

JAMES RIVER BASIN

02037000 JAMES RIVER AND KANAWHA CANAL NEAR RICHMOND, VA

LOCATION.--Lat 37°33'53", long 77°34'27", NAD83, Henrico County, Hydrologic Unit 02080205, on left bank 75 ft downstream from Canal bridge, 400 ft downstream from head gates, 1,200 ft north of north end of Boshier Dam on James River, 1.6 mi upstream from Huguenot Memorial Bridge, and 2.0 mi west of Richmond city limits.

PERIOD OF RECORD.--September 1936 to current year.

GAGE.--Water-stage recorder. Datum of gage is 106.07 ft above sea level. Prior to Oct. 1, 1938, at datum 3.06 ft higher.

REMARKS.--Records fair except those for periods of no gage-height record, Mar. 22-29, Apr. 26, and June 18-20, which are poor. Canal diverts from James River 1,200 ft upstream from Boshier Dam and discharges into river at several points downstream from gaging station near Richmond. Beginning with the 1969 water year, the descriptive statement that above 2,540 ft³/s, gage height, 14.5 ft, there is interchange of flow with the James River and that discharge above 2,540 ft³/s is included in discharge for the James River near Richmond (station 02037500) has been used. Daily discharges in excess of 2,540 ft³/s for water years 1937-68 should be used with caution until historical records of canal construction and modifications can be reviewed. Figures given show flow in canal only. Probably no flow at times when head gates were closed. 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.

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	70	64	92	99	87	104	79	140	86	209	62
2	81	70	64	92	99	84	94	78	132	84	211	62
3	81	70	64	92	98	83	90	78	130	79	213	61
4	80	69	64	92	100	84	87	80	129	77	200	58
5	79	69	63	92	101	83	83	76	128	76	189	48
6	78	69	63	90	98	82	77	77	155	74	188	72
7	77	69	64	92	97	82	76	76	133	69	177	71
8	76	70	64	93	97	82	74	75	127	68	178	61
9	76	70	64	93	96	81	69	73	125	69	196	61
10	75	70	64	93	96	80	70	73	122	69	235	61
11	74	70	64	93	95	79	76	71	120	73	220	61
12	74	70	60	92	94	80	69	57	117	81	244	61
13	73	70	49	92	94	80	69	41	115	82	370	62
14	72	71	55	92	94	78	68	44	113	82	328	64
15	72	71	62	91	94	81	68	97	118	82	295	65
16	72	71	66	91	97	78	68	119	116	82	235	65
17	71	70	116	91	106	77	68	119	110	82	88	58
18	71	70	76	92	99	76	67	118	e108	82	23	52
19	71	70	93	101	98	76	67	125	e106	82	5.4	54
20	71	70	109	119	95	77	67	125	e104	82	1.9	57
21	71	70	107	112	94	109	66	128	102	82	5.7	58
22	71	70	104	112	94	e98	66	131	100	82	26	57
23	71	70	102	113	94	e96	78	133	102	82	80	56
24	70	70	99	109	93	e90	87	150	103	82	83	58
25	71	72	98	106	96	e85	83	158	106	82	83	59
26	71	79	96	104	94	e82	e81	152	101	82	83	57
27	70	70	95	103	93	e80	80	136	95	82	84	50
28	70	70	95	102	93	e77	79	141	90	97	85	56
29	70	69	95	101	---	e85	79	133	88	186	83	56
30	70	66	94	100	---	125	79	132	87	206	82	55
31	70	---	92	99	---	107	---	131	---	210	63	---
TOTAL	2281	2105	2465	3036	2698	2644	2289	3206	3422	2834	4564.0	1778
MEAN	73.6	70.2	79.5	97.9	96.4	85.3	76.3	103	114	91.4	147	59.3
MAX	82	79	116	119	106	125	104	158	155	210	370	72
MIN	70	66	49	90	93	76	66	41	87	68	1.9	48

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	571	600	621	640	653	642	657	638	647	586	572	549
MAX	1078	1014	1220	1145	1086	1094	1108	1086	1061	956	1108	937
(WY)	1949	1948	1949	1949	1979	1951	1951	1952	1951	1940	1940	1949
MIN	a.60											
(WY)	b1981	b1980										

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1937 - 2001

ANNUAL TOTAL	42571	33322.0	
ANNUAL MEAN	116	91.3	614
HIGHEST ANNUAL MEAN			1023
LOWEST ANNUAL MEAN			1.48
HIGHEST DAILY MEAN	371	Jun 13	370
LOWEST DAILY MEAN	39	May 11	d1.9
ANNUAL SEVEN-DAY MINIMUM	40	hMar 6	32
MAXIMUM PEAK FLOW			589
MAXIMUM PEAK STAGE			7.65
INSTANTANEOUS LOW FLOW			d1.2
10 PERCENT EXCEEDS	257	128	985
50 PERCENT EXCEEDS	72	82	790
90 PERCENT EXCEEDS	42	62	17

- a Estimated, leakage through head gates.
- b Also 1983.
- c See REMARKS.
- d Result of headgates being closed.
- e Estimated.
- f Probably no flow at times when headgates were closed prior to 1958.
- g Many days in 1937-38, 1949-50, 1952, 1954-55, and 1957.
- h Also Mar. 7, 2000.
- j Interchange of flow with James River makes maximum discharge indeterminate.
- k From floodmarks.

