

Water-Data Report 2010

02111000 YADKIN RIVER AT PATTERSON, NC

Upper Pee Dee Basin
Upper Yadkin Subbasin

LOCATION.--Lat 35°59'27", long 81°33'30" referenced to North American Datum of 1983, Caldwell County, NC, Hydrologic Unit 03040101, on left bank 200 ft upstream from bridge on Secondary Highway 268, 0.4 mi upstream from Warrior Creek, 0.5 mi south of Patterson, 2.0 mi downstream of Walnut Branch, and at river mile 416.

DRAINAGE AREA.--28.8 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1303.

REVISED RECORDS.--WSP 1303: 1940(m), 1947-48(M). WSP 1553: 1948(P). WDR NC-80-1: 1975(P), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1,211.47 ft above National Geodetic Vertical Datum of 1929. Prior to February 9, 1940, nonrecording gage at present site, at datum 1,212.47 ft. February 9, 1940, to October 20, 1970, recording gage at present site, at datum 1,212.47 ft. Satellite telemetry at station.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Maximum discharge, for period of record, from rating curve extended above 1,400 ft³/s on basis of computation of peak flow over dam 1 mi upstream at gage heights 4.58, 6.60, 7.70, and 12.70 ft. Minimum discharge for current water year also occurred September 25, 26, 2010.

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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	39	76	36	75	73	58	79	39	34	21	19	23
2	36	66	109	68	106	59	74	39	35	20	19	22
3	33	58	132	e61	104	58	69	63	34	20	18	22
4	31	52	85	e54	92	54	65	47	31	19	17	21
5	33	47	75	e51	133	52	61	41	67	18	71	20
6	30	44	64	e48	149	50	58	39	39	18	43	20
7	29	41	57	e47	120	48	56	37	35	17	25	19
8	26	39	58	e45	107	48	73	36	32	16	23	21
9	26	37	222	e44	97	48	80	34	32	20	21	22
10	25	54	134	e43	90	48	63	34	31	39	22	18
11	25	182	96	e43	80	54	59	36	29	20	21	19
12	26	121	80	e42	76	70	57	36	29	20	22	21
13	27	86	108	e42	73	137	55	35	29	22	19	18
14	43	72	98	e42	67	94	53	39	29	22	112	17
15	38	62	86	42	67	80	51	72	34	18	81	16
16	31	55	76	42	62	72	50	75	38	25	45	16
17	29	50	69	153	59	66	49	65	31	30	77	16
18	27	51	70	102	57	62	47	56	27	34	98	15
19	25	61	73	86	56	59	45	48	27	38	74	15
20	25	52	64	78	56	56	45	42	36	35	57	14
21	25	49	60	83	59	67	48	42	26	34	50	14
22	25	47	61	83	71	243	44	43	25	26	52	16
23	25	49	62	79	81	144	43	40	24	23	39	17
24	76	45	66	196	83	110	44	37	25	20	35	14
25	49	44	302	445	76	94	65	37	25	19	35	14
26	40	43	228	197	70	89	47	36	24	19	31	27
27	56	40	145	135	66	77	45	35	26	24	39	34
28	94	39	114	108	62	104	42	33	33	20	30	42
29	64	38	94	94	---	122	40	32	23	21	28	21
30	54	38	83	93	---	98	39	31	22	17	26	24
31	57	---	79	79	---	87	---	38	---	17	25	---
Total	1,169	1,738	3,086	2,800	2,292	2,508	1,646	1,317	932	712	1,274	598
Mean	37.7	57.9	99.5	90.3	81.9	80.9	54.9	42.5	31.1	23.0	41.1	19.9
Max	94	182	302	445	149	243	80	75	67	39	112	42
Min	25	37	36	42	56	48	39	31	22	16	17	14
Cfsm	1.31	2.01	3.46	3.14	2.84	2.81	1.91	1.48	1.08	0.80	1.43	0.69
In.	1.51	2.24	3.99	3.62	2.96	3.24	2.13	1.70	1.20	0.92	1.65	0.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2010, BY WATER YEAR (WY)

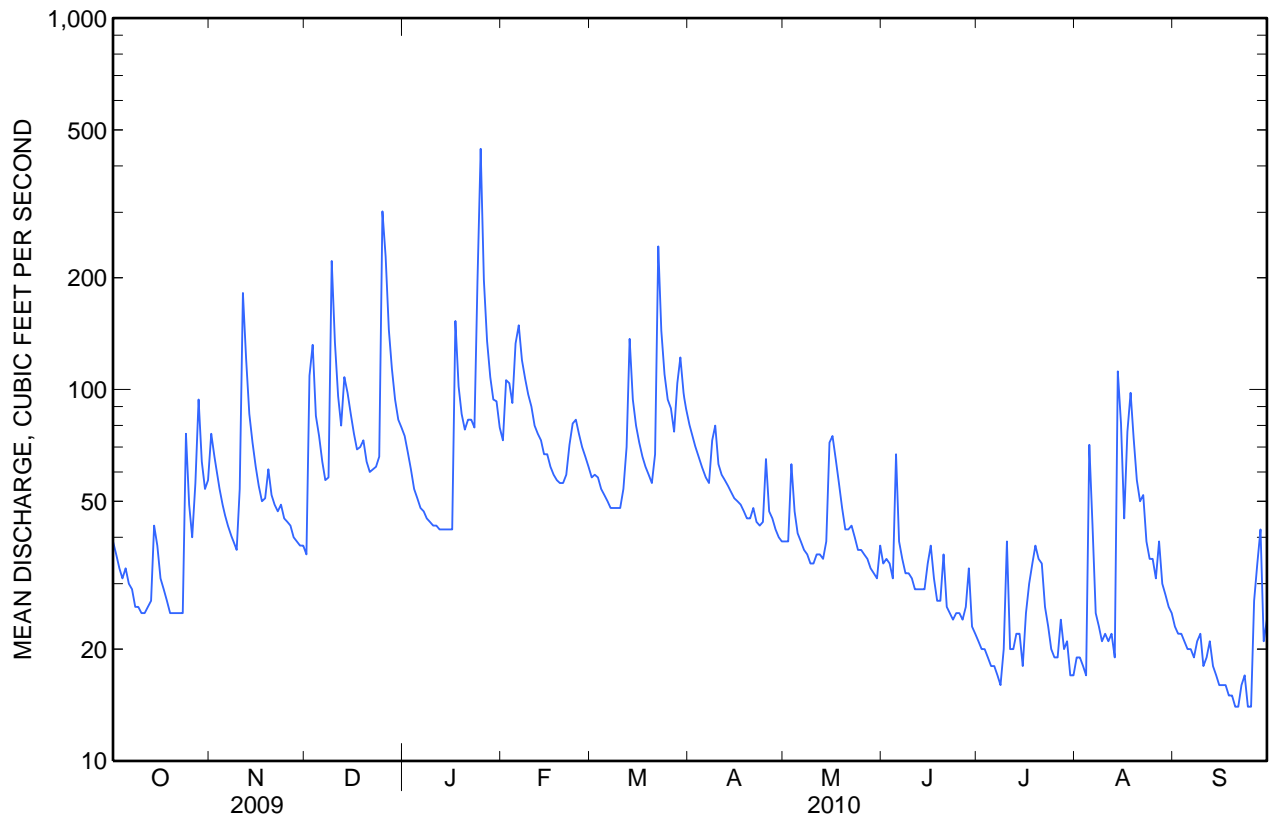
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	35.2	41.0	46.3	51.4	59.3	70.8	67.3	52.9	48.1	39.5	43.1	36.8
Max	149	140	99.5	132	143	160	164	125	132	122	194	168
(WY)	(1991)	(1978)	(2010)	(1946)	(1960)	(1993)	(1980)	(1973)	(2003)	(2003)	(1940)	(2004)
Min	8.45	9.07	11.8	11.4	17.4	23.7	26.5	16.5	10.7	9.04	6.69	6.95
(WY)	(1955)	(1982)	(1956)	(1956)	(2001)	(1988)	(1981)	(2001)	(2008)	(1988)	(2002)	(1954)

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SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1940 - 2010	
Annual total	19,455		20,072			
Annual mean	53.3		55.0		49.2	
Highest annual mean					78.6	2003
Lowest annual mean					21.0	2001
Highest daily mean	348	May 28	445	Jan 25	2,130	Aug 13, 1940
Lowest daily mean	18	Aug 16	14	Sep 20	3.6	Sep 12, 2002
Annual seven-day minimum	19	Sep 2	15	Sep 19	4.1	Sep 7, 2002
Maximum peak flow			815	Jan 25	^a 16,200	Aug 13, 1940
Maximum peak stage			4.16	Jan 25	12.70	Aug 13, 1940
Instantaneous low flow			^a 13	Sep 22	3.0	May 15, 1940
Annual runoff (cfsm)	1.85		1.91		1.71	
Annual runoff (inches)	25.13		25.93		23.22	
10 percent exceeds	93		95		87	
50 percent exceeds	40		44		37	
90 percent exceeds	22		20		16	

^a See Remarks.



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CLIMATOLOGICAL RECORDS

PERIOD OF RECORD.--October 1999 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	0.20	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	1.73	0.00	---	0.00	0.00	0.00	0.17	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	---	0.19	0.00	0.52	0.01	0.00	0.05	0.00
4	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.12	0.00	0.00	0.00
5	0.27	0.00	0.13	0.00	---	0.00	0.00	0.00	0.01	0.00	2.99	0.00
6	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.02	0.00	0.00	0.00
7	0.01	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.72	0.00	---	0.00	0.46	0.00	0.00	0.00	0.00	0.14
9	0.01	0.00	0.68	0.00	---	0.00	0.00	0.00	0.00	0.27	0.00	0.01
10	0.01	1.20	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.91	0.00	0.00	---	0.38	0.00	0.05	0.00	0.00	0.00	0.05
12	0.16	0.00	0.00	0.00	---	0.85	0.00	0.00	0.00	0.54	0.00	0.01
13	0.02	0.00	0.64	0.00	---	0.06	0.00	0.00	0.39	0.54	0.19	0.00
14	0.75	0.00	0.00	0.00	---	0.00	0.00	1.34	0.21	0.01	1.49	0.00
15	0.05	0.00	0.00	0.00	---	0.00	0.00	0.03	1.02	0.01	0.43	0.00
16	0.03	0.00	0.00	0.04	0.00	0.00	0.00	0.38	0.77	0.00	0.00	0.00
17	0.04	0.00	0.00	1.31	0.00	0.00	0.00	0.24	0.00	0.51	1.49	0.00
18	0.00	0.32	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.96	0.77	0.00
19	0.00	0.06	---	0.00	0.00	0.00	0.00	0.00	0.03	0.06	0.17	0.00
20	0.00	0.01	---	0.00	0.00	0.00	0.13	0.00	0.00	1.06	0.00	0.00
21	0.00	0.00	---	0.39	0.00	0.85	0.17	0.24	0.00	0.00	0.31	0.00
22	0.00	0.13	---	0.01	0.10	0.48	0.00	0.05	0.00	0.00	0.10	---
23	0.20	0.08	---	0.01	0.00	0.01	0.02	0.00	0.00	0.00	0.00	---
24	0.17	0.00	---	2.32	0.03	0.00	0.30	0.03	0.00	0.00	0.00	---
25	0.00	0.00	---	0.15	0.00	0.06	0.40	0.00	0.00	0.00	0.15	---
26	0.00	0.01	---	0.00	0.00	0.06	0.00	0.00	0.00	0.57	0.07	---
27	0.96	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.45	0.05	0.05	---
28	0.05	0.00	0.00	0.00	0.00	0.60	0.01	0.02	0.01	0.00	0.00	0.28
29	0.00	0.00	0.00	0.00	---	0.02	0.00	0.00	0.00	0.00	0.00	0.18
30	0.00	0.01	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.06
31	0.54	---	0.10	0.00	---	0.00	---	0.69	---	0.10	0.00	---
Total	3.27	2.93	---	4.23	---	3.56	1.60	3.60	3.21	4.68	8.26	---

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