

## POTOMAC RIVER BASIN

01658705 LITTLE CREEK AT GEIGER ROAD AT QUANTICO, VA

**LOCATION.**--Lat 38°31'41", long 77°17'46", Prince William County, Hydrologic Unit 02070010, on left bank 75 ft downstream from bridge on Geiger Road on Quantico Marine Base, 2.7 mi east of U.S. Highway 1, and 0.7 mi upstream from Potomac River.

**DRAINAGE AREA.**--Not determined.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD.**--February 1999 to current year.

**GAGE.**--Water-stage recorder. Elevation of gage is 10 ft above sea level, from topographic map.

**REMARKS.**--Records fair except for periods of doubtful gage-height record, Nov. 5-18, and Jan. 28, which are poor. Several measurements of water temperature were made during the year.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 399 ft<sup>3</sup>/s, Aug. 4, gage height, 13.64 ft; minimum discharge, 0.35 ft<sup>3</sup>/s, Oct. 26, 27, gage height, 7.32 ft.

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	1.9	.62	1.1	1.1	2.2	2.0	2.0	2.0	1.2	1.7	2.0	3.6
2	1.5	2.5	1.1	1.1	1.8	1.8	1.9	1.9	2.7	1.6	1.6	5.0
3	1.3	.84	1.1	1.2	1.7	1.7	2.4	1.8	1.8	1.5	3.8	4.0
4	2.7	.68	1.1	4.8	1.7	1.7	4.3	1.7	1.2	2.9	45	2.2
5	1.8	e.71	1.0	2.2	1.8	1.5	2.2	1.6	1.2	1.8	6.8	1.1
6	1.4	e.78	2.5	1.3	1.9	1.4	1.9	1.5	4.2	1.6	21	1.3
7	1.4	e.89	1.5	1.2	2.6	1.4	1.7	1.5	1.4	1.5	12	.80
8	1.3	e.98	1.4	1.1	2.4	1.5	7.5	1.4	1.2	1.5	6.6	.77
9	1.3	e1.1	1.7	1.1	2.3	1.5	9.0	1.2	1.1	1.5	6.8	.80
10	3.2	e1.2	5.2	8.7	2.8	1.4	2.9	1.3	.97	2.3	4.6	.73
11	1.6	e1.3	1.7	2.5	3.3	1.4	2.3	1.2	.94	1.7	3.1	.71
12	1.1	e1.2	1.3	1.8	2.8	2.7	2.1	.97	1.8	1.5	2.3	.72
13	1.0	e1.1	2.0	1.6	2.3	1.5	1.9	1.7	1.3	1.5	4.4	.66
14	.91	e.89	14	1.8	3.1	1.6	1.9	1.4	1.2	1.5	2.6	.61
15	.83	e.88	3.1	1.8	2.1	1.6	2.0	.93	2.4	18	1.8	.83
16	.83	e.98	2.1	1.9	2.7	2.1	.87	2.0	2.7	1.6	.56	
17	1.1	e1.1	1.7	1.7	2.0	2.7	37	.80	9.4	2.0	1.3	.58
18	.94	e1.3	1.5	1.7	5.8	1.7	19	.76	11	1.7	2.7	.59
19	.80	1.1	1.4	1.7	5.1	1.7	9.0	1.1	5.0	4.2	1.3	19
20	4.9	1.2	1.5	2.2	2.9	1.6	5.8	1.1	2.7	18	1.0	2.1
21	1.1	1.1	1.5	1.6	2.5	12	13	1.2	2.3	2.4	1.0	1.2
22	1.1	1.0	1.6	1.9	2.1	5.2	8.3	8.2	3.8	1.8	.89	.99
23	1.1	1.0	1.3	2.0	2.0	3.0	4.4	1.8	1.8	1.6	1.1	1.0
24	.71	.98	1.2	2.2	2.0	2.5	3.3	1.9	1.5	1.9	1.4	1.1
25	.64	1.1	1.1	3.5	1.9	2.6	24	2.0	1.3	1.7	1.3	22
26	.60	12	1.2	2.8	1.9	2.2	8.0	1.3	1.3	3.1	1.0	18
27	.57	5.7	1.2	1.5	3.0	5.3	5.2	1.3	2.1	1.7	4.5	4.4
28	.61	1.8	1.2	e.96	7.9	5.0	3.5	1.6	2.8	7.3	1.8	2.6
29	.56	1.3	1.2	1.2	2.3	2.9	2.8	1.8	3.7	4.7	1.4	2.1
30	.57	1.1	1.2	2.9	---	2.3	2.4	1.4	3.2	2.2	2.7	2.0
31	.61	---	1.1	4.1	---	2.1	---	1.3	---	1.9	2.8	---
TOTAL	39.98	48.43	61.8	67.16	78.9	79.6	193.8	50.53	78.51	101.0	152.19	102.05
MEAN	1.29	1.61	1.99	2.17	2.72	2.57	6.46	1.63	2.62	3.26	4.91	3.40
MAX	4.9	12	14	8.7	7.9	12	37	8.2	11	18	45	22
MIN	.56	.62	1.0	.96	1.7	1.4	1.7	.76	.94	1.5	.89	.56

## 01658705 LITTLE CREEK AT GEIGER ROAD AT QUANTICO, VA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS \*\*1999 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1.29	1.61	1.99	2.17	2.72	3.53	4.46	1.45	1.68	1.94	2.92	3.51
MAX	1.29	1.61	1.99	2.17	2.72	4.48	6.46	1.63	2.62	3.26	4.91	3.62
(WY)	2000	2000	2000	2000	2000	1999	2000	2000	2000	2000	2000	1999
MIN	1.29	1.61	1.99	2.17	2.72	2.57	2.47	1.27	.74	.62	.92	3.40
(WY)	2000	2000	2000	2000	2000	2000	1999	1999	1999	1999	1999	2000

SUMMARY STATISTICS      \*\*FOR 1999 CALENDAR YEAR      FOR 2000 WATER YEAR      WATER YEARS \*\*1999 - 2000

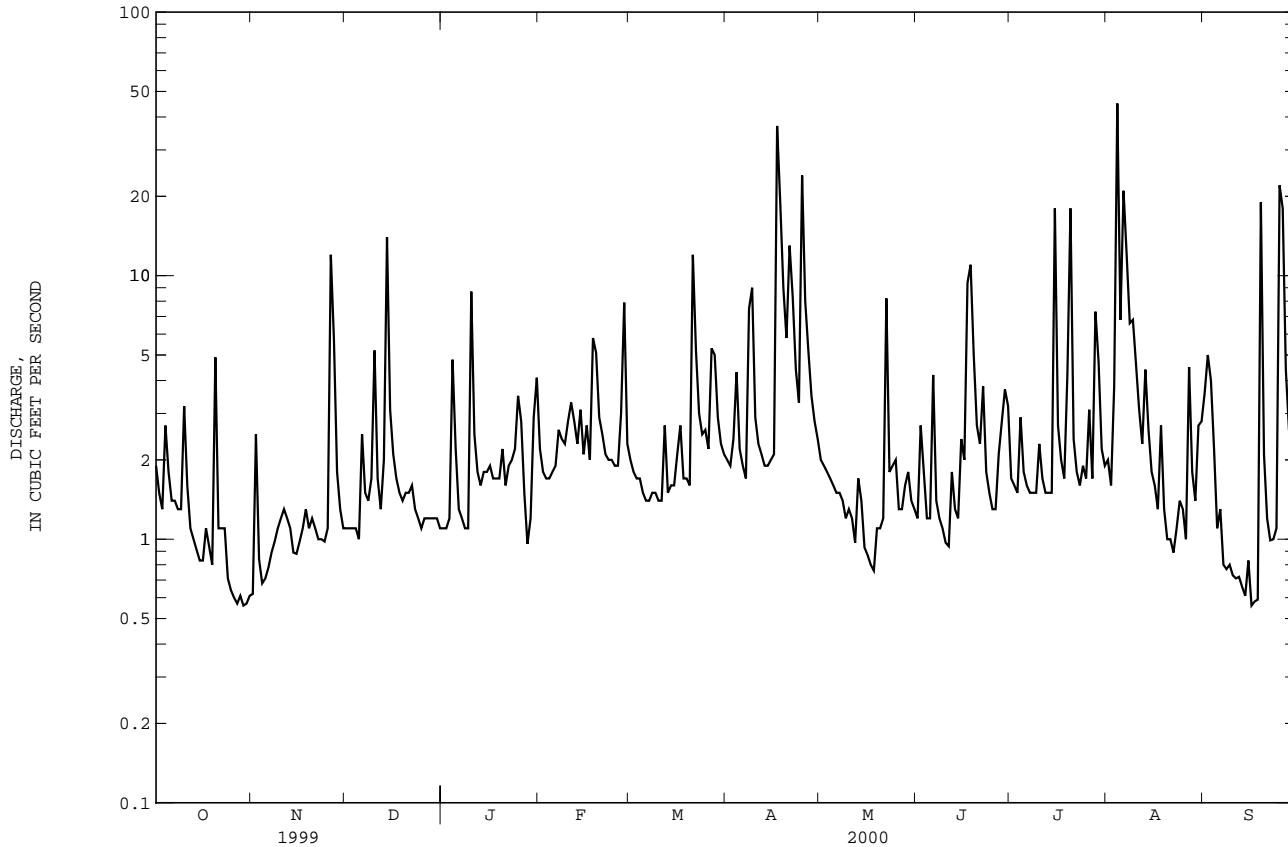
ANNUAL TOTAL	1053.95		
ANNUAL MEAN	2.88		
HIGHEST ANNUAL MEAN	2.88		
LOWEST ANNUAL MEAN	2.88		
HIGHEST DAILY MEAN	48	Sep 16	45 Aug 4
LOWEST DAILY MEAN	.20	Aug 12	.56 aOct 29
ANNUAL SEVEN-DAY MINIMUM	.28	Aug 7	.59 Oct 26
INSTANTANEOUS PEAK FLOW	399	Aug 4	399 Aug 4
INSTANTANEOUS PEAK STAGE	13.64	Aug 4	13.64 Aug 4
INSTANTANEOUS LOW FLOW	.35	bOct 26	.14 Jun 2
10 PERCENT EXCEEDS	2.9		4.5
50 PERCENT EXCEEDS	1.1		1.6
90 PERCENT EXCEEDS	.46		.59

\*\* Partial year.

a Also Sept. 16, 2000.

b Also Oct. 27, 1999.

e Estimated.



## POTOMAC RIVER BASIN

01658705 LITTLE CREEK AT GEIGER ROAD AT QUANTICO, VA--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1999 to current year.

REMARKS.--Additional samples were collected on April 25, May 22 and July 19 to evaluate nutrient concentration change during storms.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	SAMPLE TYPE	TEMPER-	TEMPER-	BARO- METRIC PRES- SURE (MM OF HG)	DIS- CHARGE, INST. CUBIC (MM FEET PER SECOND)	SPE- CIFIC COND- DUCT- (US/CM) (00061)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT) (00301)
			ATURE WATER (DEG C) (00010)	ATURE AIR (DEG C) (00020)		(00025)	(00095)	(00095)	
OCT 20...	1230	ENVIRONMENTAL	13.5	13.0	760	16	114	11.2	99
NOV 24...	0945	ENVIRONMENTAL	13.8	15.3	762	1.0	204	6.5	100
DEC 14...	1045	ENVIRONMENTAL	8.9	7.5	749	43	100	8.3	99
JAN 10...	1245	REPLICATE	7.5	10.0	744	58	132	7.7	100
10...	1255	ENVIRONMENTAL	7.5	10.0	744	52	132	7.7	100
FEB 24...	0900	ENVIRONMENTAL	6.9	10.0	765	1.9	345	12.0	100
MAR 14...	1030	ENVIRONMENTAL	8.2	12.0	760	1.7	282	13.6	110
APR 19...	1045	ENVIRONMENTAL	10.8	13.0	761	9.3	225	6.8	83
25...	0955	ENVIRONMENTAL	12.3	12.3	753	63	123	11.1	106
25...	1000	ENVIRONMENTAL	12.3	12.3	753	65	123	11.1	106
25...	1500	ENVIRONMENTAL	12.3	12.5	753	43	124	11.2	104
25...	1505	ENVIRONMENTAL	12.3	12.5	753	42	124	11.2	104
MAY 22...	0600	ENVIRONMENTAL	--	--	754	1.1	--	--	--
22...	0605	REPLICATE	--	--	754	1.2	--	--	--
22...	0610	REPLICATE	--	--	754	1.3	--	--	--
22...	0930	ENVIRONMENTAL	17.0	19.5	754	30	112	8.2	87
JUN 16...	0945	ENVIRONMENTAL	21.2	20.5	756	1.8	182	8.2	92
27...	0900	ENVIRONMENTAL	23.1	26.0	757	1.3	187	7.6	90
27...	2057	ENVIRONMENTAL	23.1	26.0	757	7.1	187	7.6	90
JUL 17...	1200	ENVIRONMENTAL	22.3	27.5	756	2.1	183	5.8	69
19...	1900	ENVIRONMENTAL	--	--	--	1.9	--	--	--
19...	1915	REPLICATE	--	--	--	2.1	--	--	--
AUG 23...	0945	ENVIRONMENTAL	19.9	26.5	761	1.1	193	10.1	100
SEP 18...	0915	ENVIRONMENTAL	20.3	18.0	761	.62	694	9.9	81

## 01658705 LITTLE CREEK AT GEIGER ROAD AT QUANTICO, VA--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	PH	NITRO-	NITRO-	NITRO-	NITRO-	NITRO-	PHOS-	PHORUS	
	WATER	GEN,	GEN,	AM-	GEN, AM-	GEN,			
	WHOLE FIELD	AMMONIA	NITRITE	MONIA +	MONIA +	NO <sub>2</sub> +NO <sub>3</sub>			
(STAND- ARD (MG/L UNITS)	SOLVED (00400)	DIS- (00608)	SOLVED (00613)	DIS. (00623)	TOTAL (00625)	SOLVED (00631)	TOTAL (00665)	SOLVED (00666)	
OCT 20...	6.5	.065	.014	.44	1.4	.490	.465	.054	.033
NOV 24...	6.4	<.020	<.010	.26	.31	.094	.011	E.003	<.010
DEC 14...	6.4	.052	.011	.49	1.1	.393	.439	.139	.123
JAN 10...	6.6	.125	.011	.45	2.7	.406	1.13	.066	.041
10...	6.6	.128	.012	.43	3.4	.426	1.21	.065	.044
FEB 24...	6.6	.101	.025	.52	.61	.751	.068	.024	.017
MAR 14...	6.8	.040	<.010	.18	.23	.521	.071	.022	.014
APR 19...	6.6	.050	<.010	.21	E.10	.719	.043	.035	.020
25...	6.6	.087	<.010	.51	3.9	.265	.953	.071	.047
25...	6.6	.070	<.010	.48	2.9	.271	.890	.071	.045
25...	6.7	.036	<.010	.45	1.0	.266	.252	.066	.041
25...	6.7	.055	<.010	.50	1.0	.289	.258	.064	.043
MAY 22...	--	.145	.011	.48	1.9	.302	.468	.030	.020
22...	--	.114	.011	.53	2.3	.342	.672	.056	.031
22...	--	.116	.011	.56	1.8	.351	.675	.053	.032
22...	6.7	.141	.011	.52	2.4	.320	.728	.059	.036
JUN 16...	6.7	.104	.015	.38	.62	.659	.129	.051	.035
27...	6.7	.080	.010	.41	.85	.779	.317	.050	.039
27...	6.7	.041	.010	.32	.94	.765	.337	.041	.029
JUL 17...	7.0	.037	<.010	.26	.39	.648	.109	.047	.033
19...	--	.075	.010	.50	1.5	.462	.329	.035	.028
19...	--	.075	.011	.50	1.4	.461	.354	.037	.025
AUG 23...	7.0	.022	<.010	.21	.28	.489	.057	.017	.011
SEP 18...	7.0	<.020	<.010	.13	.20	.395	.086	.034	.027