

Water-Data Report 2010

**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.--50.9 mi<sup>2</sup>, 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 ft<sup>3</sup>/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 September 22, 23, 24, 25, 26.

EXTREMES OUTSIDE PERIOD OF RECORD.--The flood of August 13, 1940, reached a stage of about 22 ft; discharge, about 70,000 ft<sup>3</sup>/s, on basis of several contracted-opening and slope-area measurements. A minimum discharge of 6.0 ft<sup>3</sup>/s was measured September 19, 1956.

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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	70	127	67	133	203	93	133	70	58	33	32	26
2	64	114	198	122	276	93	123	70	52	31	31	25
3	61	98	321	e110	292	91	111	101	51	29	30	25
4	55	85	177	e99	264	85	104	82	49	29	29	23
5	57	77	142	e94	373	81	100	72	66	28	115	23
6	53	71	118	e89	490	78	97	68	50	27	88	23
7	51	67	103	e87	319	77	93	64	47	26	40	22
8	47	63	99	e85	218	76	118	63	44	26	33	24
9	45	61	479	e83	168	77	181	60	45	30	30	27
10	45	72	290	e82	152	80	132	59	46	52	28	23
11	44	425	183	e80	131	91	120	61	44	30	28	25
12	44	293	143	e79	120	119	114	62	42	29	28	30
13	47	171	176	e78	115	264	108	60	43	35	28	24
14	62	129	166	e77	105	177	102	56	43	45	75	22
15	66	106	144	76	104	137	99	98	44	30	68	20
16	52	93	126	76	98	116	96	73	52	35	43	20
17	49	85	117	362	93	105	94	99	42	42	37	20
18	45	87	117	261	89	99	90	84	39	34	112	20
19	44	128	125	195	87	93	87	74	41	39	97	20
20	44	116	106	167	87	87	86	65	48	47	66	19
21	43	105	100	173	91	95	93	62	38	49	50	18
22	43	96	99	185	117	749	85	70	37	32	58	18
23	44	98	102	177	153	335	81	65	35	29	43	19
24	140	89	108	415	161	206	80	59	35	26	38	17
25	98	85	747	1,520	137	163	102	70	34	25	37	17
26	75	82	575	597	120	152	84	62	34	25	35	29
27	81	77	314	391	108	126	81	58	34	38	36	41
28	164	74	232	301	100	163	76	56	46	55	32	40
29	115	71	185	262	---	237	72	53	37	32	30	27
30	94	69	153	260	---	181	71	51	33	29	29	32
31	93	---	143	220	---	151	---	65	---	28	27	---
<b>Total</b>	2,035	3,314	6,155	6,936	4,771	4,677	3,013	2,112	1,309	1,045	1,453	719
<b>Mean</b>	65.6	110	199	224	170	151	100	68.1	43.6	33.7	46.9	24.0
<b>Max</b>	164	425	747	1,520	490	749	181	101	66	55	115	41
<b>Min</b>	43	61	67	76	87	76	71	51	33	25	27	17
<b>Cfsm</b>	1.29	2.17	3.90	4.40	3.35	2.96	1.97	1.34	0.86	0.66	0.92	0.47
<b>In.</b>	1.49	2.42	4.50	5.07	3.49	3.42	2.20	1.54	0.96	0.76	1.06	0.53

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2010, BY WATER YEAR (WY)

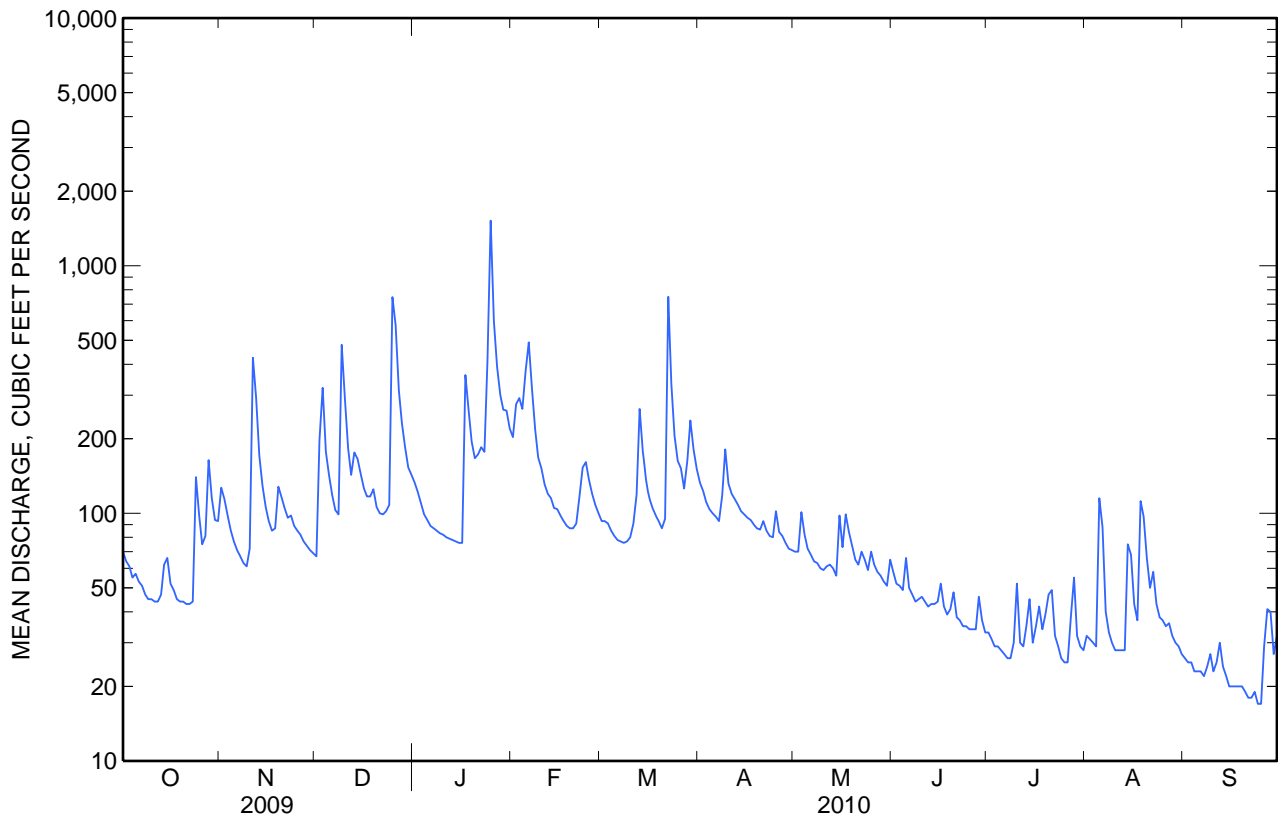
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	70.0	87.0	90.2	104	114	141	134	105	96.9	68.6	75.6	65.9
<b>Max</b>	298	365	199	323	250	317	379	291	300	211	384	293
<b>(WY)</b>	(1991)	(1978)	(2010)	(1995)	(1966)	(1993)	(1980)	(1973)	(2003)	(2003)	(1994)	(2004)
<b>Min</b>	13.7	19.3	19.1	22.5	25.0	47.9	49.9	31.0	21.7	17.6	15.3	15.5
<b>(WY)</b>	(2001)	(2008)	(2001)	(1981)	(2001)	(1988)	(2001)	(2002)	(1988)	(1988)	(2002)	(2007)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1966 - 2010	
<b>Annual total</b>	36,636		37,539			
<b>Annual mean</b>	100		103		95.9	
<b>Highest annual mean</b>					157	2003
<b>Lowest annual mean</b>					35.7	2001
<b>Highest daily mean</b>	1,460	May 27	1,520	Jan 25	5,890	Aug 17, 1994
<b>Lowest daily mean</b>	28	Feb 17	17	Sep 24	5.5	Aug 24, 2008
<b>Annual seven-day minimum</b>	30	Feb 5	18	Sep 19	6.2	Aug 19, 2008
<b>Maximum peak flow</b>			2,710	Jan 25	<sup>a</sup> 18,700	Aug 17, 1994
<b>Maximum peak stage</b>			4.62	Jan 25	12.02	Aug 17, 1994
<b>Instantaneous low flow</b>			<sup>a</sup> 17	Sep 21	<sup>a</sup> 5.3	Aug 22, 2008
<b>Annual runoff (cfsm)</b>	1.97		2.02		1.88	
<b>Annual runoff (inches)</b>	26.78		27.44		25.60	
<b>10 percent exceeds</b>	174		184		167	
<b>50 percent exceeds</b>	67		76		67	
<b>90 percent exceeds</b>	37		28		26	

<sup>a</sup> 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 2009 TO SEPTEMBER 2010**  
**DAILY SUM VALUES**

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.00	0.31	0.00	0.00	---	0.00	0.00	0.00	0.01	0.00	0.01	0.00
2	0.00	0.00	2.31	0.00	---	---	0.00	0.00	0.00	0.00	0.01	0.00
3	0.00	0.00	0.00	0.00	---	---	0.00	0.60	0.00	0.00	0.00	0.00
4	0.02	0.00	0.00	0.00	---	0.00	0.00	0.00	0.25	0.00	0.03	0.00
5	0.22	0.00	0.25	0.00	---	0.00	0.00	0.00	0.13	0.00	0.92	0.00
6	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.01	0.00	0.00	0.00
7	0.03	0.00	0.00	0.00	---	0.00	0.00	0.00	0.01	0.00	0.00	0.00
8	0.00	0.00	0.94	0.00	---	0.00	0.67	0.00	0.00	0.16	0.00	0.18
9	0.00	0.00	0.78	0.00	---	0.00	0.00	0.00	0.00	0.40	0.00	0.00
10	0.01	1.54	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.01
11	0.00	1.28	0.00	0.00	---	0.36	0.00	0.07	0.00	0.00	0.00	0.27
12	0.22	0.03	0.00	0.00	---	1.32	0.00	0.03	0.00	0.10	0.00	0.00
13	0.00	0.00	0.91	0.00	---	0.19	0.00	0.00	0.07	0.04	1.01	0.00
14	0.82	0.00	0.00	0.00	---	0.00	0.00	0.20	0.24	0.00	1.32	0.00
15	0.07	0.00	0.00	0.00	---	0.00	0.00	0.20	0.23	0.00	0.06	0.00
16	0.02	0.00	0.00	0.04	0.00	0.00	0.00	0.48	0.10	0.00	0.00	0.00
17	0.04	0.00	0.00	1.65	0.00	0.00	0.00	0.32	0.00	0.02	0.45	0.01
18	0.00	0.55	0.01	0.01	0.00	0.00	0.00	0.04	0.00	0.01	0.39	0.00
19	0.00	0.13	---	0.00	0.00	0.00	0.00	0.00	1.02	0.00	0.22	0.00
20	0.00	0.00	---	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	---	0.51	0.00	1.23	0.19	0.22	0.00	0.00	0.31	0.00
22	0.00	0.14	---	0.02	0.10	0.72	0.00	0.40	0.00	0.00	0.00	0.22
23	0.05	0.15	---	0.00	0.00	0.00	0.01	0.29	0.00	0.00	0.00	0.00
24	0.32	0.00	---	3.24	0.02	0.00	0.38	0.00	0.01	0.00	0.00	0.00
25	0.00	0.01	---	0.22	0.00	0.15	0.34	0.01	0.00	0.00	0.01	0.05
26	0.00	0.00	---	0.00	0.00	0.03	0.00	0.00	0.00	0.08	0.79	1.53
27	1.36	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.08	0.57	0.08	0.66
28	0.04	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.01	0.00	0.00	0.06
29	0.00	0.00	0.00	0.00	---	0.02	0.00	0.00	0.00	0.00	0.00	0.19
30	0.00	0.02	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.03
31	0.64	---	0.10	0.00	---	0.00	---	0.90	---	0.11	0.00	---
<b>Total</b>	3.86	4.16	---	5.69	---	---	1.84	3.76	2.17	1.49	5.61	3.21

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