Water-Data Report 2011

01413398 BUSH KILL NEAR ARKVILLE, NY

Upper Delaware Basin
East Branch Delaware Subbasin

LOCATION.--Lat 42°09′03″, long 74°36′06″ referenced to North American Datum of 1927, Delaware County, NY, Hydrologic Unit 02040102, on left bank 60 ft upstream from private bridge, 0.7 mi upstream from mouth, 1.0 mi east of Arkville, and 2.4 mi east of Margaretville.

DRAINAGE AREA.--46.7 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1997 to current year.

REVISED RECORDS.--WDR NY-99-1: 1998(P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,371.37 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diurnal fluctuation at medium and low flow from unknown source upstream from station. Satellite gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,800 ft^3/s, Aug. 28, 2011, gage height, 16.26 ft, outside gage height was 15.06 ft, from crest-stage gage, from rating curve extended above 1,900 ft^3/s on basis of runoff comparison of peak flow from contracted-opening measurement at site 2.2 mi upstream; minimum discharge, 3.1 ft^3/s, Sept. 24, Oct. 6, 2005; minimum gage height, 3.25 ft, Sept. 14, 24, 2005.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 7,600 ft^3/s, Jan. 19, 1996, on basis of contracted-opening measurement of peak flow at site 0.2 mi downstream, drainage area, 47.0 mi^2.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 1	0645	2,890	9.03
Dec 1	1730	1,640	7.51
Mar 6	2030	1,480	7.27
Mar 11	0700	2,200	8.24
Aug 19	1830	701	5.93
Aug 28	1015	a*13,800	b*16.26
Sep 7	0730	2,830	9.31

a From rating curve extended as explained above.

b Recorded; outside gage height was 15.06 ft, from crest-stage gage.

Minimum discharge, 15 ft^3/s, Aug. 3, 5, 6, 13; minimum gage height, 3.46 ft, Aug. 6.

01413398 BUSH KILL NEAR ARKVILLE, NY—Continued

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	1,280	85	543	53	e27	90	88	231	77	94	19	294
2	395	76	474	84	e29	76	85	195	68	84	18	234
3	233	71	328	70	e28	71	79	169	61	253	17	197
4	188	124	252	70	e27	78	123	288	55	204	20	188
5	217	133	202	68	e35	89	213	224	51	155	16	561
6	176	107	169	e71	52	693	224	196	47	128	18	720
7	181	101	143	e69	33	647	202	179	42	115	25	1,680
8	147	107	121	66	33	372	179	159	38	102	20	1,150
9	127	116	102	57	e33	273	163	e139	57	88	22	621
10	112	129	98	55	e32	307	161	123	47	72	44	411
11	102	108	86	51	e32	1,430	193	110	45	63	22	311
12	93	101	138	53	e32	655	272	98	77	56	18	248
13	81	98	201	51	e33	433	251	89	54	49	16	203
14	76	94	137	e49	e32	316	206	87	46	43	16	172
15	163	88	124	e47	e32	260	172	85	46	38	233	167
16	245	86	118	e45	e32	250	188	96	50	35	233	140
17	177	200	107	e43	37	279	368	127	53	31	146	117
18	159	138	98	e51	79	390	278	168	53	30	141	102
19	140	133	89	67	100	390	257	347	43	29	191	91
20	123	126	e81	44	84	319	252	371	38	25	187	89
21	111	114	75	e40	81	281	207	307	35	23	140	80
22	100	107	69	e38	e81	249	180	246	42	21	181	78
23	87	105	64	e35	75	205	229	206	51	19	120	77
24	81	96	59	e33	74	181	193	198	65	19	99	95
25	74	85	54	e32	78	155	190	156	76	64	95	75
26	80	123	51	e35	70	132	244	136	57	54	89	68
27	163	97	e49	e32	63	117	318	154	51	38	81	68
28	110	86	e46	e31	91	105	395	124	80	25	4,760	166
29	105	80	e45	e28	---	95	334	104	193	22	1,080	300
30	101	80	43	29	---	90	280	102	110	21	543	285
31	96	---	40	e26	---	88	---	86	---	18	387	---
Total	5,523	3,194	4,206	1,523	1,435	9,116	6,524	5,300	1,808	2,018	8,997	8,988
Mean	178	106	136	49.1	51.2	294	217	171	60.3	65.1	290	300
Max	1,280	200	543	84	100	1,430	395	371	193	253	4,760	1,680
Min	74	71	40	26	27	71	79	85	35	18	16	68
Cfsm	3.82	2.28	2.91	1.05	1.10	6.30	4.66	3.66	1.29	1.39	6.21	6.42
In.	4.40	2.54	3.35	1.21	1.14	7.26	5.20	4.22	1.44	1.61	7.17	7.16

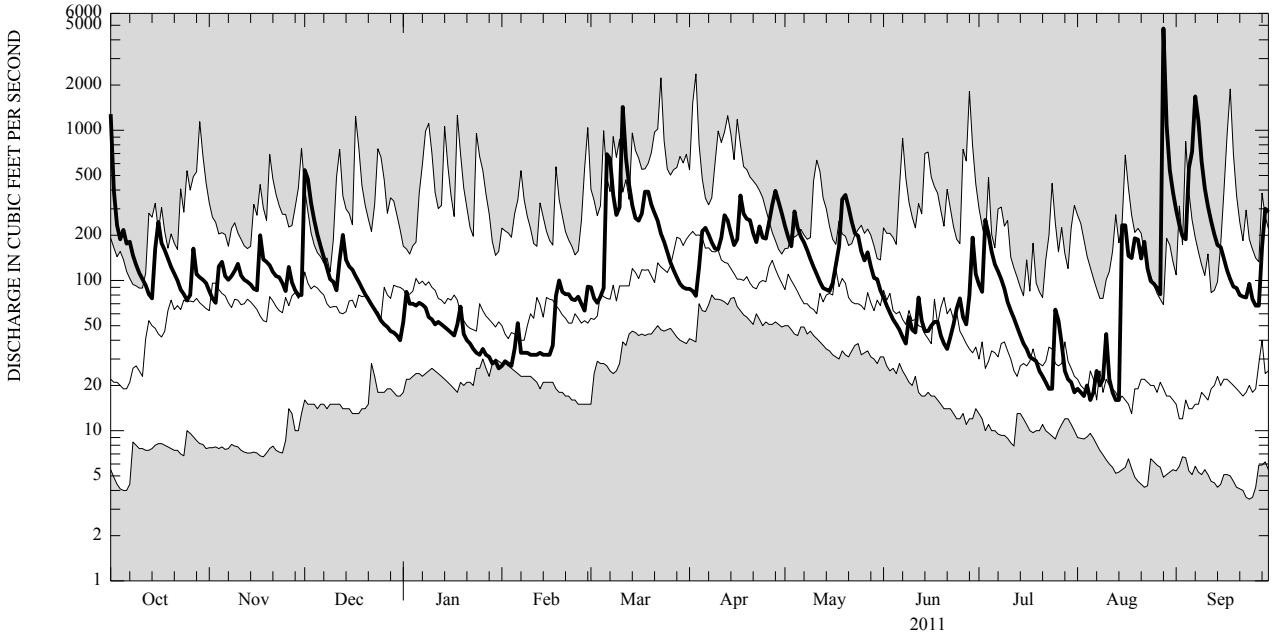
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	79.1	98.4	113	111	77.0	187	181	100	94.3	50.4	58.0	70.3
Max	188	231	262	241	210	452	357	181	279	92.8	290	300
(WY)	(2004)	(2004)	(2004)	(2006)	(2008)	(2010)	(2001)	(1998)	(2006)	(1999)	(2011)	(2011)
Min	9.50	8.31	16.1	35.9	23.8	44.5	78.9	45.5	19.1	16.0	7.55	5.87
(WY)	(1998)	(2002)	(1999)	(2002)	(2004)	(2006)	(2009)	(2001)	(2008)	(2002)	(2002)	(2005)

01413398 BUSH KILL NEAR ARKVILLE, NY—Continued

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1998 - 2011	
Annual total	42,169.3		58,632			
Annual mean	116		161		102	
Highest annual mean					161	2011
Lowest annual mean					54.9	2002
Highest daily mean	2,230	Mar 23	4,760	Aug 28	4,760	Aug 28, 2011
Lowest daily mean	4.0	Sep 25	16	Aug 5	3.5	Sep 24, 2005
Annual seven-day minimum	6.2	Sep 20	18	Jul 31	3.9	Sep 20, 2005
Annual runoff (cfsm)	2.47		3.44		2.18	
Annual runoff (inches)	33.59		46.70		29.60	
10 percent exceeds	255		290		207	
50 percent exceeds	59		95		64	
90 percent exceeds	13		32		13	



CURRENT WATER YEAR DAILY MEAN DISCHARGE (BOLD) WITH DAILY MEDIAN FOR PERIOD OF RECORD.
SHADED AREAS SHOW HIGHEST AND LOWEST DAILY MEAN FOR PERIOD OF RECORD THROUGH PREVIOUS WATER YEAR.