

02011800 JACKSON RIVER BELOW GATHRIGHT DAM, NEAR HOT SPRINGS, VA

LOCATION.--Lat 37°56'54", lon 79°56'58", Alleghany County, Hydrologic Unit 02080201, on right bank 0.4 mi upstream from Cedar Creek, 0.5 mi downstream from Gathright Dam and Lake Moomaw, and 7.3 mi southwest of Hot Springs.

DRAINAGE AREA.--345 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1973 to current year.

REVISED RECORDS.--WDR VA-81-1: 1980.

GAGE.--Water-stage recorder. Datum of gage is 1,400.00 ft above sea level (U.S. Army Corps of Engineers bench mark). Prior to Dec. 20, 1973, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since December 1979 by Lake Moomaw (station 02011795) 0.5 mi upstream; since October 1984 by Back Creek Lake 28.5 mi upstream, amount unknown; and since January 1985 by Little Back Creek Lake 31.6 mi upstream, amount unknown. Statistics of monthly mean data and summary statistics for water years 1974-1979 (unregulated flow) are available in previous data books, water years 1991-1998. U.S. Army Corps of Engineers satellite water-quality and gage-height telemeter at station. Maximum discharge, 29,000 ft<sup>3</sup>/s, result of cofferdam failure during construction of Gathright Dam, from rating curve extended above 9,200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow. Minimum discharge, 3.0 ft<sup>3</sup>/s, Jul. 12, 1979, result of gate closure at Gathright Dam, gage height, 7.78 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jun. 21, 1972, reached a stage of 17.20 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,100 ft<sup>3</sup>/s, Mar 23, gage height, 10.63 ft; minimum discharge, 11 ft<sup>3</sup>/s, Apr 8, gage height, 7.88 ft.

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	219	199	167	167	162	162	257	217	278	300	295	269
2	202	199	167	167	162	162	256	217	278	300	292	260
3	202	167	167	168	162	162	257	217	280	299	292	260
4	202	166	167	167	160	162	256	244	283	298	292	260
5	202	169	167	168	159	162	259	218	285	296	292	226
6	202	171	168	167	160	162	260	220	285	299	292	198
7	202	170	167	167	160	164	237	223	285	300	292	260
8	202	170	167	167	160	164	190	226	292	300	292	260
9	202	170	167	167	159	164	214	226	293	300	292	260
10	202	170	167	164	159	164	214	226	292	300	291	260
11	202	170	167	161	159	165	214	226	289	300	290	260
12	201	170	167	159	159	164	214	226	288	300	292	260
13	201	170	167	159	160	165	214	226	289	300	292	258
14	202	170	167	159	159	165	214	227	288	300	292	256
15	201	170	167	160	159	167	214	226	289	300	292	256
16	201	170	166	159	159	167	214	226	288	300	292	256
17	201	170	165	159	160	168	214	226	289	300	292	256
18	201	170	165	159	161	170	214	226	288	299	292	256
19	201	170	167	159	161	341	206	227	288	298	292	256
20	201	170	168	159	162	513	194	226	288	298	292	256
21	201	169	168	159	162	513	190	229	287	300	292	256
22	201	169	167	159	162	846	190	227	285	300	290	256
23	201	168	167	161	162	1090	190	226	285	300	291	256
24	201	167	167	162	162	1090	190	226	285	300	292	256
25	201	167	168	164	162	801	190	227	285	300	294	256
26	200	168	168	161	162	548	190	226	285	300	292	256
27	198	167	168	159	162	523	190	226	285	300	292	256
28	198	167	167	159	162	522	189	226	285	300	292	230
29	199	167	167	159	---	367	190	226	285	300	292	199
30	199	167	167	160	---	257	200	226	291	300	292	201
31	199	---	167	161	---	257	---	252	---	300	292	---
TOTAL	6247	5127	5178	5026	4498	10627	6421	7013	8593	9287	9051	7505
MEAN	202	171	167	162	161	343	214	226	286	300	292	250
MAX	219	199	168	168	162	1090	260	252	293	300	295	269
MIN	198	166	165	159	159	162	189	217	278	296	290	198
(†)	-4134	-3176	-2823	+10688	+5848	+10587	0	-1008	-6756	-7915	-7008	-4689
MEAN†	68.2	65.0	76.0	507	370	684	214	194	61.2	44.3	65.9	93.9
CFSM†	.20	.19	.22	1.47	1.07	1.98	.62	.56	.18	.13	.19	.27
IN.†	.23	.21	.25	1.69	1.12	2.29	.69	.65	.20	.15	.22	.30

CAL YR 1998 TOTAL 191983 MEAN 526 MAX 5440 MIN 156 MEAN† 506 CFSM† 1.47 IN.† 19.91  
WTR YR 1999 TOTAL 84573 MEAN 232 MAX 1090 MIN 159 MEAN† 203 CFSM† 0.59 IN.† 7.99

† Total change of 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	235	301	273	475	650	904	723	592	426	273	278	258
MAX	829	1235	1061	1555	1466	1881	2052	1477	1017	398	644	661
(WY)	1980	1986	1997	1996	1998	1993	1987	1989	1982	1995	1984	1996
MIN	70.8	64.1	60.8	74.5	114	74.4	172	226	202	123	71.4	57.5
(WY)	1981	1982	1982	1981	1981	1981	1981	1999	1980	1980	1981	1981

SUMMARY STATISTICS FOR 1998 CALENDAR YEAR FOR 1999 WATER YEAR WATER YEARS 1980 - 1999

ANNUAL TOTAL	191983	84573	
ANNUAL MEAN	526	232	448
HIGHEST ANNUAL MEAN			592
LOWEST ANNUAL MEAN			196
HIGHEST DAILY MEAN	5440	Mar 24	1090
LOWEST DAILY MEAN	156	bJan 1	159
ANNUAL SEVEN-DAY MINIMUM	156	Jan 1	159
INSTANTANEOUS PEAK FLOW			1100
INSTANTANEOUS PEAK STAGE			10.63
INSTANTANEOUS LOW FLOW			11
ANNUAL RUNOFF (CFSM)	1.52	.67	1.30
ANNUAL RUNOFF (INCHES)	20.70	9.12	17.63
10 PERCENT EXCEEDS	1070	299	899
50 PERCENT EXCEEDS	272	202	264
90 PERCENT EXCEEDS	167	162	151

- a Also Mar 24, 1999.
- b Also Jan 2-4, 6, 7, 10-14, 1998.
- c Also Jan 13, 14, 16-22, 27-29, and Feb. 5, 9-12, 14-16, 1999.

