01664000 RAPPAHANNOCK RIVER AT REMINGTON, VA

Lower Chesapeake Basin
Rapidan-Upper Rappahannock Subbasin

LOCATION.--Lat 38°31′50″, long 77°48′50″ referenced to North American Datum of 1927, Fauquier County, VA, Hydrologic Unit 02080103, on left bank 80 ft upstream from bridge on alternate U.S. Highway 29, at Remington, 0.3 mi upstream from Tinpot Run, 0.4 mi downstream from Ruffans Run, and 2.5 mi downstream from Hazel River.

DRAINAGE AREA.--619 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1942 to current year.

REVISED RECORDS.--WSP 1171: 1944. OFR 2006-1308: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 252.53 ft NGVD of 1929. Prior to Nov. 21, 1951, nonrecording gage at bridge 80 ft downstream at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. National Weather Service gage-height telemeter at station. Maximum discharge, 90,000 ft^3/s, from rating curve extended above 43,000 ft^3/s on basis of slope-area measurement of peak flow. Water-quality records for some prior periods have been collected at this location.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood since at least 1828, that of Oct. 16, 1942.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 8	0815	*8,110	*13.57

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2012: U.S. Geological Survey Water-Data Report WDR-US-2012, site 01664000, accessed at http://wdr.water.usgs.gov/wy2012/pdfs/01664000.2012.pdf

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	321	720	901	739	507	1,620	397	342	332	98	109	65
2	296	636	731	690	539	1,170	395	350	546	100	119	58
3	322	588	643	634	599	1,320	392	345	375	97	117	313
4	342	559	581	570	529	1,190	371	324	293	89	85	241
5	323	518	543	576	524	977	365	334	275	85	68	211
6	284	476	538	564	527	853	352	363	265	84	77	208
7	250	452	2,320	547	502	755	337	392	263	81	138	129
8	237	438	6,170	522	486	703	327	353	255	71	113	111
9	221	423	2,540	497	495	661	321	352	238	172	82	104
10	210	414	1,670	500	480	603	319	369	216	272	127	94
11	201	407	1,280	503	490	563	316	335	198	159	290	83
12	604	385	1,070	1,950	481	542	307	291	190	118	155	72
13	4,580	376	933	1,450	427	534	305	276	372	97	112	64
14	3,740	368	840	1,080	458	516	297	273	327	83	90	58
15	2,030	366	774	905	450	493	294	447	229	100	76	56
16	1,180	370	719	787	441	478	294	589	214	93	73	53
17	890	421	655	766	493	467	285	440	201	88	90	50
18	696	408	612	751	470	452	274	367	193	85	75	54
19	837	365	579	673	442	444	308	e331	201	73	66	351
20	1,740	347	561	626	435	442	321	e291	217	69	61	299
21	841	348	541	617	423	436	296	272	204	141	68	165
22	650	407	547	603	417	427	321	339	171	235	94	124
23	559	807	1,940	584	419	432	411	408	167	134	93	106
24	496	828	1,300	617	423	423	509	852	166	102	78	91
25	468	600	937	593	507	540	444	1,190	156	96	69	78
26	435	524	812	556	450	523	391	649	144	133	72	72
27	421	483	892	767	412	435	373	482	136	100	137	71
28	400	459	1,470	686	407	405	342	392	125	78	188	957
29	633	647	1,010	582	608	423	342	343	114	68	133	478
30	1,270	1,290	868	539	---	407	369	375	105	59	97	237
31	872	---	799	516	---	399	---	377	---	53	76	---
Total	26,349	15,430	35,776	21,990	13,841	19,633	10,375	12,843	6,888	3,313	3,228	5,053
Mean	850	514	1,154	709	477	633	346	414	230	107	104	168
Max	4,580	1,290	6,170	1,950	608	1,620	509	1,190	546	272	290	957
Min	201	347	538	497	407	399	274	272	105	53	61	50
Cfsm	1.37	0.83	1.86	1.15	0.77	1.02	0.56	0.67	0.37	0.17	0.17	0.27
In.	1.58	0.93	2.15	1.32	0.83	1.18	0.62	0.77	0.41	0.20	0.19	0.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2012, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	476	577	746	836	950	1,179	1,043	839	587	330	331	382
Max	4,895	2,575	2,176	2,480	3,496	3,751	3,784	2,177	3,520	974	2,926	2,815
(WY)	(1943)	(1986)	(2004)	(1998)	(1998)	(1993)	(1983)	(1989)	(1972)	(1949)	(1955)	(1996)
Min	27.3	61.8	61.1	78.3	143	292	248	198	54.1	30.1	13.2	15.4
(WY)	(1987)	(1966)	(1966)	(1966)	(2002)	(1981)	(1981)	(1977)	(1999)	(1966)	(1966)	(1985)

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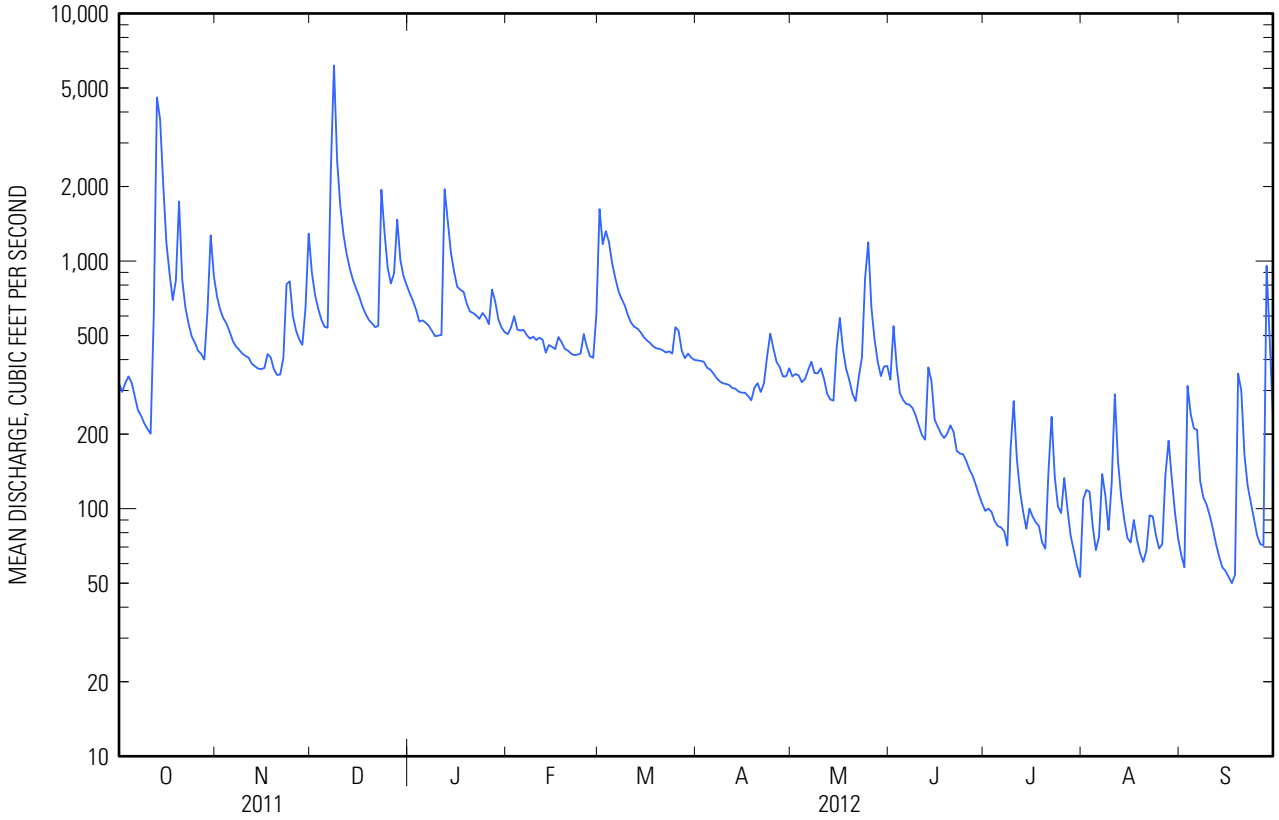
SUMMARY STATISTICS

	Calendar Year 2011		Water Year 2012		Water Years 1943 - 2012	
Annual total	278,635		174,719			
Annual mean	763		477		688	
Highest annual mean					1,240	2003
Lowest annual mean					195	2002
Highest daily mean	15,100	Apr 17	6,170	Dec 8	64,000	Oct 16, 1942
Lowest daily mean	38	Aug 3	50	Sep 17	2.9	Sep 12, 1966
Annual seven-day minimum	43	Jul 30	58	Sep 12	3.2	Sep 7, 1966
Maximum peak flow			8,110	Dec 8	90,000	Oct 16, 1942
Maximum peak stage			13.57	Dec 8	[a]30.00	Oct 16, 1942
Instantaneous low flow			49	Jul 31[b]	1.1	Sep 10, 1966
Annual runoff (cfsm)	1.23		0.771		1.11	
Annual runoff (inches)	16.75		10.50		15.10	
10 percent exceeds	1,520		852		1,390	
50 percent exceeds	396		392		413	
90 percent exceeds	101		85		73	

[a] From floodmarks.
[b] Also Sept. 17, 18, 2012.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1955, 1956, 1967 to 1986, and 2012.

COOPERATION.--Water samples were collected by the U.S. Geological Survey and analyzed by either the U.S. Geological Survey (Agency code 1028) or by the Virginia Division of Consolidated Laboratory Services (VDCLS, Agency code 85116), using analytical methods approved by the U.S. Geological Survey. Analyses performed by the 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 2011 TO SEPTEMBER 2012

Part 1 of 3

[%, percent; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Medium name	Sample type	Barometric pressure, mm Hg (00025)	Temperature, air, °C (00020)	Discharge, instantaneous, ft³/s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)
08-28-2012	***1125***	*QC sample - Artificial*	*Blank*	--	--	--	--	--	--
08-28-2012	**1130**	Surface water	Regular	754	31.0	192	7.6	92	7.0
09-20-2012	**0945**	Surface water	Regular	759	19.0	309	8.2	86	7.0

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 2 of 3

[%, percent; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; ft, feet; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Specific conductance, water, unfiltered, µS/cm at 25°C (00095)	Temperature, water, °C (00010)	Turbidity, water, unfiltered, monochrome near infrared LED light, 780-900 nm, detection angle 90 +/- 2.5 degrees, FNU (63680)	Gage height, ft (00065)	Suspended solids remaining after ignition, water, unfiltered, mg/L (00540)	Suspended solids, water, unfiltered, mg/L (00530)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)
08-28-2012	***1125***	--	--	--	--	*< 1*	*< 1*	*< .008*	*0.010*
08-28-2012	**1130**	81	24.7	5.3	3.18	1	1	.010	.150
09-20-2012	**0945**	78	17.2	10	3.55	5	7	.020	.300

01664000 RAPPAHANNOCK RIVER AT REMINGTON, VA—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2011 TO SEPTEMBER 2012

Part 3 of 3

[%, percent; FNU, Formazin nephelometric units; LED, light-emitting diode; N, nitrogen; P, phosphorus; ft, feet; ft^3/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; mm, millimeters; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; --, no data; <, less than]

Date	Sample start time	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, unfiltered, mg/L (00600)	Suspended sediment, sieve diameter, percent smaller than 0.0625 mm (70331)	Suspended sediment concentration, mg/L (80154)
08-28-2012	***1125***	*< .002*	*< .002*	*< .02*	*20*	*1*
08-28-2012	**1130**	.009	.030	.46	54	2
09-20-2012	**0945**	.013	.060	.70	82	8