

Water-Data Report 2010

03456991 PIGEON RIVER NEAR CANTON, NC

French Broad-Holston Basin
Pigeon Subbasin

LOCATION.--Lat 35°31'23", long 82°50'48" referenced to North American Datum of 1983, Haywood County, NC, Hydrologic Unit 06010106, on right bank 600 ft upstream from North Carolina Highway 215 bridge, 1.3 mi upstream from U.S. Highways 19/23 at Canton, and at river mile 64.9.

DRAINAGE AREA.--130 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--May 1907 to June 1909, October 1928 to current year. Monthly discharge only for some periods published in WSP 1306. May 1907 to June 1909, October 1928 to September 1983, published as "Pigeon River at Canton, NC" (03457000).

REVISED RECORDS.--WSP 823: Drainage area. WSP 853: 1929-37(M). WSP 1306: 1903(M). WDR NC-91-1: 1984-89(M).

GAGE.--Water-stage recorder. Datum of gage is 2,581.66 ft above National Geodetic Vertical Datum of 1929 (Tennessee Valley Authority bench mark). Prior to June 1909, nonrecording gage at bridge 1.2 mi downstream at different datum. December 6, 1928, to January 3, 1929, nonrecording gage at site 0.8 mi downstream at different datum. Prior to October 1, 1983, water-stage recorder at site 0.8 mi downstream at different datum. Satellite and telephone telemetry at streamgage.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Occasional diurnal fluctuation and considerable regulation at low flow, since 1932, caused by Lake Logan (station 03455773) on West Fork Pigeon River 11.2 mi upstream. Prior to regulation, maximum discharge: 21,500 ft³/s, August 16, 1928; gage height: 16.40 ft; minimum discharge: 39 ft³/s, September 3, 1930. Maximum discharge for period of record from rating curve extended above 20,000 ft³/s on basis of slope-area measurement of peak flow. Minimum discharge for period of record, at former site, result of freezeup. Minimum discharge for current water year also occurred September 4, 5, 8, 10, 11, 18, 19, 21, 22, 24, 25, 26.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of about 1810 is believed to have been approximately equal to that of August 30, 1940, and flood of June 15, 1876, reached a gage height of 18.3 ft; discharge, 25,700 ft³/s, at former site, from studies by Tennessee Valley Authority.

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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	324	877	324	629	610	329	536	238	261	126	87	56
2	291	647	999	557	785	336	499	245	189	117	76	53
3	267	558	999	e481	751	318	463	496	196	114	72	52
4	239	491	714	e428	682	298	432	396	170	108	70	53
5	378	435	615	e388	1,360	287	407	328	174	103	74	54
6	290	389	529	e358	1,430	276	385	299	160	95	82	54
7	253	356	474	e334	1,010	272	360	282	150	92	77	53
8	226	326	448	e314	886	271	425	263	139	88	68	55
9	211	302	1,560	e298	830	285	525	245	137	89	65	56
10	213	524	903	e287	766	315	388	238	158	93	65	53
11	198	2,710	740	e278	688	405	360	239	130	86	65	66
12	214	1,430	643	e270	646	739	345	239	160	105	95	111
13	235	1,010	803	e266	600	876	328	227	135	138	84	67
14	220	818	693	e262	549	650	314	213	128	107	102	58
15	262	682	601	e259	539	554	302	243	133	92	80	56
16	265	577	535	e260	486	496	291	228	194	94	76	55
17	232	507	488	1,110	454	467	279	245	201	191	72	53
18	233	1,460	522	772	425	433	268	211	138	116	87	52
19	211	1,100	487	608	407	412	257	194	124	102	85	52
20	213	844	413	569	388	396	255	184	119	96	71	55
21	207	725	379	738	381	459	269	183	111	91	124	53
22	197	641	361	778	473	1,860	245	188	104	87	262	53
23	196	612	351	657	474	868	236	173	113	94	102	55
24	815	532	354	1,490	446	738	239	164	133	87	81	53
25	405	477	2,980	2,700	406	669	607	176	221	82	74	52
26	327	428	1,480	1,280	372	623	339	169	199	101	70	67
27	416	387	1,030	1,000	365	560	313	159	162	84	67	115
28	904	355	874	871	347	664	287	153	276	84	66	107
29	571	330	766	801	---	797	264	149	162	93	64	83
30	485	336	691	778	---	641	251	142	143	77	61	150
31	548	---	669	671	---	583	---	224	---	75	58	---
Total	10,046	20,866	23,425	20,492	17,556	16,877	10,469	7,133	4,820	3,107	2,582	1,952
Mean	324	696	756	661	627	544	349	230	161	100	83.3	65.1
Max	904	2,710	2,980	2,700	1,430	1,860	607	496	276	191	262	150
Min	196	302	324	259	347	271	236	142	104	75	58	52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2010 ^a, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	219	269	330	418	464	519	451	332	259	191	195	219
Max	787	964	872	1,017	1,150	1,058	1,005	981	781	600	1,476	2,504
(WY)	(1965)	(1980)	(1933)	(1937)	(1939)	(1975)	(1983)	(1976)	(1967)	(2005)	(1940)	(2004)
Min	48.2	59.2	64.5	85.3	150	155	167	132	82.8	57.7	61.6	47.8
(WY)	(1955)	(1955)	(1940)	(1956)	(1941)	(1988)	(1986)	(1941)	(2008)	(2008)	(2007)	(1998)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1932 - 2010 ^a	
Annual total	134,039		139,325			
Annual mean	367		382		321	
Highest annual mean					503 1949	
Lowest annual mean					170 1988	
Highest daily mean	3,780	Sep 21	2,980	Dec 25	19,800	Sep 8, 2004
Lowest daily mean	54	Sep 15	52	Sep 3	27	Sep 7, 1954
Annual seven-day minimum	62	Sep 9	53	Sep 16	40	Aug 19, 2008
Maximum peak flow			6,360	Jan 25	^b 48,000	Sep 17, 2004
Maximum peak stage			7.77	Jan 25	22.80	Sep 17, 2004
Instantaneous low flow			^b 52	Sep 3	^b 15	Jan 8, 1956
10 percent exceeds	707		781		601	
50 percent exceeds	263		276		229	
90 percent exceeds	83		71		84	

^a Regulated period only (1932-2010). See Remarks.

^b See Remarks.

