Water-Data Report 2008

01420500 BEAVER KILL AT COOKS FALLS, NY

Upper Delaware Basin
East Branch Delaware Subbasin

LOCATION.--Lat 41°56′47″, long 74°58′48″ referenced to North American Datum of 1927, Delaware County, NY, Hydrologic Unit 02040102, on left bank 125 ft downstream from bridge on Cooks Brook Road in Cooks Falls, and 5.5 mi downstream from Willowemoc Creek. Water-quality sampling site at discharge station.

DRAINAGE AREA.--241 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1913 to current year.

REVISED RECORDS.--WSP 521: Drainage area. WSP 781: 1933(M). WSP 891: 1936-39(M). WSP 1202: 1950. WSP 1232: 1950(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 1,151.70 ft above NGVD of 1929. Prior to Oct. 1, 1933, nonrecording gage at site 125 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Satellite and telephone gage-height and temperature telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62,400 ft^3/s, June 28, 2006, gage height, 20.55 ft, from floodmark in gage house, from rating curve extended above 14,000 ft^3/s on basis of slope-area measurement at gage height 15.52 ft; minimum discharge, 16 ft^3/s, Nov. 22, 23, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,700 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct 27	1700	7,000	8.64
Nov 15	1345	6,320	8.27
Dec 24	0115	5,040	7.50
Feb 7	0530	6,300	8.26
Mar 5	1345	11,300	10.55
Mar 8	2215	12,000	10.82
Mar 20	0430	6,980	8.63
Jul 23	1745	*17,000	*12.43

Minimum discharge, 75 ft^3/s, Oct. 6, July 13, gage height, 0.84 ft.

01420500 BEAVER KILL AT COOKS FALLS, NY—Continued

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	88	704	821	856	e345	e390	2,510	380	272	132	497	103
2	84	591	704	765	e550	e380	3,420	370	220	112	463	99
3	81	516	915	e530	e430	e360	2,090	371	192	106	563	97
4	79	469	826	e500	393	e460	2,260	481	199	114	432	99
5	77	425	687	e500	578	6,490	2,710	438	192	106	361	91
6	75	765	e575	e520	2,700	3,730	2,200	382	183	99	444	134
7	87	677	e520	639	4,620	2,240	1,930	354	199	96	371	338
8	94	539	e490	931	2,320	5,790	1,750	349	185	91	311	181
9	90	484	e460	2,370	1,540	6,120	1,620	365	175	87	281	269
10	185	476	482	2,350	1,190	2,620	1,510	414	154	85	262	310
11	337	445	475	2,650	e780	1,780	1,370	355	161	79	307	198
12	352	413	760	2,510	e640	1,390	1,490	322	144	79	299	165
13	267	669	762	1,710	1,810	1,110	1,260	300	131	195	250	206
14	218	654	676	1,370	2,160	955	1,010	280	140	628	224	252
15	186	3,950	579	1,130	1,370	1,030	858	278	149	255	264	245
16	169	2,880	e520	937	1,060	1,060	755	321	143	181	269	186
17	156	1,680	e480	e780	884	880	677	543	209	151	237	160
18	148	1,210	e455	e770	3,110	798	616	443	161	137	204	145
19	171	975	e430	e640	2,690	1,290	560	390	148	128	212	135
20	1,060	1,020	e420	e490	e1,450	4,890	510	345	136	128	185	130
21	591	1,060	e405	e410	e1,100	2,400	476	327	129	202	168	126
22	431	937	e390	e360	e910	1,620	435	366	122	155	155	122
23	373	811	897	e320	e820	1,260	405	352	212	5,160	142	116
24	560	707	3,310	e310	e740	1,060	377	311	188	7,230	135	110
25	560	644	1,660	e305	e660	930	349	282	144	2,710	136	106
26	483	951	1,180	e305	657	900	331	281	128	1,360	129	167
27	3,160	2,400	998	e300	635	882	324	260	125	1,820	119	194
28	2,750	1,500	879	e295	e490	1,330	376	243	119	1,570	114	167
29	1,440	1,170	1,190	e290	e420	1,220	625	219	114	964	113	229
30	1,040	971	1,120	e350	---	984	454	205	150	729	117	183
31	833	---	976	e330	---	1,180	---	229	---	596	112	---
Total	16,225	30,693	25,042	26,523	37,052	57,529	35,258	10,556	4,924	25,485	7,876	5,063
Mean	523	1,023	808	856	1,278	1,856	1,175	341	164	822	254	169
Max	3,160	3,950	3,310	2,650	4,620	6,490	3,420	543	272	7,230	563	338
Min	75	413	390	290	345	360	324	205	114	79	112	91
Cfsm	2.17	4.25	3.35	3.55	5.30	7.70	4.88	1.41	0.68	3.41	1.05	0.70
In.	2.50	4.74	3.87	4.09	5.72	8.88	5.44	1.63	0.76	3.93	1.22	0.78

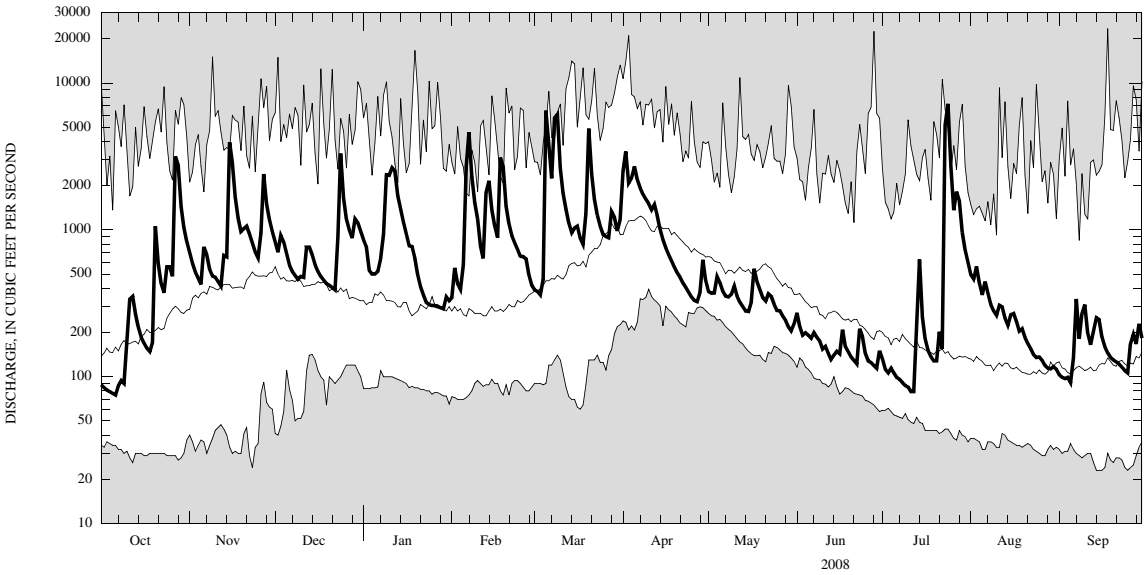
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	410	616	645	549	498	974	1,271	680	406	286	222	267
Max	1,535	1,427	1,967	1,769	2,026	2,485	2,581	1,584	1,830	1,329	1,047	1,661
(WY)	(1978)	(1973)	(1997)	(1996)	(1981)	(1977)	(1940)	(1989)	(2006)	(1945)	(2004)	(2004)
Min	31.3	42.4	140	93.5	107	262	347	222	107	54.0	40.4	31.8
(WY)	(1965)	(1965)	(1923)	(1981)	(1920)	(2006)	(1946)	(2001)	(1991)	(1962)	(1962)	(1964)

01420500 BEAVER KILL AT COOKS FALLS, NY—Continued

SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1913 - 2008	
Annual total	231,153		282,226			
Annual mean	633		771		568	
Highest annual mean					937	1928
Lowest annual mean					277	1965
Highest daily mean	9,480	Apr 16	7,230	Jul 24	23,500	Sep 18, 2004
Lowest daily mean	75	Oct 6	75	Oct 6	23	Sep 14, 1913
Annual seven-day minimum	82	Oct 1	82	Oct 1	26	Sep 21, 1964
Annual runoff (cfsm)	2.63		3.20		2.36	
Annual runoff (inches)	35.68		43.56		32.02	
10 percent exceeds	1,440		1,790		1,240	
50 percent exceeds	350		430		325	
90 percent exceeds	112		122		86	



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.

01420500 BEAVER KILL AT COOKS FALLS, NY—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-75, 1988 to current year.
CHEMICAL DATA: 1966 (c), 1967-74 (d), 1975 (c).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1987 to current year.

INSTRUMENTATION.--Water-temperature satellite and telephone telemeter since June 1986, provides 15-minute-interval readings.

REMARKS.--Temperature readings prior to Oct. 1, 2007, rounded to the nearest 0.5°C.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Prior to Oct. 1, 2007--Maximum (water years 1991, 1993-97, 1999-2007), 31.5°C, Aug. 12, 2005; minimum, 0.0°C on many days during winter periods.
WATER TEMPERATURE: After Oct. 1, 2007--Maximum, 26.7°C, July 12, 2008; minimum, -0.2°C on several days during winter period.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 26.7°C, July 12; minimum, -0.2°C on several days during winter period.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		October			November			December			January	
1	16.5	14.9	15.5	9.2	8.0	8.6	2.7	0.2	1.3	1.3	-0.1	0.6
2	17.1	14.7	15.8	8.6	6.7	7.6	0.4	-0.1	0.0	1.1	-0.1	0.4
3	19.1	15.6	17.0	7.4	6.3	6.8	2.4	0.4	1.7	-0.1	-0.1	-0.1
4	20.7	16.6	18.3	7.1	5.9	6.6	1.4	0.2	0.6	-0.1	-0.1	-0.1
5	20.6	17.4	18.7	7.8	6.1	7.0	0.7	0.0	0.4	0.0	-0.1	-0.1
6	21.4	17.5	19.1	8.1	6.6	7.5	0.2	-0.1	0.0	0.7	0.0	0.4
7	20.8	18.6	19.5	6.6	4.9	5.9	0.1	-0.1	-0.1	2.3	0.7	1.6
8	21.0	17.9	19.3	5.1	3.7	4.5	1.6	0.1	0.9	3.1	1.9	2.5
9	20.8	17.9	19.5	5.3	4.1	4.8	1.5	0.7	1.0	4.3	2.7	3.4
10	18.6	16.9	17.6	5.5	4.4	5.0	2.8	1.5	2.3	3.1	2.2	2.7
11	17.0	14.4	15.5	4.6	3.1	3.9	2.4	1.3	1.9	3.6	3.0	3.3
12	14.4	11.5	13.3	4.7	3.6	4.1	2.9	1.8	2.5	3.6	3.0	3.3
13	11.8	10.3	11.0	6.8	4.7	5.7	1.8	-0.1	0.6	3.0	2.0	2.6
14	10.9	9.7	10.3	6.1	4.7	5.3	1.4	-0.1	0.7	3.0	2.6	2.8
15	11.8	10.4	11.0	7.0	6.0	6.5	1.0	-0.1	0.4	2.7	1.8	2.4
16	12.7	10.4	11.6	6.0	4.3	5.4	-0.1	-0.1	-0.1	1.8	0.5	1.0
17	13.1	10.6	12.0	4.7	3.7	4.3	-0.1	-0.1	-0.1	0.5	-0.1	0.1
18	14.7	12.3	13.6	4.9	4.0	4.5	0.1	-0.1	-0.1	2.3	0.1	1.2
19	16.0	14.6	15.3	5.0	4.1	4.6	0.4	-0.1	0.0	1.2	-0.1	0.5
20	15.5	12.8	14.2	4.9	4.4	4.7	1.3	0.4	0.9	0.5	-0.1	0.0
21	13.5	11.2	12.4	6.4	4.9	5.5	1.5	0.7	1.1	-0.1	-0.1	-0.1
22	13.5	10.9	12.3	8.1	6.4	7.1	2.1	1.3	1.6	-0.1	-0.1	-0.1
23	14.0	12.6	13.3	6.6	2.5	4.4	3.8	2.1	2.8	-0.1	-0.1	-0.1
24	13.7	12.1	12.8	2.5	1.2	2.0	2.4	1.4	1.9	-0.1	-0.1	-0.1
25	13.0	11.1	12.0	2.9	1.5	2.2	2.3	1.9	2.1	-0.1	-0.1	-0.1
26	11.1	9.6	10.4	4.3	2.4	3.2	2.4	1.5	2.0	-0.1	-0.1	-0.1
27	12.5	10.7	11.6	5.4	4.3	4.9	3.0	2.4	2.7	0.0	-0.1	-0.1
28	11.7	8.7	10.3	4.3	3.4	3.7	3.6	2.8	3.2	0.1	-0.1	-0.1
29	8.9	7.7	8.3	4.2	3.4	3.7	3.8	3.1	3.4	0.0	-0.1	-0.1
30	8.8	6.9	7.9	3.5	2.4	2.9	3.1	1.9	2.4	0.4	-0.1	0.0
31	9.3	7.4	8.4	---	---	---	1.9	0.8	1.3	-0.1	-0.2	-0.1
Month	21.4	6.9	13.8	9.2	1.2	5.1	3.8	-0.1	1.3	4.3	-0.2	0.9

01420500 BEAVER KILL AT COOKS FALLS, NY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		February			March			April			May	
1	-0.1	-0.1	-0.1	0.6	-0.2	0.1	5.4	2.4	4.0	9.3	5.8	7.8
2	0.1	-0.1	0.0	1.8	-0.1	0.4	4.8	2.5	3.6	9.7	8.8	9.2
3	1.1	-0.1	0.4	2.3	-0.1	0.8	5.0	1.3	3.2	9.6	9.0	9.2
4	0.7	0.2	0.4	1.5	0.6	1.1	4.1	2.7	3.4	11.9	8.6	10.1
5	1.6	0.7	1.2	1.5	0.5	0.9	4.9	3.6	4.2	13.9	8.7	11.3
6	1.8	1.2	1.4	3.2	0.7	1.8	7.1	3.3	5.0	14.2	10.0	12.2
7	2.1	1.5	1.8	3.2	1.0	2.2	7.4	4.3	5.8	15.5	10.6	13.2
8	2.1	1.0	1.5	3.0	1.7	2.5	8.3	4.8	6.5	15.7	13.3	14.3
9	1.8	1.5	1.6	2.3	0.6	1.4	8.5	5.0	6.9	13.5	10.4	11.7
10	1.8	-0.2	1.1	2.2	0.1	1.1	9.7	6.3	8.1	12.2	9.4	10.8
11	-0.1	-0.2	-0.1	3.6	0.8	2.1	8.4	6.7	7.1	13.7	9.4	11.6
12	-0.1	-0.2	-0.2	3.2	2.1	2.6	10.9	6.8	8.7	11.7	9.5	10.5
13	0.0	-0.2	-0.1	3.5	1.1	2.4	9.2	6.4	7.6	14.2	8.0	11.2
14	0.8	-0.2	0.2	3.5	1.8	2.6	7.5	4.5	6.1	15.4	10.4	13.2
15	1.0	-0.1	0.4	4.3	3.0	3.6	8.6	4.2	6.5	15.2	13.0	13.9
16	1.2	-0.2	0.3	4.0	2.4	3.3	9.8	4.9	7.5	13.0	10.2	11.4
17	0.6	-0.2	0.0	3.8	0.6	2.3	11.5	6.4	9.1	13.2	9.3	11.4
18	1.8	0.6	1.4	3.4	1.6	2.7	13.0	8.2	10.7	12.3	10.0	11.2
19	1.8	0.5	1.4	3.0	2.5	2.6	14.5	9.7	12.2	10.7	8.6	9.6
20	0.8	-0.2	0.1	2.9	1.9	2.5	12.8	11.1	11.8	10.1	7.9	9.1
21	0.7	-0.2	0.1	3.1	0.8	1.8	14.5	9.9	12.1	11.4	8.7	10.1
22	-0.1	-0.2	-0.1	3.4	0.3	1.8	14.7	10.1	12.5	11.5	8.8	10.2
23	0.8	-0.1	0.2	3.7	0.5	2.1	15.5	10.9	13.3	12.6	9.5	10.9
24	1.8	-0.2	0.6	4.4	0.7	2.6	15.8	12.0	13.9	13.6	10.0	11.9
25	1.9	-0.2	0.7	4.5	0.9	2.9	14.6	10.6	12.8	16.3	10.2	13.3
26	0.9	-0.1	0.3	4.9	2.6	3.7	16.1	12.0	14.0	17.6	12.0	15.1
27	1.5	-0.1	0.5	3.8	2.3	3.1	15.1	12.2	13.6	18.6	15.2	16.6
28	0.2	-0.2	-0.1	3.5	2.7	3.2	13.2	10.0	11.2	17.2	12.8	15.0
29	0.2	-0.2	-0.1	4.4	1.4	2.8	10.6	8.7	9.5	17.0	11.4	14.4
30	---	---	---	4.6	0.3	2.6	9.5	7.0	8.1	17.8	12.2	15.3
31	---	---	---	3.6	1.8	2.3	---	---	---	18.3	15.1	16.3
Month	2.1	-0.2	0.5	4.9	-0.2	2.2	16.1	1.3	8.6	18.6	5.8	12.0

01420500 BEAVER KILL AT COOKS FALLS, NY—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Day	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
		June			July			August			September	
1	18.2	14.9	16.4	23.7	19.6	21.6	20.9	17.7	19.3	21.9	16.8	19.1
2	19.0	14.4	16.9	24.4	19.4	21.8	19.2	17.2	18.2	22.9	17.6	20.0
3	18.4	14.8	16.9	21.2	19.2	20.2	19.0	16.1	17.5	24.0	19.1	21.2
4	17.3	15.9	16.6	21.9	18.7	20.1	19.4	16.4	17.9	24.1	19.5	21.6
5	18.2	15.2	16.6	23.2	18.8	20.9	21.4	17.0	19.2	24.0	19.6	21.6
6	19.3	16.0	17.4	24.8	20.0	22.1	21.3	18.5	19.7	21.5	19.4	20.6
7	22.9	17.3	20.2	26.6	21.4	23.6	20.9	17.8	19.3	20.7	17.8	19.1
8	23.3	20.0	21.5	26.6	22.6	24.3	20.0	17.6	18.8	20.9	17.4	19.0
9	25.6	20.0	22.8	25.2	22.5	23.6	20.5	17.1	18.7	18.7	16.1	17.3
10	26.4	21.1	23.8	25.9	20.5	22.8	18.8	16.7	17.6	18.2	14.9	16.3
11	24.5	21.0	22.8	23.8	19.6	21.7	17.6	16.1	16.8	17.8	14.4	16.2
12	24.1	19.2	21.6	26.7	20.2	23.2	18.8	15.6	17.1	16.6	15.8	16.0
13	23.9	17.9	21.0	24.1	19.4	22.0	19.6	16.2	17.9	17.7	15.6	16.7
14	23.7	20.1	21.5	20.8	17.9	19.2	21.2	16.9	19.1	20.8	17.3	19.0
15	24.1	19.8	21.6	22.5	17.6	20.0	20.2	17.3	18.9	20.6	18.1	19.5
16	23.1	18.9	20.4	23.5	18.0	20.8	20.5	17.2	18.8	18.1	15.7	17.0
17	20.0	17.4	18.7	23.3	19.5	21.5	21.2	16.9	19.2	18.1	14.3	16.2
18	17.4	15.4	16.2	25.0	20.1	22.3	22.1	17.8	20.0	18.0	14.7	16.1
19	18.4	14.5	16.5	25.7	21.1	23.1	21.3	18.1	19.8	16.8	13.1	14.9
20	18.8	15.8	17.1	25.5	21.9	23.3	20.3	15.9	18.1	16.3	12.4	14.4
21	21.4	15.7	18.6	24.4	21.1	22.6	21.0	16.1	18.6	17.0	13.3	15.2
22	21.8	17.6	19.6	23.1	20.7	21.9	22.2	17.1	19.6	18.5	14.8	16.3
23	21.0	18.2	19.4	21.2	16.7	18.9	22.6	17.9	20.2	17.4	13.4	15.4
24	20.9	17.4	18.9	17.6	16.3	16.9	22.9	18.6	20.5	17.4	13.3	15.2
25	21.7	16.7	19.2	18.4	15.2	16.7	22.1	18.9	20.3	16.9	14.5	15.4
26	19.9	17.9	18.7	18.6	15.2	16.9	21.0	16.4	18.7	14.5	13.6	14.2
27	20.6	17.8	19.2	18.2	16.5	17.2	20.9	16.2	18.4	16.5	14.4	15.4
28	22.8	18.6	20.8	18.4	15.1	16.8	20.3	16.5	18.4	16.9	15.8	16.4
29	23.0	20.3	21.3	19.3	15.7	17.5	18.5	17.4	17.8	16.3	14.6	15.5
30	23.9	19.4	21.5	19.4	16.0	17.8	19.8	17.2	18.3	16.2	13.8	15.1
31	---	---	---	21.0	17.1	19.1	21.5	16.6	18.8	---	---	---
Month	26.4	14.4	19.5	26.7	15.1	20.7	22.9	15.6	18.8	24.1	12.4	17.2

	Max	Min	Mean
Year	26.7	-0.2	10.1