

JAMES RIVER BASIN

02017500 JOHNS CREEK AT NEW CASTLE, VA

LOCATION.--Lat 37°30'22", long 80°06'25", Craig County, Hydrologic Unit 02080201, on right bank 20 ft downstream from bridge on State Highway 615 at New Castle and 1,700 ft upstream from mouth.

DRAINAGE AREA.--104 mi².

PERIOD OF RECORD.--April 1926 to current year.

REVISED RECORDS.--WSP 972: 1935-36(M), 1940(M). WSP 1203: 1928, 1935. WSP 1303: 1927(M), 1928, 1929-34(M), 1935. WSP 2104: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,254.30 ft above sea level. Prior to June 7, 1937, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period with ice effect, Jan. 4-6, and period of no gage-height record, Feb. 28 to Mar. 17, which are fair. Maximum discharge, 8,000 ft³/s, from rating curve extended above 3,200 ft³/s on basis of slope-area measurement of peak flow. Several measurements of water temperature were made during the year. Water-quality records for some prior periods have been collected at this location.

COOPERATION.--Records were provided by the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan 24	1600	*520	*5.60	No peak greater than base discharge.			

Minimum discharge, 5.6 ft³/s, Aug 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	13	16	21	65	e60	85	89	37	14	12	12
2	9.3	13	16	19	167	e62	92	87	34	14	13	11
3	9.0	15	16	29	265	e64	84	82	33	13	12	11
4	9.4	17	16	e40	186	e120	80	77	31	13	11	11
5	9.6	16	16	e34	149	e160	76	72	28	13	10	90
6	9.6	14	16	e22	123	e135	72	68	26	12	9.9	212
7	10	15	16	26	109	e140	68	68	25	11	9.3	101
8	44	16	17	23	103	e130	65	174	23	11	8.8	63
9	28	15	23	26	89	e125	64	153	22	11	8.6	41
10	18	15	23	51	79	e120	66	125	20	10	7.8	29
11	16	16	19	41	71	e115	85	107	19	11	7.7	22
12	14	16	19	36	66	e108	160	93	18	14	7.0	18
13	13	15	29	41	64	e100	143	99	17	20	6.9	16
14	13	15	37	64	58	e170	134	312	17	19	8.5	15
15	12	16	30	320	54	e265	127	328	16	19	8.0	16
16	13	16	26	192	51	e350	126	230	16	16	7.2	15
17	12	16	24	130	50	e396	109	182	18	15	6.5	13
18	12	16	22	103	84	415	97	150	18	15	6.2	13
19	12	15	21	83	113	339	89	180	16	13	6.9	12
20	12	15	21	68	107	281	95	180	16	13	27	12
21	12	15	20	57	97	284	101	166	17	13	27	13
22	11	15	20	50	87	296	99	143	16	14	14	12
23	12	15	19	55	79	247	95	124	15	16	12	11
24	12	15	20	353	73	211	95	118	14	13	14	11
25	13	15	20	288	68	184	88	99	14	12	16	11
26	12	16	19	205	65	157	82	83	14	12	24	11
27	11	17	20	155	60	135	82	69	15	11	21	14
28	12	17	19	125	e58	116	84	58	16	11	17	18
29	12	16	19	101	---	102	89	51	14	23	14	25
30	12	16	19	83	---	90	89	45	15	20	13	54
31	13	---	20	69	---	81	---	40	---	14	12	---
TOTAL	417.5	462	638	2910	2640	5558	2821	3852	600	436	378.3	913
MEAN	13.5	15.4	20.6	93.9	94.3	179	94.0	124	20.0	14.1	12.2	30.4
MAX	44	17	37	353	265	415	160	328	37	23	27	212
MIN	9.0	13	16	19	50	60	64	40	14	10	6.2	11
CFSM	.13	.15	.20	.90	.91	1.72	.90	1.19	.19	.14	.12	.29
IN.	.15	.17	.23	1.04	.94	1.99	1.01	1.38	.21	.16	.14	.33

02017500 JOHNS CREEK AT NEW CASTLE, VA--Continued

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

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	56.9	88.1	133	189	226	278	223	160	89.3	40.3	43.0	40.1
MAX	396	445	514	546	542	730	820	398	471	291	364	353
(WY)	1930	1986	1949	1996	1998	1955	1987	1989	1972	1941	1940	1989
MIN	9.81	14.0	15.7	16.2	18.0	51.9	47.8	33.5	20.0	8.90	9.39	9.07
(WY)	1992	1931	1940	1956	1934	1988	1995	1930	1999	1930	1930	1930

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1927 - 1999	
ANNUAL TOTAL	63505.6		21625.8			
ANNUAL MEAN	174		59.2		130	
HIGHEST ANNUAL MEAN					235	
LOWEST ANNUAL MEAN					59.2	
HIGHEST DAILY MEAN	2170	Mar 21	415	Mar 18	6040	Jun 21 1972
LOWEST DAILY MEAN	9.0	Oct 3	6.2	Aug 18	6.2	Aug 18 1999
ANNUAL SEVEN-DAY MINIMUM	9.4	Sep 29	7.2	Aug 13	7.1	Sep 27 1968
INSTANTANEOUS PEAK FLOW			520		8000	
INSTANTANEOUS PEAK STAGE			5.60		12.48	
INSTANTANEOUS LOW FLOW			5.6		5.6	
ANNUAL RUNOFF (CFSM)	1.67		.57		1.25	
ANNUAL RUNOFF (INCHES)	22.72		7.74		16.98	
10 PERCENT EXCEEDS	463		145		300	
50 PERCENT EXCEEDS	35		21		59	
90 PERCENT EXCEEDS	12		11		13	

e Estimated.

