

JAMES RIVER BASIN

02031000 MECHUMS RIVER NEAR WHITE HALL, VA

LOCATION.--Lat 38°06'09", long 78°35'35", Albemarle County, Hydrologic Unit 02080204, on right bank 20 ft downstream from bridge on State Highway 614, 1.5 mi downstream from Rocky Run, 4.0 mi southeast of White Hall, and 4.9 mi upstream from confluence with Moormans River.

DRAINAGE AREA.--95.4 mi².

PERIOD OF RECORD.--October 1942 to September 1951, October 1979 to current year. Prior to September 1951, published as Mechum River near Ivy.

GAGE.--Water-stage recorder. Datum of gage is 429.75 ft above sea level. Oct. 1, 1942, to Sep. 30, 1951, on right bank 20 ft downstream from former highway bridge at different datum.

REMARKS.--Records good except those for periods of backwater from beaver dams, Jun. 6-27, Jun. 29 to Jul. 3, 9-12, Jul. 18 to Aug. 13, 20-24, and Aug. 28 to Sep. 3, 8-15, 17-27, which are poor. Maximum discharge, 20,000 ft³/s, from rating curve extended above 8,000 ft³/s. 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 OUTSIDE PERIOD OF RECORD.--Flood of Sep. 6, 1979, reached a stage of 24.5 ft, from floodmarks, discharge, about 13,500 ft³/s, from rating curve extended above 8,300 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sep 30	0500	*5,000	*15.26	No other peak greater than base discharge.			
Minimum daily discharge, 1.2 ft ³ /s, Aug 12-13.							

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	15	22	26	27	65	66	76	38	21	e8.9	e6.3	e3.1
2	14	22	26	30	197	56	83	37	20	e10	e8.0	e2.8
3	14	28	25	209	150	61	70	36	19	e12	e6.4	e2.7
4	15	35	26	141	115	87	67	36	18	14	e6.9	2.5
5	17	27	25	70	93	67	64	36	17	9.8	e5.0	226
6	19	25	25	59	84	65	61	38	e16	8.2	e3.9	184
7	20	25	25	50	77	63	58	37	e15	7.5	e3.7	127
8	94	25	32	41	74	58	57	125	e14	22	e2.5	e82
9	54	26	85	52	67	59	57	68	e13	13	e1.8	e72
10	29	26	47	67	64	63	57	49	e12	e8.6	e1.4	e90
11	24	34	33	50	59	62	59	42	e14	e9.0	e1.3	e59
12	23	33	29	42	60	59	61	39	e18	e7.6	e1.2	e39
13	22	27	51	46	57	55	53	38	e15	13	e1.2	e29
14	22	27	58	60	52	75	54	73	e17	12	6.4	e25
15	21	27	40	158	52	301	53	64	e15	10	5.7	e27
16	21	27	34	123	51	254	58	49	e13	8.9	3.3	94
17	22	25	32	82	51	179	51	44	e16	7.4	1.9	e74
18	22	25	30	131	99	153	48	41	e21	e7.1	1.6	e52
19	21	25	28	127	103	129	47	41	e17	e10	1.5	e43
20	22	27	27	89	84	113	48	36	e15	e8.4	e6.4	e35
21	20	28	28	72	73	124	47	33	e20	e14	e9.2	e39
22	20	27	27	62	66	128	48	33	e18	e16	e5.2	e33
23	19	26	25	80	61	107	48	43	e16	e13	e3.8	e28
24	21	25	29	442	60	100	53	40	e12	e14	e3.0	e26
25	21	25	30	248	58	92	46	33	e11	e17	11	e23
26	21	29	28	148	57	84	44	29	e10	e11	33	e22
27	21	30	28	115	55	78	42	27	e9.6	e8.4	14	e21
28	22	25	30	97	62	74	41	25	12	e6.4	e8.2	23
29	22	25	30	83	---	69	42	24	e10	e7.5	e5.0	417
30	21	26	30	73	---	65	40	23	e9.2	e6.6	e3.8	2080
31	22	---	27	67	---	63	---	22	---	e6.0	e3.2	---
TOTAL	741	804	1016	3141	2146	3009	1633	1299	453.8	327.3	175.8	3981.1
MEAN	23.9	26.8	32.8	101	76.6	97.1	54.4	41.9	15.1	10.6	5.67	133
MAX	94	35	85	442	197	301	83	125	21	22	33	2080
MIN	14	22	25	27	51	55	40	22	9.2	6.0	1.2	2.5
CFSM	.25	.28	.34	1.06	.80	1.02	.57	.44	.16	.11	.06	1.39
IN.	.29	.31	.40	1.22	.84	1.17	.64	.51	.18	.13	.07	1.55

02031000 MECHUMS RIVER NEAR WHITE HALL, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	87.1	103	117	133	151	169	171	123	91.2	62.4	56.7	86.9
MAX	606	636	329	425	550	473	703	289	322	192	245	422
(WY)	1943	1986	1949	1996	1998	1993	1983	1989	1995	1991	1949	1987
MIN	8.65	19.7	20.7	24.0	55.4	45.2	37.1	34.9	15.1	8.95	5.67	8.29
(WY)	1944	1944	1944	1981	1947	1981	1981	1981	1999	1944	1999	1943

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1943 - 1999
ANNUAL TOTAL	59116	18727.0	
ANNUAL MEAN	162	51.3	112
HIGHEST ANNUAL MEAN			178
LOWEST ANNUAL MEAN			41.6
HIGHEST DAILY MEAN	2920	Feb 17	10600
LOWEST DAILY MEAN	14	Sep 29	.70
ANNUAL SEVEN-DAY MINIMUM	15	Sep 28	1.2
INSTANTANEOUS PEAK FLOW			20000
INSTANTANEOUS PEAK STAGE			b30.30
INSTANTANEOUS LOW FLOW			.60
ANNUAL RUNOFF (CFSM)	1.70	.54	1.18
ANNUAL RUNOFF (INCHES)	23.05	7.30	15.99
10 PERCENT EXCEEDS	346	91	200
50 PERCENT EXCEEDS	70	29	70
90 PERCENT EXCEEDS	21	7.6	21

a Also Aug 13, 1999.
 b From floodmarks, datum then in use.
 e Estimated.

