

Water-Data Report 2010

02053200 POTECASI CREEK NEAR UNION, NC

Albemarle-Chowan Basin
Meherrin Subbasin

LOCATION.--Lat 36°22'15", long 77°01'32" referenced to North American Datum of 1983, Hertford County, NC, Hydrologic Unit 03010204, on right bank at downstream side of bridge on North Carolina Highway 11, 2.8 mi north of Union, 3 mi downstream from Cutawhiskie Swamp, and 3.5 mi upstream from Bells Branch.

DRAINAGE AREA.--225 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1958 to current year. Occasional low-flow measurements, water years 1953-57.

REVISED RECORDS.--WDR NC-81-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3.53 ft above NGVD of 1929. Prior to December 1, 1958, nonrecording gage at same site and datum. Satellite telemetry at streamgage.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Maximum discharge for period of record from rating curve extended above 5,800 ft³/s on basis of discharge-conveyance ratios of peak flow; maximum gage height from outside floodmarks. Minimum discharge for the current water year also occurred July 29.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1929 reached a stage of 19.1 ft; discharge, 4,050 ft³/s; and flood of August 1940 reached a stage of 24.1 ft; discharge, 7,000 ft³/s, from rating curve extended above 4,000 ft³/s, from information furnished by North Carolina State Highway Commission.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	11	16	77	573	745	149	1,780	17	105	3.3	1.5	2.0
2	8.5	21	77	534	558	136	1,640	15	90	3.2	2.4	1.6
3	7.0	20	152	457	488	229	1,300	13	153	3.0	1.8	2.9
4	5.5	19	246	e375	635	427	946	11	166	2.8	1.5	3.4
5	4.4	18	271	e315	693	398	644	11	115	2.3	1.5	2.1
6	3.8	17	511	e280	1,240	337	412	9.8	63	1.5	2.8	1.5
7	3.5	16	569	244	1,920	305	254	8.7	39	1.2	3.2	1.1
8	3.2	16	548	221	2,220	277	164	7.8	26	0.89	2.6	0.93
9	2.9	15	790	186	2,070	242	123	6.7	18	0.86	1.9	0.94
10	2.9	16	1,370	e155	1,760	201	105	6.3	14	1.5	1.2	0.89
11	3.3	50	1,450	e150	1,430	169	94	6.1	11	3.6	1.7	0.73
12	3.4	553	1,340	142	1,110	179	85	6.4	9.4	2.8	54	1.3
13	4.5	1,470	1,190	e115	857	256	81	56	12	2.4	169	2.3
14	3.9	1,820	1,030	e105	672	304	73	85	11	2.2	157	1.7
15	5.4	2,090	866	100	543	302	65	52	8.5	1.9	e43	1.1
16	8.1	1,950	700	92	452	306	57	55	7.5	1.8	e14	0.76
17	7.0	1,600	556	104	377	289	49	120	25	1.5	8.8	0.50
18	6.3	1,230	437	238	315	261	42	436	16	1.7	7.2	0.34
19	6.0	912	426	304	266	226	36	909	8.2	1.8	14	0.26
20	5.5	652	649	272	227	189	32	780	5.6	1.9	11	0.23
21	4.7	449	681	281	194	156	31	616	4.2	1.7	8.6	0.34
22	4.6	303	648	400	171	131	34	506	5.0	1.2	7.3	0.30
23	5.0	220	622	678	175	113	32	420	5.0	0.84	6.9	0.21
24	6.5	174	575	741	179	99	29	347	4.3	0.88	5.9	0.17
25	4.9	149	512	810	180	86	30	325	3.6	0.59	4.7	0.14
26	5.2	129	551	1,290	197	84	29	286	3.1	0.22	4.3	0.26
27	7.8	112	654	1,600	185	85	28	216	2.9	0.24	3.7	22
28	9.5	100	658	1,700	165	78	26	321	2.5	0.07	4.9	165
29	9.8	92	676	1,560	---	356	23	341	2.3	0.09	4.5	433
30	12	82	654	1,290	---	1,170	21	258	2.7	1.7	3.4	3,340
31	13	---	601	1,010	---	1,600	---	170	---	1.5	2.7	---
Total	189.1	14,311	20,087	16,322	20,024	9,140	8,265	6,417.8	938.8	51.18	557.0	3,988.00
Mean	6.10	477	648	527	715	295	276	207	31.3	1.65	18.0	133
Max	13	2,090	1,450	1,700	2,220	1,600	1,780	909	166	3.6	169	3,340
Min	2.9	15	77	92	165	78	21	6.1	2.3	0.07	1.2	0.14
Cfsm	0.03	2.12	2.88	2.34	3.18	1.31	1.22	0.92	0.14	0.01	0.08	0.59
In.	0.03	2.37	3.32	2.70	3.31	1.51	1.37	1.06	0.16	0.01	0.09	0.66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	117	123	219	377	460	437	295	142	124	99.5	152	146
Max	1,108	888	675	957	1,135	1,439	994	925	741	531	1,131	2,515
(WY)	(1960)	(2007)	(2004)	(1987)	(1960)	(1989)	(1983)	(1979)	(2006)	(1975)	(1992)	(1999)
Min	2.12	4.71	11.3	51.3	44.7	43.7	27.7	5.36	3.94	1.65	1.57	1.09
(WY)	(1995)	(2002)	(2002)	(1981)	(2009)	(2006)	(1995)	(1994)	(2008)	(2010)	(2008)	(2007)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1959 - 2010	
Annual total	66,432.09		100,290.88			
Annual mean	182		275		223	
Highest annual mean					458	1979
Lowest annual mean					56.1	2002
Highest daily mean	2,090	Nov 15	3,340	Sep 30	15,200	Sep 17, 1999
Lowest daily mean	0.99	Jul 1	0.07	Jul 28	0.06	Aug 27, 2008
Annual seven-day minimum	1.7	Jun 29	0.24	Sep 19	0.16	Aug 22, 2008
Maximum peak flow			2,260	Feb 8	^a 17,000	Sep 17, 1999
Maximum peak stage			15.60	Feb 8	^a 28.90	Sep 17, 1999
Instantaneous low flow			^a 0.03	Jul 28	Not Determined	
Annual runoff (cfsm)	0.809		1.22		0.992	
Annual runoff (inches)	10.98		16.58		13.48	
10 percent exceeds	656		798		620	
50 percent exceeds	33		57		73	
90 percent exceeds	4.6		1.5		4.9	

^a See Remarks.

