02041650 APPOMATTOX RIVER AT MATOACA, VA

LOCATION.--Lat 37°13'31", long 77°28'31", NAD83, Chesterfield County, Hydrologic Unit 02080207, on left bank at upstream side of bridge on State Highway 600, 0.2 mi south of Matoaca, 2.0 mi upstream from Rohoic Creek, 2.8 mi downstream from Lake Chesdin, 3.5 mi west of Petersburg, and at mile 15.9

DRAINAGE AREA.--1,344 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 68.30 ft above sea level.

REMARKS.--Records good except those for periods of no gage-height record, Dec. 25-31 and Jan. 3-6, which are fair. Flow regulated by Appomattox Water Authority at Lake Chesdin, capacity, 36,000 acre-ft, 2.8 mi upstream from which an average of 38.6 ft^3/s is diverted for industrial and municipal use. Records do not include flow of Upper Appomattox Canal of city of Petersburg which diverts around station. National Weather Service gage-height telemeter at station.

COOPERATION.--Records were provided by the Virginia Department of Environmental Quality - Water Division.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	315	131	272	285	467	1420	8750	421	935	153	373	116
2	281	130	257	265	620	957	8360	374	1690	139	422	87
3	233	130	285	e260	433	567	7500	349	1920	114	370	85
4	184	136	267	e250	414	696	6700	329	1970	114	129	83
5	197	150	257	e245	650	776	3720	401	1470	127	127	84
6	178	142	245	e275	519	898	2070	952	1210	131	131	84
7	160	140	257	289	576	603	1610	507	1480	124	122	82
8	155	143	245	327	528	660	1380	277	2960	160	114	80
9	161	154	244	469	460	663	1240	282	2590	127	102	79
10	141	204	260	307	545	459	907	295	1970	128	123	114
11	132	199	272	304	395	531	1110	285	1390	124	235	83
12	128	181	284	400	321	480	1030	284	693	141	485	85
13	125	193	242	416	491	544	1190	270	538	129	376	83
14	121	254	274	334	456	532	1140	223	415	117	1040	83
15	120	255	289	379	540	654	897	148	790	108	1160	82
16	118	241	363	390	601	1210	919	183	1950	113	710	81
17	105	267	1220	338	1120	1170	688	206	2590	115	275	80
18	102	237	1950	324	1580	1270	790	215	2420	144	235	81
19	107	224	1990	375	1890	1100	516	235	1740	105	210	82
20	112	246	1730	1490	1700	731	495	219	1070	99	110	125
21	114	260	1230	3040	1330	2060	628	242	477	96	103	86
22	124	185	771	3690	1010	7430	522	532	372	96	100	86
23	118	166	399	3020	657	8240	525	541	408	94	118	83
24	115	185	318	1870	756	8160	526	357	353	152	129	82
25	115	248	e310	1370	815	7330	651	436	271	84	96	54
26	120	592	e300	978	1100	6060	660	570	277	130	95	51
27	128	607	e265	699	831	2930	524	1240	266	86	120	50
28	140	515	e300	586	1040	1660	544	1550	205	85	368	49
29	129	533	e335	500	---	1430	407	1370	169	327	296	49
30	127	454	e315	590	---	4710	417	772	161	128	152	49
31	130	---	e320	606	---	7970	---	477	---	215	95	---
TOTAL	4535	7502	16066	24671	21845	73901	56416	14542	34750	4005	8521	2398
MEAN	146	250	518	796	780	2384	1881	469	1158	129	275	79.9
MAX	315	607	1990	3690	1890	8240	8750	1550	2960	327	1160	125
MIN	102	130	242	245	321	459	407	148	161	84	95	49
(†)	1281	965	1021	1047	899	1040	1164	1236	1151	1480	1369	1420

CAL YR 2000 TOTAL 316397 MEAN 864 MAX 8650 MIN 88 (†) 12723
WTR YR 2001 TOTAL 269152 MEAN 737 MAX 8750 MIN 49 (†) 14075

† Total diversion, in cubic feet per second, at Lake Chesdin, provided by Appomattox Water Authority.

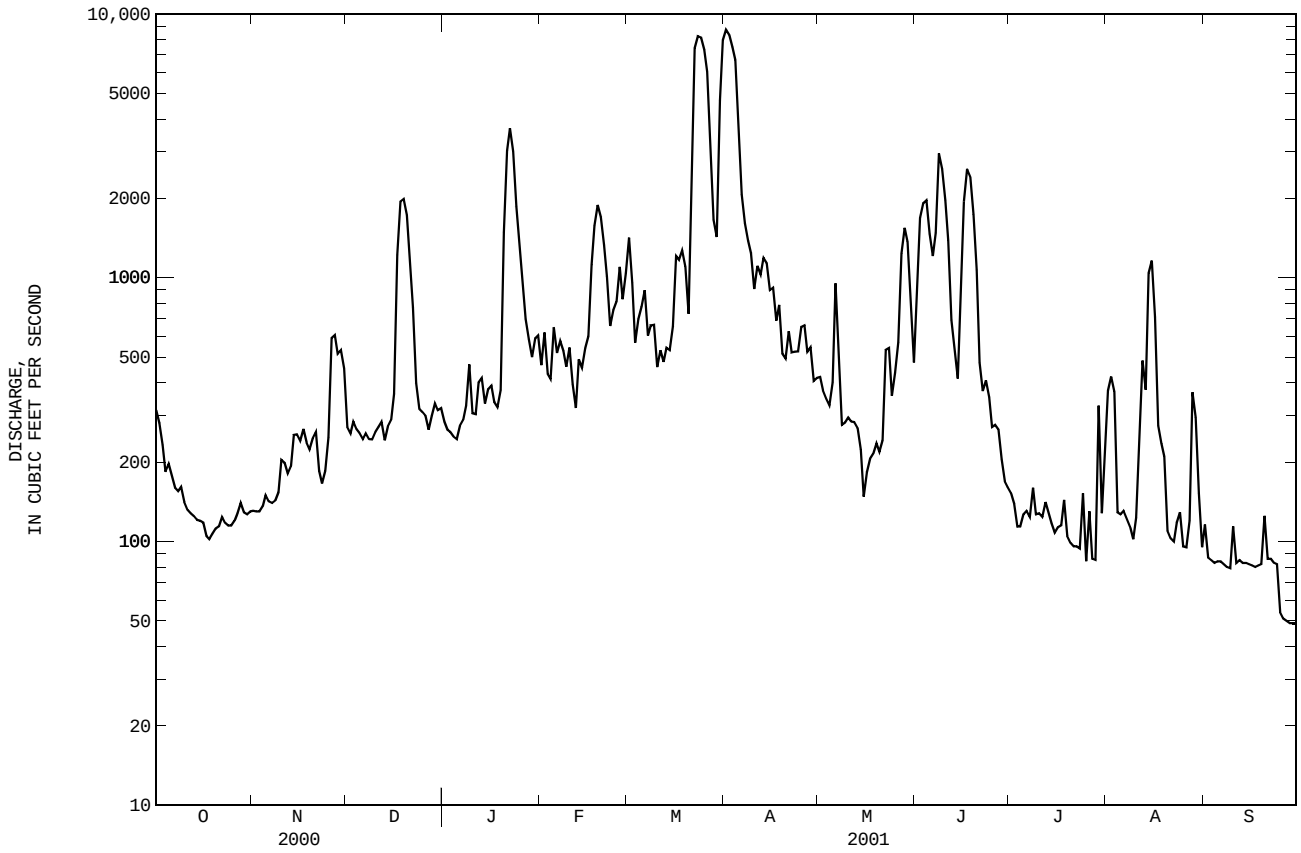
02041650 APPOMATTOX RIVER AT MATOACA, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1027	1037	1367	2005	2207	2532	2105	1292	898	543	473	734
MAX	6869	5648	3857	5868	6532	6098	5003	4452	5293	2123	1818	5312
(WY)	1973	1986	1997	1978	1998	1993	1983	1978	1972	1995	1978	1979
MIN	87.8	92.5	382	384	591	478	498	411	105	99.2	60.5	79.9
(WY)	1994	1999	1999	1981	1999	1981	1985	1985	1999	1986	1999	2001

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1970 - 2001	
ANNUAL TOTAL	316397		269152			
ANNUAL MEAN	864		737		1347	
HIGHEST ANNUAL MEAN					2559	1973
LOWEST ANNUAL MEAN					460	1981
HIGHEST DAILY MEAN	8650	Apr 19	8750	Apr 1	39400	Oct 7 1972
LOWEST DAILY MEAN	a88	Aug 24	a49	bSep 28	a32	Aug 31 1993
ANNUAL SEVEN-DAY MINIMUM	a111	Oct 15	a55	Sep 24	a48	Aug 25 1980
MAXIMUM PEAK FLOW			8870	Apr 1	40800	Oct 7 1972
MAXIMUM PEAK STAGE			9.16	Apr 1	18.39	Oct 7 1972
INSTANTANEOUS LOW FLOW			a48	cSep 28	a26	Aug 31 1993
ANNUAL RUNOFF (CFSM)	.64		.55		1.00	
ANNUAL RUNOFF (INCHES)	8.76		7.45		13.62	
10 PERCENT EXCEEDS	1930		1590		3300	
50 PERCENT EXCEEDS	500		304		670	
90 PERCENT EXCEEDS	143		98		143	

a Result of regulation.
b Also Sept. 29, 30, 2001.
c Also Sept. 29, 2001.
e Estimated.



02041650 APPOMATTOX RIVER AT MATOACA, VA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years l978 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1991 to September 1993.
WATER TEMPERATURE: October 1991 to September 1993.

COOPERATION.--Water samples, as noted, were collected by the U.S. Geological Survey and analyzed by the Virginia Division of Consolidated Laboratory Services (VDCLS), using analytical methods approved by the U.S. Geological Survey. Analyses performed by VDCLS are reported to U.S. Geological Survey rounding specifications. Results of chemical analyses provided by VDCLS were quality-assured and approved by the U.S. Geological Survey.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	SAMPLE TYPE	TEMPER-ATURE WATER (DEG C) (00010)	TEMPER-ATURE AIR (DEG C) (00020)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	AGENCY COL-LECTING SAMPLE (CODE NUMBER) (00027)	AGENCY ANA-LYZING SAMPLE (CODE NUMBER) (00028)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	GAGE HEIGHT (FEET) (00065)	TUR-BID-ITY (NTU) (00076)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	OXYGEN, DIS-SOLVED (MG/L) (00300)
OCT												
11...	0800	ENVIRONMENTAL	14.0	8.0	755	USGS	VDCLS	132	1.82	3.7	92	9.0
25...	1015	ENVIRONMENTAL	16.1	15.5	763	USGS	VDCLS	115	1.74	2.3	104	9.3
NOV												
09...	1330	ENVIRONMENTAL	16.2	18.5	750	USGS	VDCLS	156	1.92	4.9	95	9.8
28...	1230	ENVIRONMENTAL	10.5	13.5	755	USGS	VDCLS	566	2.94	4.0	98	11.7
DEC												
05...	0845	ENVIRONMENTAL	5.8	.5	759	USGS	VDCLS	248	2.23	2.8	99	13.2
18...	1300	ENVIRONMENTAL	6.6	5.5	757	USGS	VDCLS	2030	4.73	12	101	11.0
26...	1115	ENVIRONMENTAL	2.7	-1.0	770	USGS	VDCLS	323	2.43	6.9	96	14.0
JAN												
03...	1100	ENVIRONMENTAL	1.9	0.0	760	USGS	VDCLS	312	2.41	12	96	13.9
03...	1115	REPLICATE	1.9	0.0	760	USGS	VDCLS	312	2.41	14	96	13.9
16...	0815	ENVIRONMENTAL	4.1	1.5	760	USGS	VDCLS	380	2.57	14	89	12.3
23...	1230	ENVIRONMENTAL	4.1	5.0	760	USGS	VDCLS	3010	5.56	11	104	15.0
FEB												
07...	1200	ENVIRONMENTAL	5.8	12.5	764	USGS	VDCLS	583	2.97	30	85	12.9
22...	0815	ENVIRONMENTAL	6.7	0.0	760	USGS	VDCLS	1140	3.78	9.0	85	12.4
MAR												
06...	1100	ENVIRONMENTAL	7.8	4.5	742	USGS	VDCLS	939	3.45	9.6	86	13.7
16...	1015	ENVIRONMENTAL	9.8	11.0	754	USGS	VDCLS	1200	3.81	7.8	96	12.4
16...	1030	REPLICATE	9.8	11.0	754	USGS	VDCLS	1200	3.81	7.7	96	12.4
23...	0915	ENVIRONMENTAL	10.3	12.5	753	USGS	VDCLS	8280	8.80	21	62	11.2
27...	1015	ENVIRONMENTAL	10.7	3.0	764	USGS	VDCLS	2950	5.42	60	60	10.8

DATE	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	RESIDUE VOLA-TILE, SUS-PENDED (MG/L) (00535)	RESIDUE FIXED NON FILTER-ABLE (MG/L) (00540)	NITROGN TOTAL SEDIMNT SUSP TOTAL AS N (MG/L) (00601)	NITRO-GEN DIS-SOLVED (MG/L AS N) (00602)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS TOTAL SEDIMNT SUSP TOTAL AS P (MG/L) (00667)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)
OCT													
11...	7.1	<3	<3	<3	.02	.48	.005	.002	.188	.190	.014	.006	.008
25...	6.7	<3	<3	<3	.02	.40	<.004	<.002	.118	.118	.009	.005	.007
NOV													
09...	7.3	<3	<3	<3	.04	.41	.010	.002	.109	.111	.007	.009	.005
28...	7.4	4	<3	<3	.06	.46	.064	.023	.057	.080	.013	.012	.004
DEC													
05...	7.1	<3	<3	<3	.04	.40	.051	.013	.083	.096	.013	.008	.011
18...	7.1	17	4	13	.20	.35	.032	.002	.045	.047	.016	.042	.003
26...	7.1	<3	<3	<3	.07	.30	.008	<.002	.136	.136	.011	.018	.004
JAN													
03...	7.1	5	<3	3	.07	.55	.030	.002	.259	.261	.027	.022	.010
03...	7.1	<3	<3	<3	.08	.44	.030	.002	.260	.262	.019	.022	.012
16...	6.9	4	<3	<3	.06	.69	.068	.004	.304	.308	.038	.023	.010
23...	7.3	7	<3	5	.08	.44	.019	<.002	.269	.270	.028	.022	.003
FEB													
07...	7.1	5	<3	3	.07	.83	.066	.004	.404	.408	.037	.029	.012
22...	7.2	6	<3	4	.11	.41	.014	<.002	.188	.189	.009	.021	.009
MAR													
06...	7.2	6	<3	4	.10	.49	.012	.002	.188	.190	.010	.024	.009
16...	7.5	4	<3	<3	.10	.79	.011	<.002	.116	.116	.014	.025	.006
16...	7.5	4	3	3	.10	.41	.011	.002	.114	.114	.012	.021	.005
23...	6.3	20	4	16	.14	.47	.021	<.002	.136	.137	.040	.035	.007
27...	7.4	35	9	26	.18	.68	.038	.003	.246	.249	.030	.073	.012

02041650 APPOMATTOX RIVER AT MATOACA, VA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	CARBON, INORG + ORGANIC PARTIC. TOTAL (MG/L AS C) (00694)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	DATA BASE NUMBER
OCT				
11...	.2	14.7	1	01
25...	.1	14.7	3	01
NOV				
09...	.3	15.3	1	01
28...	.5	16.4	3	01
DEC				
05...	.3	17.6	3	01
18...	1.5	16.1	18	01
26...	.5	16.3	4	01
JAN				
03...	.5	14.7	6	01
03...	.5	14.8	6	02
16...	.5	14.4	6	01
23...	.6	17.0	8	01
FEB				
07...	.5	10.8	8	01
22...	.6	15.0	12	01
MAR				
06...	.6	14.1	40	01
16...	.5	9.8	7	01
16...	.6	10.4	7	02
23...	.9	12.1	21	01
27...	1.3	9.6	72	01

Remark codes used in this report:
< -- Less than