Water-Data Report 2011

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 mi^2.

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 Datim 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 ft^3/s, August 16, 1928; gage height: 16.40 ft; minimum discharge: 39 ft^3/s, September 3, 1930. Maximum discharge for period of record from rating curve extended above 20,000 ft^3/s on basis of slope-area measurement of peak flow. Minimum discharge for period of record, at former site, result of freezeup.

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 ft^3/s, at former site, from studies by Tennessee Valley Authority.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	110	80	2,050	347	163	387	404	531	141	105	185	60
2	78	76	667	523	722	252	376	478	133	98	120	59
3	66	73	465	309	383	225	349	443	135	96	99	58
4	63	89	364	256	351	206	328	631	129	97	90	61
5	60	105	352	229	532	222	745	456	121	143	87	84
6	58	82	267	217	397	2,380	562	418	118	128	102	982
7	57	75	218	199	332	1,040	494	384	117	117	105	308
8	58	72	221	190	295	778	449	354	124	155	101	225
9	60	72	202	166	263	1,460	414	328	142	143	89	180
10	58	70	187	184	253	1,580	385	306	138	547	78	152
11	59	68	174	177	228	1,080	358	288	133	177	72	134
12	62	66	194	154	215	879	420	275	124	132	72	123
13	78	65	157	152	206	763	356	270	119	113	76	116
14	57	64	119	e150	196	673	324	257	108	116	201	107
15	58	67	140	e148	187	714	309	240	172	137	114	101
16	64	119	151	e146	180	680	2,450	227	361	132	84	96
17	64	211	224	145	174	586	1,050	222	148	121	77	95
18	64	110	184	147	172	536	815	217	132	108	74	93
19	64	95	168	176	171	489	684	205	172	98	81	90
20	68	90	152	162	160	446	619	196	157	93	104	88
21	66	84	151	149	156	413	545	186	126	89	131	113
22	66	81	159	134	157	383	570	175	143	93	91	162
23	66	80	159	128	154	365	485	182	160	105	77	287
24	65	85	138	134	148	405	424	164	157	105	72	188
25	78	81	147	131	216	339	389	153	126	142	72	135
26	92	91	143	191	190	330	431	146	115	291	75	121
27	252	102	124	175	164	491	395	230	109	137	82	125
28	254	83	e123	153	210	425	1,280	187	126	111	72	109
29	126	79	e127	144	---	393	725	164	138	99	65	102
30	98	1,470	e130	143	---	500	608	154	110	93	64	98
31	87	---	139	148	---	453	---	146	---	157	62	---
Total	2,556	3,985	8,196	5,807	6,975	19,873	17,743	8,613	4,234	4,278	2,874	4,652
Mean	82.5	133	264	187	249	641	591	278	141	138	92.7	155
Max	254	1,470	2,050	523	722	2,380	2,450	631	361	547	201	982
Min	57	64	119	128	148	206	309	146	108	89	62	58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2011[a], BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	217	267	329	415	461	521	453	331	258	190	194	218
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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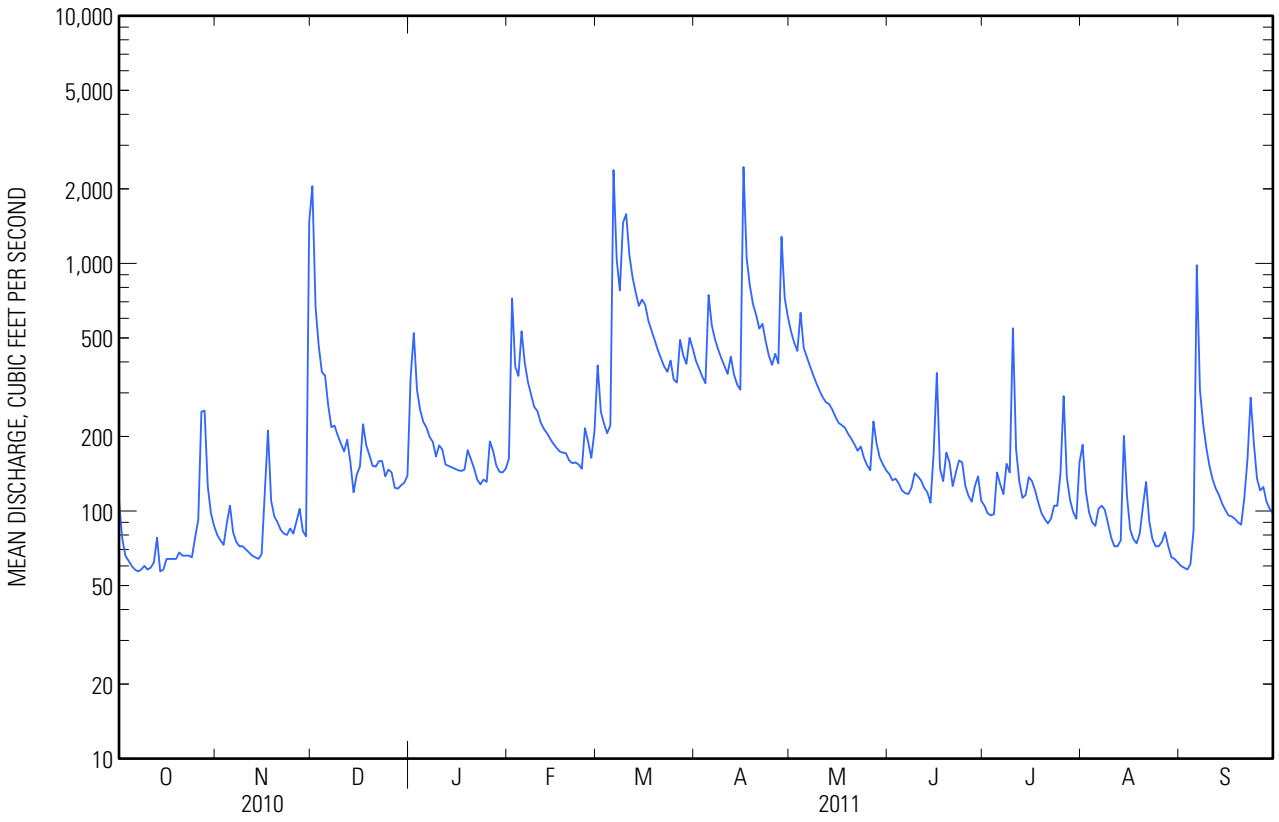
SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1932 - 2011[a]	
Annual total	99,725		89,786			
Annual mean	273		246		320	
Highest annual mean					503	1949
Lowest annual mean					170	1988
Highest daily mean	2,700	Jan 25	2,450	Apr 16	19,800	Sep 8, 2004
Lowest daily mean	52	Sep 3	57	Oct 7	27	Sep 7, 1954
Annual seven-day minimum	53	Sep 16	59	Oct 5	40	Aug 19, 2008
Maximum peak flow			7,100	Nov 30	[b]48,000	Sep 17, 2004
Maximum peak stage			8.22	Nov 30	22.80	Sep 17, 2004
Instantaneous low flow			53	Oct 14	[b]15	Jan 8, 1956
10 percent exceeds	643		496		600	
50 percent exceeds	159		149		228	
90 percent exceeds	64		72		84	

[a] Regulated period only (1932-2011). See Remarks.
[b] See Remarks.