

02197000 SAVANNAH RIVER AT AUGUSTA, GA

LOCATION.--Lat 33°22'25'', long 81°56'35'', Richmond County, Hydrologic Unit 03060106, at New Savannah Bluff lock and dam, 0.2 mi upstream from Butler Creek, 12.0 mi downstream from Augusta, and at mile 187.4.

DRAINAGE AREA.--7,508 mi², including that of Butler Creek.

PERIOD OF RECORD.--October 1883 to December 1891, January 1896 to December 1906, January 1925 to current year. Monthly discharges only for some periods, published in WSP 1303. Gage-height records collected at site of Fifth Street gage from 1875 to 1952 and at New Savannah Bluff lock and dam sites since 1937 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1303: 1927-39 (monthly runoff). WSP 1433: 1888, 1896-99, 1902-03, 1906-07, and 1932 (M). WRD SC-77-1: 1975. WRD SC-94-1: Peaks outside period of record, 1796, 1840, 1852, 1864, 1865, 1908.

GAGE.--Data collection platform. Datum of gage is 96.58 ft above sea level (U.S. Army Corps of Engineers bench mark). Oct. 1, 1883 to Dec. 31, 1891, Jan. 1, 1896, to Dec. 31, 1906, Jan. 1, 1925, to Sept. 30, 1932, nonrecording or recording gage at Fifth Street Bridge at datum 102.06 ft above sea level (levels by Southeastern Engineering Co.). Oct. 1, 1932, to Sept. 30, 1936, recording gage at Thirteenth Street bridge at datum 104.56 ft above sea level (levels by U.S. Army Corps of Engineers). Oct. 1, 1936, to Nov. 10, 1948, recording gage at site 0.2 mi downstream from present site and at present datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Thurmond Lake (see sta 02194500), Hartwell Lake, Richard B. Russell Lake, and by other powerplants above station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 307,000 ft³/s, Aug. 27, 1908, gage height, 38.8 ft, at site and datum at Fifth Street gage. Stages and discharges for other floods at site and datum at Fifth Street gage are as follows: 280,000 ft³/s, Jan. 17, 1796, gage height (determined by analysis of historical documents), 38 ft; 260,000 ft³/s, May 28, 1840, gage height, 37.5 ft; 230,000 ft³/s, Aug. 29, 1852, gage height, 36.8 ft; 160,000 ft³/s, Jan. 1, 1864, gage height, 34.0 ft; 220,000 ft³/s, Jan. 11, 1865, gage height, 36.4 ft. Stages for the 1840, 1852, 1864, and 1865 floods were obtained from the City of Augusta, Georgia, gage records that were copied in the log books of the National Weather Service. These floods and floods recorded by the National Weather Service beginning in 1876 are stored in the USGS peak flow database. Other historical documents indicated floods of unknown magnitude occurred in 1722 and 1741.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3950	4140	4540	4140	7490	4540	4490	4030	3880	4260	4650	4980
2	4080	4610	4370	4220	6720	4500	4260	3970	4080	4080	5570	4940
3	4110	4270	4400	4440	4580	4430	4490	e3900	4110	3960	4800	4650
4	5340	4440	3920	4530	4920	4650	5380	e4050	3930	4250	5650	4970
5	5340	4380	3900	4460	4740	4750	4990	4100	e4420	4440	6460	5310
6	5160	4390	4040	4310	4570	4730	5060	4020	e4360	5480	4620	6520
7	5260	4360	4200	4370	4910	4730	4440	3970	4480	5070	4960	5990
8	5080	4240	4130	4180	4040	4680	4210	4540	4270	4510	5810	6140
9	4750	4220	4140	4550	4340	4610	4090	4040	4080	4110	4630	5130
10	4510	4250	4350	e5350	4430	4590	4290	4030	4030	4500	5590	4620
11	4520	4450	4260	5090	4760	4660	5210	4080	4010	4980	5120	5160
12	5220	4200	4110	7350	4180	4110	4360	4120	3950	4910	4450	4690
13	5060	4580	4130	5490	4130	5970	4450	3960	4080	4460	4040	4730
14	5010	4400	4190	4540	5320	5450	4550	3940	3930	4170	5180	5040
15	4660	5100	4080	4160	6860	4360	4360	3940	3910	4120	6570	5170
16	4480	3950	4100	5580	6560	4930	4180	3940	3980	4230	7130	4500
17	4500	4010	4120	6280	5160	4300	4080	4010	3950	4410	7150	4230
18	4400	4130	4170	4470	5780	4090	4220	3920	3890	4250	7560	4570
19	4780	4220	4160	3990	4720	3940	4640	3930	3910	3970	6500	4180
20	5460	4030	4350	4090	3940	e6020	4450	3930	4070	3970	5120	4830
21	4880	4030	4900	6810	4110	8740	4330	4130	6280	4040	5120	5630
22	4520	4030	4740	7590	4850	8630	4050	4600	5210	4040	4510	5970
23	4740	4230	4370	5790	4470	5120	4010	3950	5050	4490	4030	8710
24	4770	4140	4280	7030	4400	4400	4050	3880	4540	4890	4090	11300
25	4930	4100	4370	e13800	4560	4620	4090	3940	4270	4470	4300	9220
26	4870	4350	4080	14400	4550	5130	3980	4140	4040	4400	4080	6920
27	5060	4460	4040	8820	3980	4930	4000	4550	4090	4060	3950	6110
28	5360	4360	4140	6470	4080	5470	4080	4640	4280	4190	3970	6470
29	4680	4200	4260	5470	4420	4860	4220	4430	4290	4250	4090	4910
30	4120	4380	4370	5230	---	4890	4120	4070	4700	4100	5530	4250
31	4080	---	4210	6580	---	4610	---	4010	---	4070	5340	---
TOTAL	147680	128650	131420	183580	141570	155440	131130	126760	128070	135130	160570	169840
MEAN	4764	4288	4239	5922	4882	5014	4371	4089	4269	4359	5180	5661
MAX	5460	5100	4900	14400	7490	8740	5380	4640	6280	5480	7560	11300
MIN	3950	3950	3900	3990	3940	3940	3980	3880	3880	3960	3950	4180
CFSM	.63	.57	.56	.79	.65	.67	.58	.54	.57	.58	.69	.75
IN.	.73	.64	.65	.91	.70	.77	.65	.63	.63	.67	.80	.84

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7251	7292	9042	10690	12160	14110	12980	9327	8204	7159	7499	6993
MAX	17740	18610	27270	30250	30600	29090	43850	27050	22830	13200	15820	14480
(WY)	1965	1996	1993	1993	1998	1952	1964	1964	1973	1976	1994	1964
MIN	2728	4017	3751	4084	4861	5014	4371	4089	4269	3627	3889	3332
(WY)	1952	1953	1953	1953	1956	2000	2000	2000	2000	1952	1952	1952

SAVANNAH RIVER BASIN

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SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1952 - 2000	
ANNUAL TOTAL	1974130		1739840			
ANNUAL MEAN	5409		4754		9378	
HIGHEST ANNUAL MEAN					16580 1964	
LOWEST ANNUAL MEAN					4754 2000	
HIGHEST DAILY MEAN	14600	Feb 3	14400	Jan 26	84500	Apr 10 1964
LOWEST DAILY MEAN	3800	May 16	3880	a May 24	1770	Oct 18 1951
ANNUAL SEVEN-DAY MINIMUM	4060	Nov 16	3940	May 14	2090	Oct 20 1951
INSTANTANEOUS PEAK FLOW			16800	b Jan 25	87100	Apr 9 1964
INSTANTANEOUS PEAK STAGE			13.25	b Jan 25	24.16	Apr 9 1964
ANNUAL RUNOFF (CFSM)	.72		.63		1.25	
ANNUAL RUNOFF (INCHES)	9.78		8.62		16.97	
10 PERCENT EXCEEDS	7180		5800		18000	
50 PERCENT EXCEEDS	5090		4430		6930	
90 PERCENT EXCEEDS	4150		4000		5000	

a Also occurred Jun. 1.
 b Also occurred Jan. 26.
 e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1883-1951, BY WATER YEAR (WY) (PRIOR TO REGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6988	6923	9645	13560	16950	17490	13660	8566	7962	8042	8864	7916
MAX	42170	21250	27390	40950	39560	52440	58700	20670	22700	19480	35030	47850
(WY)	1930	1949	1933	1936	1903	1929	1936	1929	1900	1906	1887	1888
MIN	2079	2614	4263	5137	4812	6298	5298	3427	3258	2811	1706	1453
(WY)	1905	1932	1884	1890	1938	1898	1896	1927	1925	1883	1925	1925

SUMMARY STATISTICS WATER YEARS 1883-1951

ANNUAL MEAN	10640
HIGHEST ANNUAL MEAN	16500 1929
LOWEST ANNUAL MEAN	5836 1904
HIGHEST DAILY MEAN	315000 Oct 3 1929
LOWEST DAILY MEAN	1040 Oct 2 1927
ANNUAL SEVEN-DAY MINIMUM	1170 Aug 23 1925
INSTANTANEOUS PEAK FLOW	a 350000 Oct 3 1929
INSTANTANEOUS PEAK STAGE	b 46.30 Sep 27 1929
INSTANTANEOUS LOW FLOW	c 648 Sep 24 1939
ANNUAL RUNOFF (CFSM)	1.42
ANNUAL RUNOFF (INCHES)	19.25
10 PERCENT EXCEEDS	19900
50 PERCENT EXCEEDS	6720
90 PERCENT EXCEEDS	3180

a Gage height 45.10 ft, at site and datum then in use.
 b At site and datum then in use.
 c From rating curve extended below 1,400 ft³/s.

