

Water-Data Report 2012

## 02197000 SAVANNAH RIVER AT AUGUSTA, GA

Savannah Basin  
Middle Savannah Subbasin

LOCATION.--Lat 33°22'25", long 81°56'35" referenced to North American Datum of 1927, Richmond County, GA, 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.--7,510 mi<sup>2</sup>.

### SURFACE-WATER RECORDS

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 NGVD of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Oct. 1, 2008 at same site at datum of 95.58 ft above NGVD of 1929. Prior to October 1, 2001, at same site at datum of 96.58 ft above NGVD of 1929. 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 NGVD of 1929 (levels by Southeastern Engineering Co.). Oct. 1, 1932, to Sept. 30, 1936, recording gage at Thirteenth Street bridge at datum 104.56 ft above NGVD OF 1929 (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.

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 ft<sup>3</sup>/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 ft<sup>3</sup>/s, Jan. 17, 1796, gage height (determined by analysis of historical documents), 38 ft; 260,000 ft<sup>3</sup>/s, May 28, 1840, gage height, 37.5 ft; 230,000 ft<sup>3</sup>/s, Aug. 29, 1852, gage height, 36.8 ft; 160,000 ft<sup>3</sup>/s, Jan. 1, 1864, gage height, 34.0 ft; 220,000 ft<sup>3</sup>/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.

## 02197000 SAVANNAH RIVER AT AUGUSTA, GA—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012**  
**DAILY MEAN VALUES**

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	4,270	4,490	4,350	4,180	4,000	4,140	3,760	3,330	3,430	3,520	4,260	4,470
2	4,270	4,580	4,540	3,820	4,560	4,130	3,690	3,170	3,490	3,540	4,010	4,240
3	4,470	4,440	4,460	3,800	3,960	4,380	3,700	3,270	3,360	3,680	4,180	4,280
4	4,520	4,570	4,400	4,310	3,950	4,330	3,890	3,460	3,430	3,720	4,560	4,340
5	4,330	4,410	4,370	4,050	3,830	4,150	4,030	3,130	3,490	3,650	4,410	4,410
6	4,360	4,310	4,050	4,050	3,800	4,190	3,970	3,230	3,450	3,610	4,410	4,480
7	4,410	4,310	3,920	4,060	3,730	4,280	4,120	3,300	4,250	3,660	4,430	4,400
8	4,370	4,270	3,990	4,170	3,930	3,890	3,830	3,330	3,320	3,700	4,800	4,350
9	4,360	4,230	4,070	3,970	3,960	3,860	3,700	3,230	3,310	3,760	4,570	4,800
10	4,230	4,290	3,950	3,820	4,050	3,890	3,780	3,390	3,900	3,800	4,930	4,560
11	4,460	4,160	4,160	3,750	4,270	3,780	3,350	3,480	4,750	3,980	6,090	4,380
12	4,570	4,190	4,060	3,880	4,000	3,960	3,380	3,280	4,550	4,140	6,620	4,340
13	4,450	4,460	4,100	4,110	4,040	3,850	3,610	3,340	4,360	4,300	7,270	4,330
14	4,320	4,310	4,120	4,170	4,200	3,710	3,600	3,730	4,220	4,250	5,840	4,390
15	4,250	4,130	4,120	3,790	4,120	3,650	3,520	3,860	4,230	3,920	5,440	4,220
16	4,430	4,180	4,130	3,910	4,090	3,640	3,520	3,650	4,200	4,070	5,160	4,310
17	4,130	e4,240	4,320	3,770	4,110	3,760	3,430	3,870	3,920	4,160	4,960	4,260
18	4,410	e4,300	e3,830	4,000	3,790	3,870	3,540	3,670	3,810	4,220	4,790	4,350
19	4,630	4,390	3,750	4,220	4,250	3,680	3,530	3,590	3,620	4,100	4,730	4,220
20	4,280	4,290	3,760	4,170	3,970	3,850	3,470	3,500	3,490	4,290	4,650	4,140
21	4,540	4,120	3,920	4,640	4,230	4,280	3,600	3,420	3,670	4,310	4,830	4,170
22	4,530	4,250	4,020	4,770	4,240	3,960	3,290	3,200	3,390	4,240	4,390	4,170
23	4,500	4,270	4,050	4,360	4,450	3,660	3,320	3,270	3,350	4,330	4,610	4,550
24	4,420	4,030	4,110	4,200	4,840	4,260	3,270	3,240	3,410	4,390	4,610	4,210
25	4,530	4,210	4,060	4,160	4,360	3,900	3,550	3,240	3,460	4,270	4,530	4,280
26	4,400	4,240	4,020	4,200	4,630	3,780	3,440	3,260	3,440	4,150	4,470	4,370
27	4,420	4,340	4,690	4,130	5,620	3,790	3,270	3,310	3,440	4,010	4,420	4,140
28	4,430	4,190	4,710	4,750	4,570	3,800	3,130	3,280	3,290	4,170	4,750	3,930
29	4,410	4,430	4,660	4,710	4,080	3,630	3,910	3,610	3,480	4,080	4,870	4,020
30	4,240	4,260	4,310	3,850	---	3,660	3,400	3,450	3,560	4,130	4,880	4,050
31	4,440	---	4,300	3,870	---	3,760	---	3,400	---	4,450	4,630	---
<b>Total</b>	136,380	128,890	129,300	127,640	121,630	121,470	107,600	105,490	111,070	124,600	151,100	129,160
<b>Mean</b>	4,399	4,296	4,171	4,117	4,194	3,918	3,587	3,403	3,702	4,019	4,874	4,305
<b>Max</b>	4,630	4,580	4,710	4,770	5,620	4,380	4,120	3,870	4,750	4,450	7,270	4,800
<b>Min</b>	4,130	4,030	3,750	3,750	3,730	3,630	3,130	3,130	3,290	3,520	4,010	3,930
<b>Cfsm</b>	0.59	0.57	0.56	0.55	0.56	0.52	0.48	0.45	0.49	0.54	0.65	0.57
<b>In.</b>	0.68	0.64	0.64	0.63	0.60	0.60	0.53	0.52	0.55	0.62	0.75	0.64

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2012, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	6,865	7,035	8,814	9,865	11,290	13,000	11,740	8,692	7,839	7,033	7,217	6,648
<b>Max</b>	17,740	18,610	27,270	30,250	30,600	29,090	43,850	27,050	22,830	16,850	15,820	14,480
<b>(WY)</b>	(1965)	(1996)	(1993)	(1993)	(1998)	(1952)	(1964)	(1964)	(1973)	(2003)	(1994)	(1964)
<b>Min</b>	2,728	3,872	3,751	3,404	3,929	3,918	3,587	3,403	3,702	3,627	3,825	3,332
<b>(WY)</b>	(1952)	(2008)	(1953)	(2009)	(2009)	(2012)	(2012)	(2012)	(2012)	(1952)	(2008)	(1952)

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## SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1952 - 2012	
<b>Annual total</b>	1,830,870		1,494,330			
<b>Annual mean</b>	5,016		4,083		8,864	
<b>Highest annual mean</b>					16,580	1964
<b>Lowest annual mean</b>					4,083	2012
<b>Highest daily mean</b>	23,500	Apr 1	7,270	Aug 13	84,500	Apr 10, 1964
<b>Lowest daily mean</b>	3,370	Apr 17	3,130	Apr 28 <sup>a</sup>	1,770	Oct 18, 1951
<b>Annual seven-day minimum</b>	3,750	Apr 15	3,260	May 22	2,090	Oct 20, 1951
<b>Maximum peak flow</b>			7,950	Aug 11	87,100	Apr 9, 1964
<b>Maximum peak stage</b>			101.13	Aug 11	<sup>b</sup> 120.74	Apr 9, 1964
<b>Annual runoff (cfsm)</b>	0.668		0.544		1.18	
<b>Annual runoff (inches)</b>	9.07		7.40		16.04	
<b>10 percent exceeds</b>	5,880		4,570		17,100	
<b>50 percent exceeds</b>	4,470		4,130		6,650	
<b>90 percent exceeds</b>	4,060		3,430		4,300	

<sup>a</sup> Also occurred May 5.<sup>b</sup> At datum then in use.

## 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
<b>Mean</b>	6,988	6,923	9,645	13,560	16,950	17,490	13,660	8,566	7,962	8,042	8,864	7,916
<b>Max</b>	42,170	21,250	27,390	40,950	39,560	52,440	58,700	20,670	22,700	19,480	35,030	47,850
<b>(WY)</b>	1930	1949	1993	1936	1903	1929	1936	1929	1900	1906	1887	1888
<b>Min</b>	2,079	2,614	4,263	5,137	4,812	6,298	5,298	3,427	3,258	2,811	1,706	1,453
<b>(WY)</b>	1905	1932	1884	1890	1938	1898	1896	1927	1925	1893	1925	1925

## SUMMARY STATISTICS

	Water Years 1883 - 1951	
<b>Annual total</b>		
<b>Annual mean</b>	10,640	
<b>Highest annual mean</b>	16,500	1929
<b>Lowest annual mean</b>	5,836	1904
<b>Highest daily mean</b>	315,000	Oct 3, 1929
<b>Lowest daily mean</b>	1,040	Oct 2, 1927
<b>Annual seven-day minimum</b>	1,170	Aug 23, 1925
<b>Maximum peak flow</b>	<sup>a</sup> 350,000	Oct 3, 1929
<b>Maximum peak stage</b>	<sup>b</sup> 46.30	Sep 27, 1929
<b>Minimum peak flow</b>	<sup>c</sup> 648	Sep 24, 1939
<b>Annual runoff (cfsm)</b>	1.42	
<b>Annual runoff (inches)</b>	19.25	
<b>10 percent exceeds</b>	19,900	
<b>50 percent exceeds</b>	6,720	
<b>90 percent exceeds</b>	3,180	

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

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