

02013100 JACKSON RIVER BELOW DUNLAP CREEK, AT COVINGTON, VA

LOCATION.--Lat 37°47'19", long 80°00'03", Covington City, Hydrologic Unit 02080201, on left bank in city recreation park and 0.5 mi downstream from Dunlap Creek.

DRAINAGE AREA.--614 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1974 to current year.

REVISED RECORDS.--WDR VA-76-1: 1975(M).

GAGE.--Water-stage recorder. Datum of gage is 1,206.53 ft above sea level.

REMARKS.--Records good except for period of no gage-height record, May 15, which is fair. Small diurnal fluctuation at low flow caused by Westvaco plant 0.8 mi upstream and occasionally by dam on Dunlap Creek 12.7 mi upstream. Flow regulated since December 1979 by Lake Moomaw (station 02011795) 19.9 mi upstream; since October 1984 by Back Creek Lake 47.9 mi upstream, amount unknown; and since January 1985 by Little Back Creek Lake 51.0 mi upstream, amount unknown. Statistics of monthly mean data and summary statistics for water years 1975-1979, (unregulated flow) are available in previous data books, water years 1991-1998. Diversion by Westvaco plant averages 47 ft<sup>3</sup>/s for industrial use of which approximately 42 ft<sup>3</sup>/s is returned upstream from station. Diversion 2.0 mi upstream from station for city of Covington water supply averages less than 4.0 ft<sup>3</sup>/s. U.S. Army Corps of Engineers satellite gage-height telemeter at station. Virginia Department of Emergency Services gage-height radio transmitter at station. Maximum discharge, 31,300 ft<sup>3</sup>/s, from rating curve extended above 19,000 ft<sup>3</sup>/s. Minimum discharge, 41 ft<sup>3</sup>/s, Jan. 5, 1981, gage height, 4.38 ft, result of freezeup. Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jun. 21, 1972, reached a stage of 24.36 ft, discharge, 34,000 ft<sup>3</sup>/s, from floodmarks, and flood of Dec. 27, 1973, reached a stage of 22.09 ft, from floodmarks, discharge, 28,300 ft<sup>3</sup>/s, from rating curve extended above 19,000 ft<sup>3</sup>/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,660 ft<sup>3</sup>/s, Jan 24, gage height, 7.43 ft; minimum discharge, 157 ft<sup>3</sup>/s, Nov 3, gage height, 4.61 ft; minimum daily, 192 ft<sup>3</sup>/s, Nov 25.

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	304	230	196	212	280	307	423	412	353	336	327	289
2	252	229	199	211	386	336	425	393	353	331	320	272
3	247	230	198	282	455	374	416	371	349	326	316	273
4	253	200	198	316	411	792	415	357	349	329	312	271
5	250	200	200	256	362	634	414	365	348	327	312	505
6	251	200	199	239	329	621	408	333	338	328	314	571
7	251	197	197	240	323	751	398	336	336	325	313	454
8	319	196	218	235	348	611	334	461	337	330	314	362
9	264	193	230	250	351	524	358	437	342	330	309	318
10	256	193	215	357	330	464	362	396	336	330	304	299
11	252	201	208	293	305	410	392	366	338	331	302	285
12	248	196	205	257	293	411	432	347	336	337	306	279
13	246	197	225	254	287	402	424	346	334	335	305	274
14	244	198	239	312	272	430	405	875	332	330	311	272
15	242	201	229	961	260	920	399	e949	332	327	302	275
16	239	199	219	608	252	1050	396	680	333	322	299	270
17	239	200	212	397	255	1500	375	536	335	334	301	262
18	237	198	209	344	379	2250	360	469	331	329	299	262
19	237	197	208	385	551	1710	344	493	333	323	303	259
20	236	198	208	355	462	1310	329	463	336	324	330	258
21	235	198	203	315	391	1180	321	422	327	331	309	263
22	234	196	205	283	342	1470	317	394	324	333	304	257
23	232	194	213	344	317	1710	311	375	320	329	310	250
24	233	193	214	1960	297	1590	388	389	320	330	310	250
25	233	192	211	1090	286	1340	391	373	322	333	405	249
26	235	198	207	608	276	896	369	350	320	330	367	246
27	233	194	206	451	270	802	353	336	322	331	322	288
28	231	194	205	378	279	766	360	323	321	336	310	343
29	233	194	209	330	---	654	409	316	320	338	303	283
30	233	195	208	297	---	421	403	311	323	334	303	782
31	230	---	207	276	---	398	---	311	---	328	302	---
TOTAL	7629	6001	6500	13096	9349	27034	11431	13285	10000	10237	9744	9521
MEAN	246	200	210	422	334	872	381	429	333	330	314	317
MAX	319	230	239	1960	551	2250	432	949	353	338	405	782
MIN	230	192	196	211	252	307	311	311	320	322	299	246
(+)	-4134	-3176	-2823	+10688	+5848	+10587	0	-1008	-6756	-7915	-7008	-4689
MEAN†	113	94.2	119	767	543	1214	381	396	108	74.9	88.3	161
CFSM‡	.18	.15	.19	1.25	.88	1.98	.62	.64	.18	.12	.14	.26
IN.‡	.21	.17	.22	1.44	.92	2.28	.69	.74	.20	.14	.17	.29

CAL YR 1998 TOTAL 332017 MEAN 910 MAX 5770 MIN 192 MEAN‡ 889 CFSM‡ 1.45 IN.‡ 19.66  
WTR YR 1999 TOTAL 133827 MEAN 367 MAX 2250 MIN 192 MEAN‡ 338 CFSM‡ .55 IN.‡ 7.47

† Total change in contents, equivalent in cubic feet per second, per month, in Lake Moomaw; provided by U.S. Army Corps of Engineers.  
‡ Adjusted for monthly change in contents.

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	347	503	532	866	1132	1516	1180	932	614	351	375	347
MAX	1302	2363	1685	2644	2702	3189	3540	2223	1403	526	1285	938
(WY)	1980	1986	1997	1996	1998	1993	1987	1989	1982	1995	1984	1989
MIN	111	114	130	119	283	211	356	397	303	190	117	87.3
(WY)	1981	1982	1981	1981	1981	1981	1986	1991	1980	1981	1981	1981

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1980 - 1999
ANNUAL TOTAL	332017	133827	
ANNUAL MEAN	910	367	722
HIGHEST ANNUAL MEAN			954
LOWEST ANNUAL MEAN			348
HIGHEST DAILY MEAN	5770	Mar 24	2250
LOWEST DAILY MEAN	192	Nov 25	192
ANNUAL SEVEN-DAY MINIMUM	194	Nov 23	194
INSTANTANEOUS PEAK FLOW			2660
INSTANTANEOUS PEAK STAGE			7.43
INSTANTANEOUS LOW FLOW			157
ANNUAL RUNOFF (CFSM)	1.48	.60	1.18
ANNUAL RUNOFF (INCHES)	20.12	8.11	15.98
10 PERCENT EXCEEDS	2240	466	1580
50 PERCENT EXCEEDS	385	320	361
90 PERCENT EXCEEDS	205	205	213

a Also Sep 27-29, 1981.  
 b Result of freezeup.  
 e Estimated.

