02037000 JAMES RIVER AND KANAWHA CANAL NEAR RICHMOND, VA

LOCATION.--Lat 37°33'52", long 77°34'28", 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 Bosher 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.--No estimated daily discharges. Records good. Canal diverts from James River 1,200 ft upstream from Bosher 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 ft^3/s, gage height, 14.5 ft, there is interchange of flow with the James River and that discharge above 2,540 ft^3/s is included in discharge for the James River near Richmond (station 02037500) has been used. Daily discharges in excess of 2,540 ft^3/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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 504 ft^3/s, May 24, maximum gage height, 6.96 ft, Apr. 18; minimum discharge, 39 ft^3/s, May 10-12.

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	201	210	230	194	51	42	41	42	189	241	261	86
2	171	216	217	193	49	41	41	42	200	240	259	86
3	158	222	211	192	48	41	41	42	216	272	258	90
4	157	229	207	198	48	41	41	42	214	290	268	98
5	153	233	202	208	48	41	41	42	212	282	269	97
6	152	233	200	203	48	40	40	42	240	277	266	94
7	150	231	199	201	48	40	41	42	207	276	259	92
8	156	207	199	194	47	40	46	41	208	279	249	89
9	170	209	197	194	47	40	47	40	212	272	243	88
10	170	209	195	173	47	40	42	40	214	268	243	88
11	174	208	195	95	46	40	41	39	214	266	235	87
12	182	208	199	84	46	40	41	83	236	263	234	86
13	182	206	200	59	46	40	41	111	371	261	235	86
14	206	206	221	52	46	41	41	111	334	261	234	86
15	246	208	246	49	45	43	42	111	220	306	233	85
16	243	207	253	49	46	45	41	112	219	245	232	85
17	236	207	258	49	45	50	49	111	218	249	215	85
18	230	215	243	48	63	42	65	110	216	263	209	85
19	225	216	234	48	51	42	45	132	217	272	228	85
20	233	215	226	48	48	41	47	277	220	259	233	85
21	220	215	220	48	49	46	45	301	221	234	233	87
22	217	215	221	48	49	43	44	267	224	240	232	87
23	216	214	217	48	46	46	43	304	248	242	232	86
24	214	221	209	47	44	45	43	317	292	245	232	85
25	212	225	204	48	43	44	47	162	295	242	232	88
26	212	219	202	47	43	43	44	178	286	253	221	91
27	210	218	202	47	42	52	46	186	297	249	87	86
28	209	230	200	48	43	47	45	189	290	253	84	86
29	209	233	199	46	42	42	43	192	234	257	82	85
30	209	238	197	50	---	42	43	189	231	257	86	84
31	210	---	195	59	---	41	---	189	---	255	89	---
TOTAL	6133	6523	6598	3067	1364	1321	1317	4086	7195	8069	6673	2628
MEAN	198	217	213	98.9	47.0	42.6	43.9	132	240	260	215	87.6
MAX	246	238	258	208	63	52	65	317	371	306	269	98
MIN	150	206	195	46	42	40	40	39	189	234	82	84

02037000 JAMES RIVER AND KANAWHA CANAL NEAR RICHMOND, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	579	608	629	648	661	650	666	647	656	594	579	557
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	.60	.60	.60	.60	.60	.60	.60	.60	.60	.60	.60	.60
(WY)	a1981	a1980	a1980	a1980	a1980	a1980	a1980	a1980	a1980	a1980	a1980	a1980

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1937 - 2000	
ANNUAL TOTAL	61763.3		54974			
ANNUAL MEAN	169		150		623	
HIGHEST ANNUAL MEAN					1023	1949
LOWEST ANNUAL MEAN					1.48	1980
HIGHEST DAILY MEAN	414	Sep 16	371	Jun 13	b3860	Aug 18 1940
LOWEST DAILY MEAN	c5.0	Mar 13	39	May 11	(d)	(f)
ANNUAL SEVEN-DAY MINIMUM	c5.2	Apr 3	40	gMar 6	c.44	Jan 1 1991
INSTANTANEOUS PEAK FLOW			504	May 24	(h)	
INSTANTANEOUS PEAK STAGE			6.96	Apr 18	j29.10	Jun 23 1972
INSTANTANEOUS LOW FLOW			39	kMay 10	(d)	(f)
10 PERCENT EXCEEDS	264		257		988	
50 PERCENT EXCEEDS	197		189		792	
90 PERCENT EXCEEDS	7.7		42		17	

a Estimated, leakage through head gates; also 1983.
b See REMARKS.
c Result of headgates being closed.
d Probably no flow at times when headgates were closed prior to 1958.
f Many days in 1937-38, 1949-50, 1952, 1954-55, and 1957.
g Also Mar. 7, 2000.
h Interchange of flow with James River makes maximum discharge indeterminate.
j From floodmarks.
k Also May 11, 12, 2000.