

Water-Data Report 2008

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 NGVD 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 station.

REMARKS.--No estimated daily discharges. Records good. 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 August 22-25.

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 stage 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 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	52	79	90	286	879	225	245	170	110	71	54	131
2	52	78	86	234	583	213	232	161	118	61	51	121
3	53	73	99	195	412	205	229	158	108	57	49	107
4	58	70	93	192	399	2,040	261	157	101	56	49	95
5	90	67	84	179	393	1,490	361	151	96	60	51	87
6	70	69	80	170	421	838	552	146	92	60	49	83
7	57	68	77	157	477	897	358	144	91	60	49	80
8	54	64	77	147	354	1,200	314	142	93	56	48	76
9	53	63	77	141	311	854	288	165	90	57	47	135
10	53	62	79	148	274	721	271	172	88	69	48	111
11	50	60	76	747	251	621	258	177	88	63	47	127
12	50	60	72	367	238	539	284	176	83	54	45	148
13	50	60	72	286	252	474	245	156	79	55	45	132
14	50	60	77	246	223	428	229	147	79	62	56	105
15	50	167	76	216	206	525	227	145	101	57	50	92
16	49	106	192	194	194	622	219	196	84	55	55	90
17	51	77	122	219	215	462	208	164	77	55	58	91
18	61	71	95	213	729	419	200	150	71	55	48	92
19	59	69	90	193	377	552	197	165	70	59	43	86
20	63	67	88	166	320	717	195	146	68	55	40	78
21	53	66	113	161	291	524	183	146	69	53	39	76
22	51	117	120	167	291	468	178	136	81	60	37	72
23	233	116	576	184	271	418	173	130	74	65	39	70
24	618	83	348	163	241	377	168	134	68	54	38	67
25	282	77	222	136	230	347	163	129	63	54	41	64
26	163	138	196	148	335	321	169	121	64	59	1,930	65
27	126	209	188	137	293	305	167	121	68	61	1,800	84
28	108	125	242	130	236	284	260	125	65	52	417	77
29	96	106	386	131	231	284	214	126	73	51	264	70
30	88	98	349	263	---	267	177	118	71	54	185	65
31	83	---	432	184	---	249	---	112	---	50	150	---
Total	3,026	2,625	4,974	6,500	9,927	17,886	7,225	4,586	2,483	1,790	5,922	2,777
Mean	97.6	87.5	160	210	342	577	241	148	82.8	57.7	191	92.6
Max	618	209	576	747	879	2,040	552	196	118	71	1,930	148
Min	49	60	72	130	194	205	163	112	63	50	37	64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	220	265	324	416	465	522	454	331	260	193	198	217
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 2007		Water Year 2008		Water Years 1932 - 2008	
Annual total	61,789		69,721			
Annual mean	169		190		321	
Highest annual mean					503	1949
Lowest annual mean					170	1988
Highest daily mean	2,200	Jan 1	2,040	Mar 4	19,800	Sep 8, 2004
Lowest daily mean	45	Aug 21	37	Aug 22	27	Sep 7, 1954
Annual seven-day minimum	47	Aug 15	40	Aug 19	40	Aug 19, 2008
Maximum peak flow			11,100	Aug 26	^a 48,000	Sep 17, 2004
Maximum peak stage			10.38	Aug 26	22.80	Sep 17, 2004
Instantaneous low flow			^a 37	Aug 21	^a 15	Jan 8, 1956
10 percent exceeds	321		388		599	
50 percent exceeds	108		119		229	
90 percent exceeds	53		53		85	

^aRegulated period only (1932-2008). See Remarks.

