

Water-Data Report 2008

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 Elkhville, and 3,400 ft upstream from mouth.

DRAINAGE AREA.--48.1 mi².

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 station.

REMARKS.--Records good except those for estimated daily discharges, which are poor. 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 and current water year also occurred August 24, 2008.

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 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	11	22	18	53	71	33	45	73	31	19	12	38
2	11	21	18	43	77	31	43	65	29	15	11	33
3	10	20	18	37	53	30	43	59	28	14	10	29
4	11	19	19	e33	56	159	52	55	27	14	9.8	26
5	41	19	18	e32	81	365	53	51	26	18	8.4	24
6	23	18	19	29	76	150	210	49	24	39	7.9	22
7	17	19	19	28	96	166	138	46	23	44	7.8	20
8	15	18	18	27	72	199	104	47	23	25	8.2	19
9	13	18	18	26	58	152	86	53	21	25	7.7	67
10	13	18	18	27	49	115	76	44	24	37	7.1	64
11	12	18	18	40	44	92	68	43	38	46	6.6	55
12	11	18	17	35	41	78	68	45	25	26	6.2	52
13	12	18	18	31	43	67	60	40	22	25	11	42
14	11	18	17	29	39	61	55	39	22	27	12	35
15	11	22	17	27	35	64	52	39	33	21	9.7	30
16	11	20	36	26	33	71	49	44	23	18	8.4	38
17	11	18	26	29	33	56	47	39	20	16	7.2	36
18	11	18	21	33	78	53	45	36	18	14	7.7	30
19	11	18	20	32	59	76	47	38	17	13	7.4	27
20	21	19	19	29	51	200	62	35	16	13	6.6	25
21	13	18	28	e28	46	125	49	35	17	12	6.1	24
22	12	18	29	e27	42	98	47	32	21	11	5.8	23
23	15	18	109	27	40	81	45	31	27	11	5.7	22
24	32	17	85	26	37	69	43	32	19	13	5.5	21
25	174	17	47	e25	36	62	41	31	16	11	6.4	20
26	93	24	38	e24	40	57	47	29	18	11	36	25
27	67	29	33	23	40	54	52	30	20	11	956	105
28	39	21	38	22	34	51	135	34	22	11	242	79
29	30	19	74	22	32	52	e118	42	19	15	113	53
30	26	18	61	24	---	49	e85	33	28	14	64	44
31	24	---	72	23	---	46	---	32	---	12	47	---
Total	812	578	1,006	917	1,492	2,962	2,065	1,301	697	601	1,660.2	1,128
Mean	26.2	19.3	32.5	29.6	51.4	95.5	68.8	42.0	23.2	19.4	53.6	37.6
Max	174	29	109	53	96	365	210	73	38	46	956	105
Min	10	17	17	22	32	30	41	29	16	11	5.5	19
Cfs/m	0.54	0.40	0.67	0.61	1.07	1.99	1.43	0.87	0.48	0.40	1.11	0.78
In.	0.63	0.45	0.78	0.71	1.15	2.29	1.60	1.01	0.54	0.46	1.28	0.87

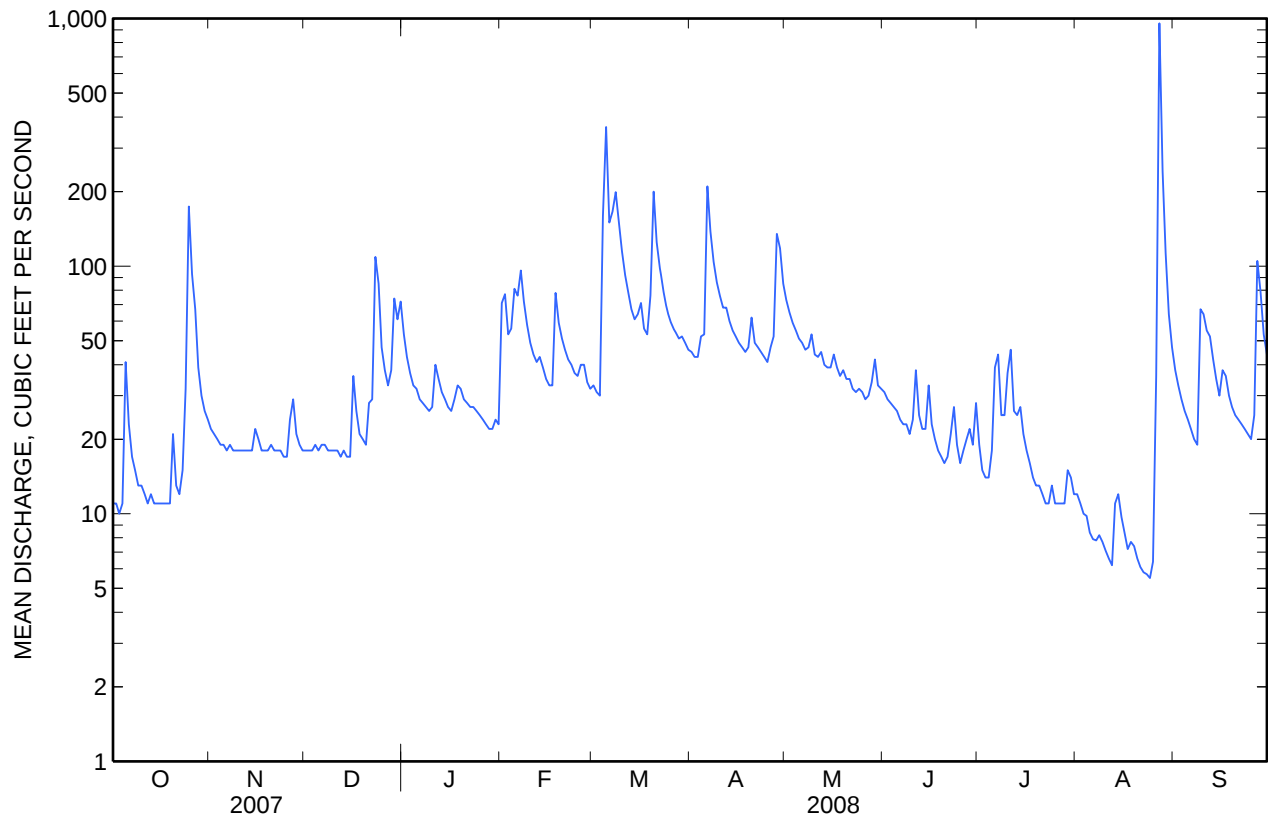
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	71.0	87.8	87.8	102	115	142	136	103	97.3	69.8	76.7	66.3
Max	298	365	193	323	250	317	379	291	300	211	384	293
(WY)	(1991)	(1978)	(1974)	(1995)	(1966)	(1993)	(1980)	(1973)	(2003)	(2003)	(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 2007		Water Year 2008		Water Years 1966 - 2008	
Annual total	19,347.7		15,219.2			
Annual mean	53.0		41.6		96.1	
Highest annual mean					157	2003
Lowest annual mean					35.7	2001
Highest daily mean	953	Jan 1	956	Aug 27	5,890	Aug 17, 1994
Lowest daily mean	9.7	Sep 10	5.5	Aug 24	5.5	Aug 24, 2008
Annual seven-day minimum	10	Sep 7	6.2	Aug 19	6.2	Aug 19, 2008
Maximum peak flow			3,300	Aug 27	^a 18,700	Aug 17, 1994
Maximum peak stage			5.10	Aug 27	12.02	Aug 17, 1994
Instantaneous low flow			^a 5.3	Aug 22	^a 5.3	Aug 22, 2008
Annual runoff (cfs)	1.10		0.865		2.00	
Annual runoff (inches)	14.96		11.77		27.14	
10 percent exceeds	90		75		167	
50 percent exceeds	33		29		67	
90 percent exceeds	13		11		26	

^aSee Remarks.

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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; consequently, winter record is poor.

PRECIPITATION, TOTAL, INCHES
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY SUM VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.00	0.00	0.00	0.00	1.15	0.00	0.01	0.00	0.00	0.00	0.01	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00
3	0.00	0.00	0.01	0.00	0.17	0.00	0.48	0.00	0.00	0.00	0.00	0.00
4	0.16	0.00	0.00	0.00	0.49	1.16	0.24	0.00	0.00	0.01	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.00	0.15	0.00	0.00
6	0.00	0.00	0.00	0.00	0.35	0.00	0.44	0.00	0.00	0.17	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.77	0.00	0.00	0.00	0.07	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.96	0.00	0.25	0.00	0.21
9	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.02	0.16	0.44	0.00	1.22
10	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.01	0.81	0.00	0.59
11	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.41
12	0.00	0.01	0.00	0.00	0.05	0.00	0.22	0.00	0.00	0.00	0.00	0.02
13	0.00	0.05	0.00	0.00	0.23	0.00	0.00	0.00	0.00	1.00	1.35	0.00
14	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.05	0.00
15	0.00	0.45	0.53	0.00	0.00	0.54	0.00	0.01	0.00	0.00	0.00	0.00
16	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.00	1.12
17	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.01
18	0.00	0.00	0.00	0.39	0.01	0.00	0.00	0.06	0.00	0.00	0.00	0.00
19	0.02	0.00	0.00	0.00	0.00	0.83	0.50	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.09	0.00	0.00	0.01	0.05	0.01	0.00	0.00	0.04	0.00
21	0.00	0.00	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
22	0.10	0.05	0.14	0.00	0.01	0.00	0.00	0.00	0.47	0.00	0.00	0.00
23	0.03	0.00	1.06	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
24	1.47	0.00	0.00	0.00	0.03	0.00	0.00	0.10	0.00	0.00	0.00	0.00
25	1.11	0.14	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.00
26	0.39	0.64	0.16	0.00	0.46	0.00	0.65	0.00	0.77	0.01	2.14	0.86
27	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.28	0.00	5.37	0.73
28	0.00	0.00	1.09	0.00	0.00	0.00	---	0.24	0.93	0.14	0.74	0.01
29	0.00	0.00	0.02	0.04	0.01	0.20	---	0.00	0.29	0.00	0.01	0.00
30	0.00	0.00	0.66	0.03	---	0.04	---	0.00	0.01	0.02	0.00	0.12
31	0.00	---	0.01	0.07	---	0.04	---	0.02	---	0.08	0.00	---
Total	3.28	1.34	4.28	1.12	3.34	3.77	---	1.79	2.93	3.17	9.98	5.30

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