62.72	62.73	62.61	63.95	68.75	68.51
18	68.38	68.32	58.51	58.44	58.47	59.10	62.65	62.71	62.60	64.10	68.78	68.50
19	68.36	68.34	58.52	58.52	58.46	58.75	62.61	62.56	62.57	64.19	68.68	68.49
20	68.36	68.29	58.54	58.82	58.46	58.53	62.61	62.46	62.54	64.32	68.56	68.56
21	68.35	67.98	58.54	58.50	58.48	58.43	62.64	62.44	62.50	64.55	68.47	68.61
22	68.34	68.13	58.53	58.43	58.48	58.54	62.59	62.48	62.48	64.77	68.48	68.52
23	68.34	68.31	58.54	58.45	58.53	58.54	62.55	62.51	62.55	65.02	68.49	68.34
24	68.36	68.30	58.56	58.47	58.42	58.54	62.56	62.54	62.68	65.30	68.47	67.95
25	68.46	68.33	58.49	58.47	58.48	58.56	62.58	62.57	62.69	65.49	68.46	68.03
26	68.55	68.38	58.50	58.45	58.43	58.49	62.56	62.59	62.72	65.64	68.47	68.06
27	68.69	68.59	58.48	58.45	58.55	58.44	62.56	62.62	62.75	65.83	68.47	68.16
28	68.58	68.70	58.53	58.46	58.47	58.67	62.60	62.64	62.79	66.26	68.49	68.22
29	68.50	68.59	58.48	58.49	---	59.15	62.63	62.67	62.84	66.63	68.50	68.65
30	68.43	68.39	58.59	58.51	---	59.69	62.63	62.68	62.93	66.92	68.50	69.36
31	68.40	---	58.56	58.47	---	60.43	---	62.71	---	67.21	68.50	---
MEAN	68.45	68.43	60.67	58.47	58.47	60.03	62.52	62.57	62.70	64.13	68.37	68.46
MAX	68.71	68.70	68.36	58.82	58.55	64.69	62.80	62.73	62.93	67.21	68.78	69.36
MIN	68.34	67.98	58.47	57.93	58.37	58.43	61.24	62.44	62.48	62.80	67.48	67.95

CAL YR 1997 MEAN 67.83 MAX 68.78 MIN 58.47
WTR YR 1998 MEAN 63.62 MAX 69.36 MIN 57.93

WELL DESCRIPTIONS AND GROUND-WATER DATA

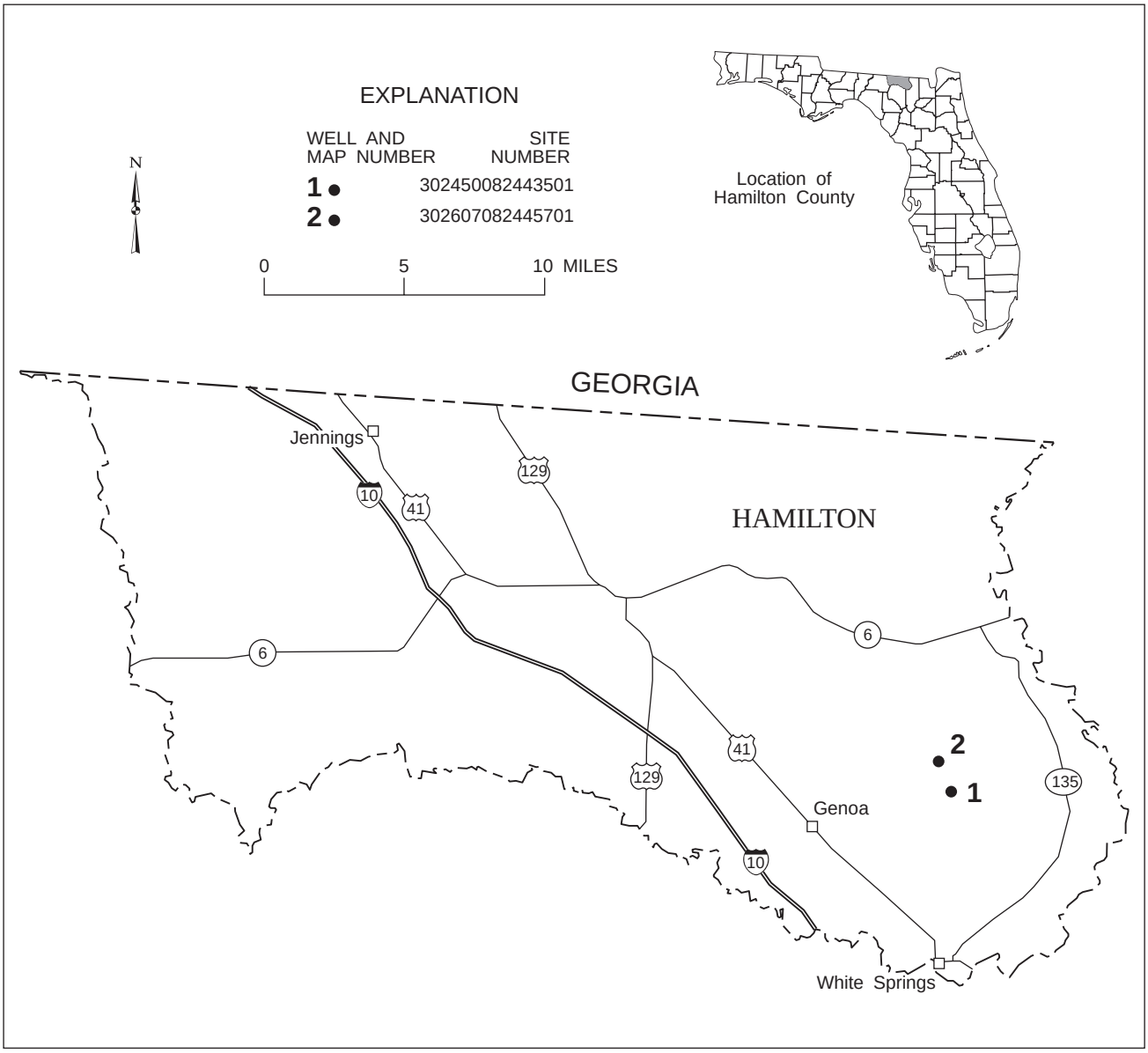

Figure 14. Location of wells in Hamilton County.

WELL NUMBER.--302450082443501. Occidental Monitor Well CW-2 near White Springs, FL.

LOCATION.--Lat 30°24'50", long 82°44'35", in SW¼SW¼ sec.5, T.1 S., R.16 E., Hydrologic Unit 03110201, 5.4 mi northeast of intersection U.S. Highway 41 and County Road 137, and 7.0 mi north of White Springs. Owner: U.S. Geological Survey.

AQUIFER.--Disturbed fill material consisting of unconsolidated quartz sand and clay sediment.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, diameter 2 in., depth 28 ft, cased to 25 ft.

INSTRUMENTATION.--Water-stage recorder--60 minute interval.

DATUM.--Land-surface datum is 158.69 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.03 ft above land-surface datum.

PERIOD OF RECORD.--July 1996 to September 1998.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 147.79 ft NGVD, Feb. 18, 23, 1998; lowest, 144.75 ft NGVD, Oct. 25, 1997.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	145.03	145.73	145.73	146.12	146.63	147.07	146.58	146.00	145.43	145.73	145.64	145.34
10	144.93	145.77	145.84	146.09	146.45	147.15	146.49	145.93	145.31	145.60	145.55	145.30
15	144.87	145.73	146.14	146.23	146.44	146.94	146.37	145.78	145.25	145.67	145.44	145.22
20	144.80	145.62	146.22	146.31	147.65	147.02	146.27	145.71	145.13	145.80	145.35	145.31
25	144.75	145.52	146.23	146.92	147.70	146.79	146.16	145.62	144.99	145.84	145.37	145.65
EOM	145.52	145.72	146.17	146.75	147.42	146.69	146.10	145.52	145.76	145.71	145.23	146.01
MAX	145.52	145.82	146.27	146.93	147.79	147.33	146.66	146.10	145.76	145.86	145.71	146.01

CAL YR 1997 MAX 146.62
WTR YR 1998 MAX 147.79

WELL NUMBER.--302607082445701. Occidental Clay Monitor Well near White Springs, FL.

LOCATION.--Lat 30°26'07", long 82°44'57", in SW¼NE¼ sec.6, T.1 S., R.16 E., Hydrologic Unit 03110201, 5.4 mi northeast of intersection U.S. Highway 41 and County Road 137, and 7.0 mi north of White Springs. Owner: U.S. Geological Survey.

AQUIFER.--Disturbed fill material consisting of unconsolidated quartz sand and clay sediment.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, diameter 2 in., depth 25 ft, cased to 16 ft.

INSTRUMENTATION.--Water-stage recorder--60 minute interval.

DATUM.--Land-surface datum is 151.31 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.31 ft above land-surface datum.

PERIOD OF RECORD.--July 1996 to September 1998 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 148.57 ft NGVD, Mar 28, 1998; lowest, 143.13 ft NGVD, Oct. 23, 1997.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	143.46	143.71	144.30	145.43	147.64	148.05	147.88	146.52	144.86	144.30	143.72	143.40
10	143.28	143.87	144.51	145.59	147.30	148.27	147.68	146.27	144.51	143.99	143.65	143.29
15	143.31	143.97	144.83	146.06	147.38	148.16	147.45	145.79	144.53	144.00	143.57	143.16
20	143.20	143.87	144.82	146.10	147.89	148.57	147.23	145.49	144.17	144.07	143.42	143.16
25	143.18	143.72	145.18	146.93	148.10	148.16	146.90	145.31	143.91	144.10	143.53	143.73
EOM	143.84	144.32	145.37	147.36	148.22	148.03	146.75	145.08	144.32	143.85	143.29	144.00
MAX	143.84	144.32	145.59	147.37	148.22	148.57	148.00	146.76	145.13	144.36	143.79	144.00

CAL YR 1997 MAX 146.81
WTR YR 1998 MAX 148.57

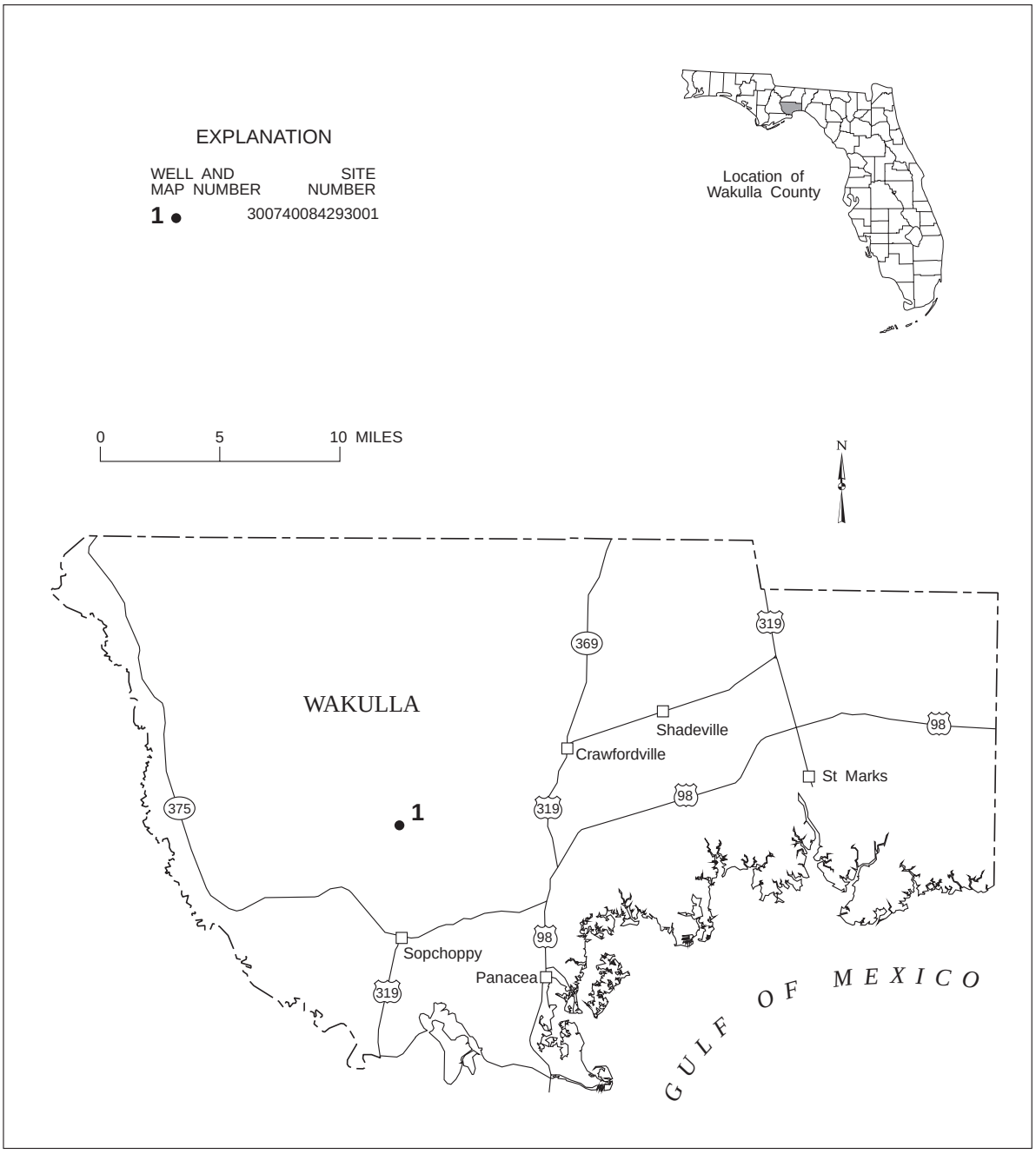

Figure 15. Location of wells in Wakulla County.

WELL NUMBER.--300740084293001. USGS Observation Well near Crawfordville, FL.

LOCATION.--Lat 30°07'40", long 84°29'30", in NW¼NE¼NW¼ sec.24, T.4 S., R.3 W., Hydrologic Unit 03120003, 400 ft east of Sopchoppy River, 6.6 mi southwest of intersection of Forest Road 365 and State Highway 368, and 7.8 mi west of Crawfordville.

AQUIFER.--Hawthorn Limestone aquifer of the Miocene System, Geologic Unit 122 HTRNN.

WELL CHARACTERISTICS.--Drilled, bench mark, artesian well, diameter 6 in., depth 127 ft, cased to 121 ft.

INSTRUMENTATION.--Water-level recorder. Measuring point: Top of recorder shelf, 2.90 ft above land-surface datum.

DATUM.--Land-surface datum is 46.91 ft above National Geodetic Vertical Datum of 1929.

PERIOD OF RECORD.--January 1967 to current year. Records of water levels prior to January 1974 are available in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.91 ft NGVD, July 31, 1975; lowest, 24.42 ft NGVD, Sept. 14, 1966.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.01	31.26	32.26	32.63	32.92	33.81	e33.02	31.85	30.36	29.15	31.86	31.86
2	30.97	31.44	32.23	32.63	33.02	33.67	e32.94	31.79	30.32	29.10	e32.10	31.98
3	30.93	31.53	32.25	32.61	33.56	33.54	e32.87	31.74	30.26	29.05	e32.18	33.78
4	30.88	31.57	32.31	32.57	33.85	33.42	e32.75	31.68	30.22	29.02	e32.18	34.92
5	30.83	31.62	32.31	32.53	33.98	33.35	e32.70	31.61	30.17	29.01	e32.15	35.13
6	30.77	31.70	32.30	32.50	33.99	33.28	32.64	31.57	30.13	28.97	e32.08	34.98
7	30.74	31.77	32.28	32.54	33.92	33.40	32.59	31.55	30.05	28.95	e32.00	34.74
8	30.70	31.79	32.29	32.85	33.81	33.98	32.55	31.53	30.00	28.94	e32.06	34.51
9	30.64	31.78	32.31	33.02	33.68	34.72	32.54	31.44	29.97	28.97	e32.25	34.24
10	30.60	31.74	32.33	33.13	33.57	35.33	32.44	31.41	29.95	29.02	e32.45	34.01
11	30.58	31.69	32.28	33.19	33.52	35.42	32.35	31.36	29.92	29.05	e32.65	33.83
12	30.55	31.72	32.25	33.18	33.40	35.17	32.30	31.27	29.87	29.06	e32.90	33.68
13	30.51	32.09	32.26	33.17	33.33	34.86	32.27	31.19	29.85	29.07	e33.15	33.53
14	30.47	32.33	32.28	33.19	33.24	34.62	32.25	31.15	29.83	29.11	e33.10	33.37
15	30.44	32.44	32.27	33.30	33.20	34.42	32.21	31.09	29.77	29.23	e32.85	33.21
16	30.41	32.53	32.26	33.36	33.26	e34.14	32.18	31.03	29.69	29.31	e32.70	33.10
17	30.40	32.56	32.26	33.34	33.50	e34.23	32.14	30.99	29.63	29.42	e32.60	33.09
18	30.39	32.59	32.23	33.33	33.61	e34.36	32.10	30.95	29.60	29.62	e32.55	33.10
19	30.36	32.59	32.17	33.32	33.67	e34.42	32.11	30.89	29.57	29.91	e32.60	33.10
20	30.28	32.57	32.15	33.23	33.73	e34.49	32.18	30.84	29.55	30.15	e32.55	33.15
21	30.26	32.54	32.15	33.17	33.67	e34.39	32.20	30.81	29.50	30.33	e32.40	33.42
22	30.25	32.49	32.17	33.14	33.77	e34.17	32.19	30.76	29.45	30.47	e32.30	33.76
23	30.21	32.40	32.27	33.19	34.07	e34.01	32.16	30.68	29.42	30.61	e32.25	33.94
24	30.22	32.29	32.41	33.23	34.13	e33.86	32.08	30.63	29.39	30.75	e32.53	33.96
25	30.24	32.24	32.55	33.21	34.15	e33.71	32.02	30.59	29.36	30.85	e32.65	33.89
26	30.26	32.22	32.64	33.22	34.12	e33.61	31.98	30.55	29.34	30.94	e32.56	33.80
27	30.45	32.16	32.81	33.23	34.05	e33.52	31.95	30.50	29.32	31.08	e32.30	33.72
28	30.59	32.12	32.83	33.16	33.92	e33.40	31.90	30.46	29.27	31.20	e32.12	33.66
29	30.74	32.14	32.91	33.10	---	e33.30	31.85	30.42	29.23	31.28	32.00	33.76
30	30.85	32.26	32.85	33.06	---	e33.19	31.86	30.39	29.19	31.49	31.95	35.29
31	31.02	---	32.76	32.98	---	e33.10	---	30.36	---	31.68	31.91	---
MEAN	30.57	32.07	32.38	33.04	33.67	34.03	32.31	31.07	29.74	29.83	32.38	33.75
MAX	31.02	32.59	32.91	33.36	34.15	35.42	33.02	31.85	30.36	31.68	33.15	35.29
MIN	30.21	31.26	32.15	32.50	32.92	33.10	31.85	30.36	29.19	28.94	31.86	31.86

CAL YR 1997 MEAN 32.33 MAX 35.19 MIN 30.21
WTR YR 1998 MEAN 32.06 MAX 35.42 MIN 28.94

e Estimated

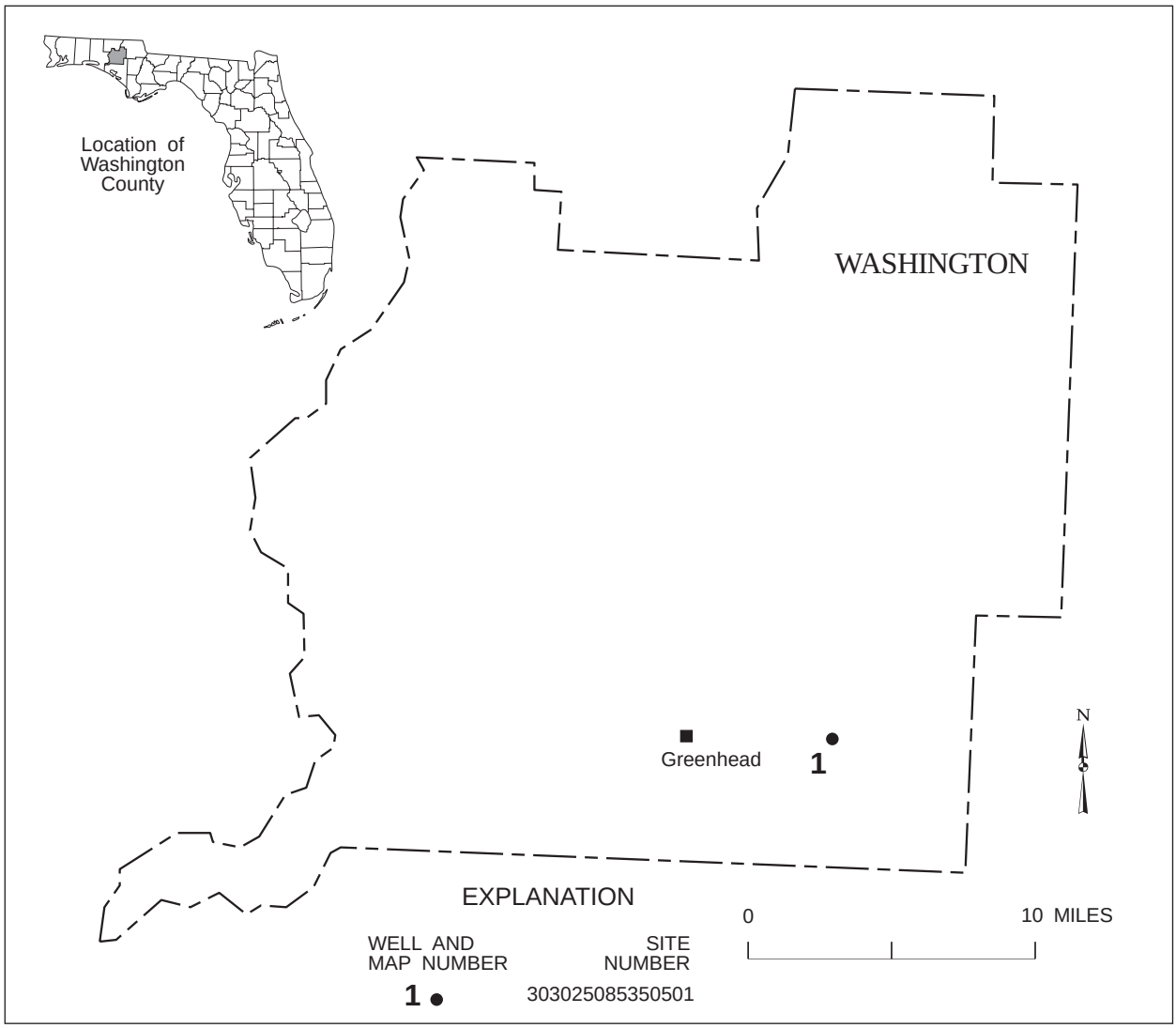

Figure 16. Location of wells in Washington County.

WELL NUMBER.--303025085350501. Local Number 422A. U.S. Geological Suvery 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 asquifer 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 recorder shelf, 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 1997 TO SEPTEMBER 1998
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	59.11	59.70	59.62	60.69	61.94	63.68	63.28	62.14	---	---	59.30
2	---	59.12	59.68	59.62	61.01	61.95	63.67	63.23	62.09	---	---	59.97
3	59.35	59.10	59.71	59.61	61.12	61.94	63.69	63.20	62.02	---	---	60.40
4	59.30	59.07	59.70	59.61	61.11	61.96	63.69	63.23	61.96	---	---	60.46
5	59.26	59.06	59.65	59.58	61.14	62.07	63.63	63.20	61.91	---	---	60.48
6	59.24	59.17	59.59	59.78	61.16	62.15	63.62	63.15	61.86	---	---	60.48
7	59.20	59.18	59.57	60.06	61.16	62.59	63.61	63.12	61.82	---	---	60.49
8	59.18	59.19	59.57	60.11	61.16	62.77	63.63	63.11	61.76	---	---	60.47
9	59.13	59.14	59.57	60.12	61.15	62.77	63.66	63.03	61.71	---	---	60.44
10	59.08	59.09	59.55	60.16	61.16	62.88	63.56	63.01	61.67	---	---	60.39
11	59.05	59.04	59.50	60.18	61.28	62.97	63.52	62.94	61.63	---	---	60.37
12	59.03	59.61	59.60	60.21	61.28	63.04	63.51	62.88	---	---	---	60.36
13	58.99	59.77	59.61	60.34	61.27	63.14	63.50	62.84	---	---	---	60.35
14	58.96	59.78	59.65	60.41	61.26	63.21	63.49	62.79	---	---	---	60.28
15	58.93	59.78	59.65	60.54	61.37	63.26	63.48	62.75	---	---	---	60.22
16	58.90	59.78	59.61	60.54	61.55	63.32	63.47	62.72	---	---	---	60.18
17	58.91	59.77	59.60	60.53	61.57	63.40	63.45	62.67	---	---	---	60.19
18	58.90	59.75	59.56	60.54	61.55	63.47	63.42	62.63	---	---	---	60.19
19	58.86	59.71	59.52	60.54	61.60	63.52	63.54	62.56	---	---	---	60.14
20	58.82	59.69	59.51	60.52	61.60	63.54	63.55	62.52	---	---	59.82	60.23
21	58.80	59.67	59.50	60.53	61.62	63.54	63.54	62.48	---	---	59.80	60.44
22	58.79	59.63	59.53	60.63	61.83	63.57	63.51	62.43	---	---	59.76	60.46
23	58.76	59.56	59.57	60.67	61.82	63.59	63.49	62.37	---	---	59.73	60.45
24	58.81	59.50	59.69	60.66	61.81	63.60	63.45	62.32	---	---	59.70	60.41
25	58.79	59.48	59.69	60.66	61.86	63.60	63.43	62.27	---	---	59.65	60.39
26	58.94	59.46	59.75	60.68	61.90	63.63	63.42	62.21	---	---	59.60	60.44
27	58.98	59.43	59.79	60.70	61.94	63.66	63.40	62.16	---	---	59.54	60.60
28	58.97	59.38	59.75	60.70	61.94	63.66	63.35	62.12	---	---	59.49	60.70
29	58.97	59.70	59.82	60.70	---	63.66	63.31	62.08	---	---	59.44	61.18
30	58.96	59.74	59.73	60.69	---	63.67	63.31	62.16	---	---	59.40	61.29
31	59.05	---	59.69	60.69	---	63.68	---	62.16	---	---	59.35	---
TOTAL	---	1783.46	1848.61	1869.93	1719.91	1955.75	1905.58	1943.62	---	---	---	1811.75
MEAN	---	59.45	59.63	60.32	61.43	63.09	63.52	62.70	---	---	---	60.39
MAX	---	59.78	59.82	60.70	61.94	63.68	63.69	63.28	---	---	---	61.29
MIN	---	59.04	59.50	59.58	60.69	61.94	63.31	62.08	---	---	---	59.30