

Water-Data Report 2013

02111180 ELK CREEK AT ELKVILLE, NC

Upper Pee Dee Basin
Upper Yadkin Subbasin

LOCATION.--Lat 36°04'17", long 81°24'11" referenced to North American Datum of 1983, Wilkes County, NC, Hydrologic Unit 03040101, on left bank 700 ft upstream from bridge on Secondary Highway 268 in Elkville, and 3,400 ft upstream from mouth.

DRAINAGE AREA.--50.9 mi², revised.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1965 to current year.

REVISED RECORDS.--WDR NC-80-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gages. Datum of gage is 1,082.40 ft above NGVD of 1929. Satellite telemetry at streamgage.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge for period of record, from rating curve extended above 3,200 ft³/s on basis of contracted-opening computation. Minimum discharge for period of record also occurred August 24, 2008. Minimum discharge for current water year also occurred December 14, 15, 16.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of August 13, 1940, reached a stage of about 22 ft; discharge, about 70,000 ft³/s, on basis of several contracted-opening and slope-area measurements. A minimum discharge of 6.0 ft³/s was measured September 19, 1956.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	31	29	23	63	320	143	96	110	101	621	205	136
2	211	28	23	61	201	124	90	112	103	1,670	175	124
3	106	27	23	56	158	109	86	109	103	804	161	106
4	65	28	23	53	130	99	97	106	94	827	147	98
5	51	28	23	51	114	110	124	257	94	1,430	136	92
6	44	27	22	49	103	168	108	2,480	146	626	133	88
7	50	27	23	47	99	129	102	776	e151	683	133	86
8	43	26	23	46	119	116	99	521	e187	620	133	86
9	40	26	22	45	99	107	94	360	209	389	152	85
10	37	26	23	44	93	100	91	273	740	290	288	83
11	35	25	24	48	97	97	90	232	395	253	262	86
12	34	26	22	47	90	277	205	204	231	240	173	85
13	32	36	21	44	95	220	164	178	177	269	171	80
14	30	29	21	140	91	166	137	158	152	497	143	76
15	47	26	21	718	85	139	149	141	125	478	130	73
16	38	26	25	678	84	125	135	130	113	297	123	72
17	33	25	36	726	80	113	128	118	109	239	119	70
18	32	25	28	783	76	110	120	133	107	245	165	70
19	31	25	26	317	77	116	183	892	105	196	356	68
20	30	25	29	205	74	100	296	352	94	181	235	67
21	28	25	55	154	71	97	199	232	88	181	185	88
22	28	24	37	124	80	92	161	230	84	238	161	92
23	28	24	32	106	80	89	140	486	82	302	141	69
24	27	24	46	96	78	121	127	302	96	193	129	64
25	27	24	51	87	74	137	116	211	104	163	118	66
26	27	23	417	83	190	124	106	171	88	146	112	68
27	28	24	214	77	265	114	101	148	83	1,150	108	62
28	27	24	113	74	179	106	126	132	81	1,280	105	60
29	27	23	92	72	---	101	139	119	76	418	106	60
30	28	23	76	441	---	97	118	112	127	277	131	59
31	29	---	66	931	---	101	---	105	---	229	122	---
Total	1,324	778	1,680	6,466	3,302	3,847	3,927	9,890	4,445	15,432	4,958	2,419
Mean	42.7	25.9	54.2	209	118	124	131	319	148	498	160	80.6
Max	211	36	417	931	320	277	296	2,480	740	1,670	356	136
Min	27	23	21	44	71	89	86	105	76	146	105	59
Cfsm	0.84	0.51	1.06	4.10	2.32	2.44	2.57	6.27	2.91	9.78	3.14	1.58
In.	0.97	0.57	1.23	4.73	2.41	2.81	2.87	7.23	3.25	11.28	3.62	1.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2013, BY WATER YEAR (WY)

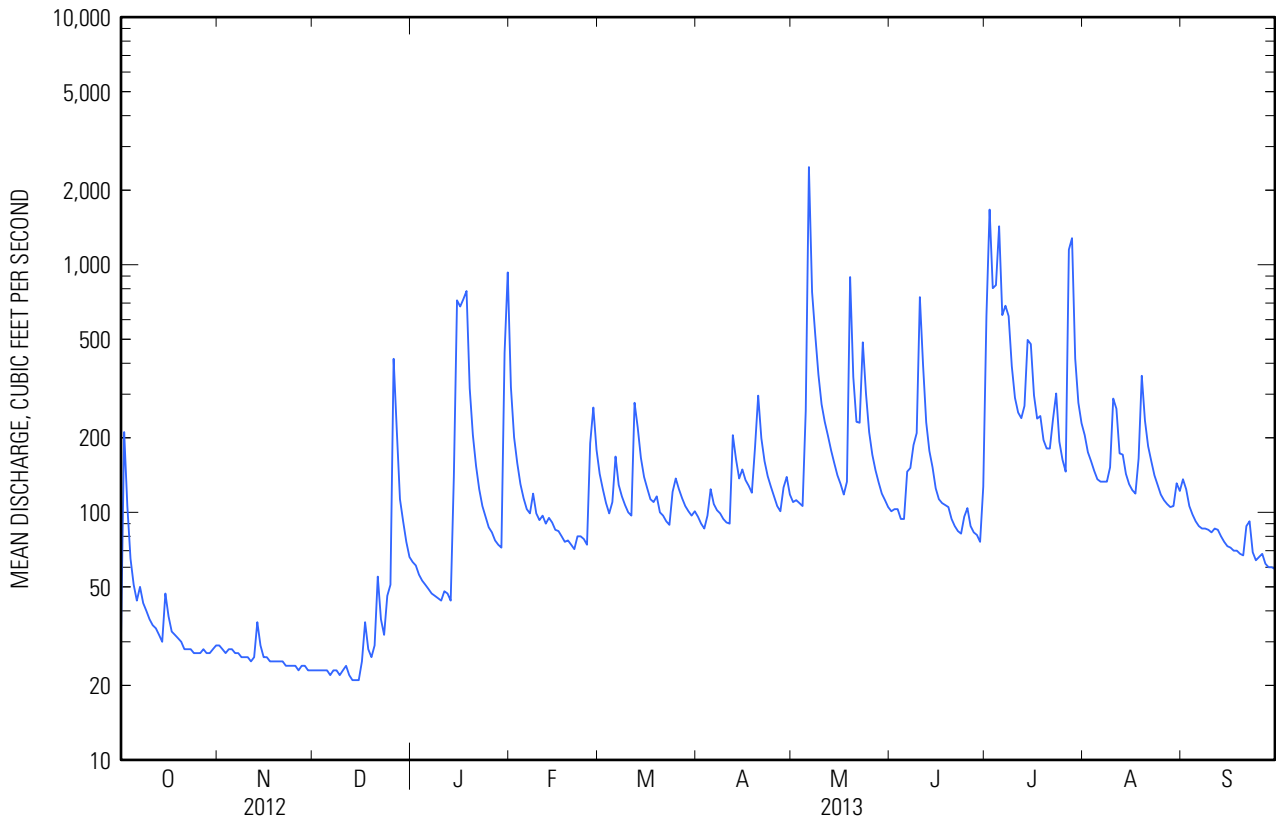
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	67.9	84.5	89.9	105	111	139	134	108	95.8	76.2	75.5	65.5
Max	298	365	199	323	250	317	379	319	300	498	384	293
(WY)	(1991)	(1978)	(2010)	(1995)	(1966)	(1993)	(1980)	(2013)	(2003)	(2013)	(1994)	(2004)
Min	13.7	19.3	19.1	22.5	25.0	47.9	49.9	31.0	21.7	17.6	15.3	15.5
(WY)	(2001)	(2008)	(2001)	(1981)	(2001)	(1988)	(2001)	(2002)	(1988)	(1988)	(2002)	(2007)

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SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1966 - 2013	
Annual total	20,742		58,468			
Annual mean	56.7		160		96.0	
Highest annual mean					160	2013
Lowest annual mean					35.7	2001
Highest daily mean	440	Jan 12	2,480	May 6	5,890	Aug 17, 1994
Lowest daily mean	21	Dec 13	21	Dec 13	5.5	Aug 24, 2008
Annual seven-day minimum	22	Dec 9	22	Dec 9	6.2	Aug 19, 2008
Maximum peak flow			4,610	May 6	^a 18,700	Aug 17, 1994
Maximum peak stage			6.05	May 6	12.02	Aug 17, 1994
Instantaneous low flow			^a 21	Dec 13	^a 5.3	Aug 22, 2008
Annual runoff (cfsm)	1.11		3.15		1.89	
Annual runoff (inches)	15.16		42.73		25.62	
10 percent exceeds	92		296		167	
50 percent exceeds	45		102		66	
90 percent exceeds	25		26		26	

^a See Remarks.



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CLIMATOLOGICAL RECORDS

PERIOD OF RECORD.--October 2001 to current year.

INSTRUMENTATION.--Tipping-bucket raingage and electronic datalogger. Satellite telemetry at station.

REMARKS.--Gage is operated in cooperation with U.S. Army Corps of Engineers, Wilmington District. Precipitation data collected during freezing periods may not be accurately reflected in daily record.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY SUM VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.65	0.00	0.00	0.18	0.00	0.00	0.01	0.00	0.00	0.99	0.11	0.69
2	1.26	0.00	0.00	0.03	0.00	0.00	0.00	0.10	0.59	3.69	0.00	0.08
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00
4	0.00	0.03	0.00	0.00	0.00	0.00	0.88	0.00	0.04	1.69	0.05	0.00
5	0.00	0.00	0.02	0.00	0.00	1.18	0.00	2.00	0.17	1.39	1.38	0.00
6	0.01	0.01	0.00	0.00	0.00	0.00	0.00	2.31	1.61	0.38	0.01	0.00
7	0.46	0.00	0.07	0.00	0.70	0.00	0.00	0.17	0.32	0.71	0.42	0.00
8	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.77	0.00	0.01	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.00	0.01	0.00
10	0.00	0.00	0.18	0.00	0.17	0.00	0.00	0.00	0.24	0.06	1.34	0.00
11	0.00	0.00	0.00	0.27	0.07	0.60	0.05	0.18	0.02	0.01	0.20	0.02
12	0.00	0.47	0.00	0.00	0.02	0.77	0.56	0.00	0.00	0.14	0.24	0.00
13	0.00	0.06	0.00	0.00	0.18	0.00	0.00	0.00	0.37	0.02	0.70	0.00
14	0.00	0.00	0.00	2.62	0.00	0.00	0.00	0.00	0.01	1.06	0.00	0.00
15	0.88	0.00	0.00	1.68	0.00	0.00	0.46	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.59	0.40	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.06	2.62	0.00	0.00	0.02	0.17	0.06	0.06	0.44	0.00
18	0.00	0.00	0.00	0.02	0.00	0.47	0.00	0.86	0.18	0.00	0.49	0.00
19	0.00	0.00	0.00	0.00	0.05	0.00	1.18	1.90	0.00	0.00	0.43	0.00
20	0.00	0.00	0.66	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.24	0.01	0.88
22	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.95	0.00	0.23	0.00	0.00
23	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.44	0.00	0.06	0.01	0.00
24	0.00	0.00	0.59	0.00	0.00	0.86	0.00	0.01	0.08	0.00	0.00	0.00
25	0.00	0.00	0.04	0.14	0.00	0.02	0.00	0.00	0.00	0.05	0.00	0.22
26	0.00	0.00	2.14	0.00	1.43	0.00	0.00	0.00	0.58	0.01	0.00	0.00
27	0.00	0.05	0.00	0.00	0.00	0.00	0.07	0.00	0.13	1.63	0.00	0.00
28	0.00	0.00	0.02	0.02	0.00	0.00	1.08	0.00	0.04	0.23	0.00	0.00
29	0.01	0.00	0.16	0.00	---	0.00	0.11	0.00	0.01	0.00	1.05	0.00
30	0.00	0.00	0.00	1.82	---	0.00	0.00	0.00	1.79	0.02	0.05	0.00
31	0.00	---	0.00	0.00	---	0.24	---	0.00	---	0.15	0.78	---
Total	3.27	0.62	4.53	9.80	3.20	4.14	4.43	9.21	8.00	13.31	7.73	1.89

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