Water-Data Report 2008

01427510 DELAWARE RIVER AT CALLICOON, NY

Upper Delaware Basin
Upper Delaware Subbasin

LOCATION.--Lat 41°45′24″, long 75°03′28″ referenced to North American Datum of 1927, Wayne County, PA, Hydrologic Unit 02040101, on right bank 0.5 mi downstream from Callicoon Creek, 0.5 mi downstream from Interstate Bridge 7, and 0.8 mi southeast of Callicoon. Water-quality sampling site at discharge station.

DRAINAGE AREA.--1,820 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--June 1975 to current year.

REVISED RECORDS.--WDR NY-82-1: Drainage area. WDR NY-86-1: 1975-84 (M). WDR NY-04-1: 2003.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 734.88 ft above NGVD of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Subsequent to September 1954, entire flow from 371 mi^2 of drainage area controlled by Pepacton Reservoir (01416900), and subsequent to October 1963, entire flow from 454 mi^2 of drainage area controlled by Cannonsville Reservoir (01424997). Part of flow from these reservoirs diverted for New York City municipal supply. Remainder of flow (except for conservation releases and spill) impounded for release during periods of low flow in the lower Delaware River basin, as directed by the Delaware River Master. Satellite and telephone gage-height and temperature telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 144,000 ft^3/s, June 28, 2006, gage height, 20.38 ft; minimum discharge, 306 ft^3/s, Sept. 24, 25, 1997; minimum gage height, 2.20 ft, Sept. 13, 1977, Aug. 23, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 46,200 ft^3/s, Mar. 9, gage height, 11.09 ft; minimum discharge, 534 ft^3/s, Sept. 6, gage height, 2.84 ft.

01427510 DELAWARE RIVER AT CALLICOON, 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	1,510	2,600	3,420	5,320	3,550	4,120	10,700	1,500	1,240	915	1,640	1,340
2	1,530	2,240	2,930	5,260	4,670	3,960	14,500	1,540	1,200	836	1,510	1,050
3	1,540	1,960	3,230	e4,340	4,400	3,860	12,200	1,640	1,120	772	1,510	1,060
4	1,550	1,760	3,410	e4,190	4,100	4,200	11,700	2,120	1,120	809	1,500	1,060
5	1,570	1,610	e2,770	e4,190	4,310	24,000	14,300	2,180	1,130	1,300	1,320	1,040
6	1,650	1,690	e2,380	4,430	10,600	28,400	12,700	1,920	1,080	1,060	1,410	611
7	1,690	2,180	e2,120	4,610	17,400	19,100	11,100	1,780	1,040	774	1,440	696
8	1,710	1,810	e2,010	5,910	11,700	26,600	9,660	1,740	1,130	789	1,270	844
9	1,660	1,610	e1,990	9,990	9,160	39,700	8,550	1,820	1,350	711	1,320	815
10	1,880	1,570	1,980	12,200	7,900	24,900	7,650	2,050	1,170	710	1,320	1,110
11	1,800	1,570	2,040	13,400	e6,040	16,600	6,950	1,860	1,470	673	1,620	943
12	2,760	1,460	3,050	14,200	e5,260	12,500	6,980	1,670	1,150	1,410	1,640	745
13	1,900	1,780	3,960	9,910	e6,200	9,910	6,600	1,570	928	1,320	1,440	1,090
14	1,440	2,370	3,480	8,310	9,880	8,350	5,910	1,470	1,140	2,580	1,280	977
15	1,210	7,480	3,090	7,360	8,290	8,560	5,180	1,440	1,470	1,720	1,440	997
16	1,060	10,900	e2,880	6,450	7,200	8,340	4,600	1,570	1,070	1,190	1,660	844
17	930	6,400	e2,690	5,630	6,270	7,170	3,970	2,340	1,220	1,040	1,510	703
18	920	4,590	e2,570	5,270	11,100	6,340	3,200	2,210	1,130	1,060	1,510	620
19	880	3,720	3,240	4,830	16,600	7,940	2,480	2,010	1,050	1,520	1,510	640
20	1,850	3,630	3,580	e4,160	12,900	22,300	2,130	1,830	986	1,450	1,620	952
21	2,400	4,250	3,350	e3,830	9,990	16,900	2,010	1,740	1,150	1,270	1,560	1,510
22	1,580	3,690	3,250	e3,760	8,420	12,800	2,160	1,830	1,090	1,270	1,560	1,110
23	1,320	3,260	4,270	e3,700	7,410	10,200	2,620	1,820	1,090	4,010	1,560	1,240
24	1,740	2,850	14,200	e3,590	6,230	8,670	2,690	1,670	1,070	16,300	1,570	1,410
25	2,350	2,610	9,330	e3,540	5,470	7,350	2,250	1,530	1,000	8,780	1,570	1,350
26	1,970	3,210	6,810	e3,400	5,070	6,420	1,790	1,420	909	4,270	1,520	1,160
27	5,310	8,390	5,740	3,460	4,880	6,030	1,560	1,360	887	3,150	1,380	1,110
28	10,300	6,780	5,160	3,380	e4,260	7,680	1,660	1,260	948	3,860	1,310	986
29	5,510	5,020	6,000	3,330	e3,960	8,250	2,000	1,180	840	2,740	1,350	1,230
30	3,910	4,100	6,180	3,580	---	6,830	1,820	1,110	929	2,170	1,390	1,140
31	3,110	---	5,530	3,620	---	6,950	---	1,120	---	1,860	1,370	---
Total	70,540	107,090	126,640	179,150	223,220	384,930	181,620	52,300	33,107	72,319	45,610	30,383
Mean	2,275	3,570	4,085	5,779	7,697	12,420	6,054	1,687	1,104	2,333	1,471	1,013
Max	10,300	10,900	14,200	14,200	17,400	39,700	14,500	2,340	1,470	16,300	1,660	1,510
Min	880	1,460	1,980	3,330	3,550	3,860	1,560	1,110	840	673	1,270	611

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	2,348	2,865	3,010	2,933	2,785	4,826	5,852	3,320	2,210	1,468	1,432	1,803
Max	6,545	7,152	11,130	8,108	7,993	12,420	14,500	7,866	13,360	3,571	4,265	9,035
(WY)	(1978)	(2004)	(1997)	(2006)	(1976)	(2008)	(1993)	(1984)	(2006)	(1996)	(2004)	(2004)
Min	701	1,130	1,035	587	611	1,177	1,496	935	734	777	560	839
(WY)	(1992)	(1979)	(1999)	(1977)	(1980)	(1981)	(1985)	(1985)	(1985)	(1981)	(1985)	(1994)

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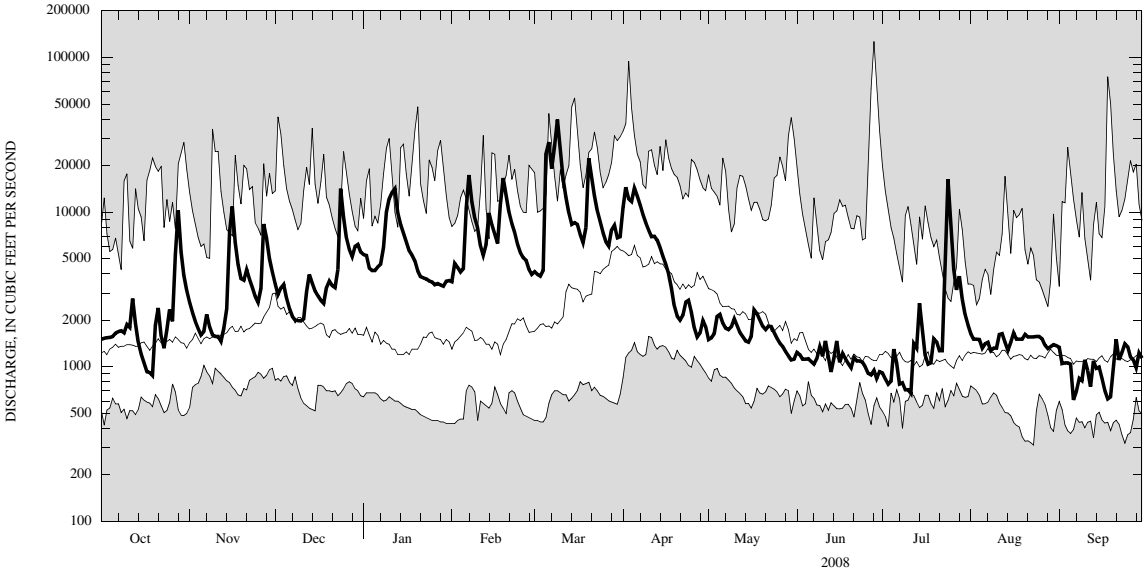
SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1975 - 2008	
Annual total	1,211,646		1,506,909			
Annual mean	3,320		4,117		2,901	
Highest annual mean					4,594	2004
Lowest annual mean					1,434	1985
Highest daily mean	24,900	Apr 16	39,700	Mar 9	127,000	Jun 28, 2006
Lowest daily mean	781	Jul 21	611	Sep 6	312	Aug 23, 1985
Annual seven-day minimum	924	Jul 17	819	Sep 14	354	Aug 17, 1985
10 percent exceeds	7,620		9,890		6,440	
50 percent exceeds	1,830		2,080		1,500	
90 percent exceeds	976		1,040		820	



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.

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1975 to current year.
CHEMICAL DATA: 2002 (b).
MINOR ELEMENTS DATA: 2002 (b).
NUTRIENT DATA: 2002 (b).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: June 1975 to current year.

INSTRUMENTATION.--Water-temperature satellite and telephone telemeter provides 15-minute-interval readings. Prior to May 1989, water- temperature recorder provided one-hour-interval readings.

REMARKS.--Temperature readings prior to Oct. 1, 2007, rounded to the nearest 0.5°C. Water temperature is affected by release of water from upstream reservoirs.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: Prior to Oct. 1, 2007--Maximum (water years 1976-2007), 30.5°C, July 12, 1987; minimum, 0.0°C on many days during winter periods.
WATER TEMPERATURE: After Oct. 1, 2007--Maximum, 29.3°C, June 10, 2008; minimum, -0.3°C, Dec. 2, 2007.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURE: Maximum, 29.3°C, June 10; minimum, -0.3°C, Dec. 2.

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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	16.4	14.3	15.5	9.6	8.5	9.1	3.0	0.6	1.9	2.0	0.7	1.4
2	16.6	14.2	15.4	9.2	7.7	8.4	0.9	-0.3	0.2	1.4	0.0	0.9
3	17.6	14.6	16.0	8.4	6.9	7.6	0.7	-0.2	0.2	0.2	-0.1	0.0
4	18.4	15.4	17.0	8.0	6.3	7.2	0.7	-0.1	0.3	0.1	-0.1	0.0
5	19.0	16.2	17.5	8.0	6.0	7.1	0.2	-0.1	0.0	0.5	0.0	0.1
6	18.9	16.1	17.6	8.7	7.1	7.9	0.3	-0.2	0.0	2.1	0.4	1.3
7	19.0	17.2	18.0	7.2	5.8	6.8	0.2	-0.1	0.0	3.2	2.1	2.6
8	19.6	16.8	18.1	6.0	4.6	5.4	0.3	-0.1	0.1	3.5	2.6	3.0
9	19.4	17.7	18.4	5.6	4.1	4.9	0.2	-0.1	0.1	3.9	3.1	3.5
10	18.6	17.1	17.9	5.8	4.4	5.0	0.8	0.1	0.5	3.8	3.1	3.4
11	17.5	15.9	16.6	4.9	3.2	4.2	1.3	0.2	0.7	3.5	3.0	3.3
12	15.9	12.8	14.5	4.7	3.6	4.1	2.3	1.3	1.8	3.9	3.4	3.7
13	13.1	11.6	12.4	6.6	4.6	5.5	1.7	-0.1	0.8	3.6	2.9	3.1
14	12.3	10.9	11.7	6.6	5.1	5.8	0.8	-0.1	0.3	3.2	2.9	3.1
15	12.8	11.3	12.0	7.3	6.5	6.9	0.7	-0.1	0.2	3.2	2.4	2.9
16	14.1	11.0	12.6	6.8	5.3	6.3	0.1	-0.1	0.0	2.4	1.4	2.0
17	14.3	11.8	13.2	5.5	4.4	4.9	0.1	-0.1	0.0	1.5	0.6	1.1
18	15.8	13.3	14.6	4.8	4.2	4.5	0.2	-0.2	0.0	1.9	0.6	1.3
19	16.7	14.8	15.7	4.8	4.1	4.5	0.2	-0.1	0.0	1.8	0.8	1.4
20	16.6	15.0	15.9	4.8	4.3	4.5	0.5	0.0	0.2	1.1	-0.1	0.3
21	15.7	14.0	14.8	6.0	4.7	5.4	1.8	0.5	1.3	0.3	-0.2	0.0
22	15.5	13.1	14.3	7.8	6.0	6.9	2.3	1.6	2.0	0.2	-0.2	0.0
23	15.5	14.0	14.7	6.6	3.7	5.4	3.5	2.2	2.7	0.4	0.0	0.1
24	15.0	13.8	14.3	3.8	2.6	3.2	2.8	2.3	2.5	0.5	-0.1	0.1
25	14.4	12.7	13.7	2.9	1.7	2.3	2.8	2.4	2.6	0.3	-0.2	0.0
26	12.7	11.9	12.3	3.6	2.0	2.7	2.7	2.2	2.5	0.2	-0.1	0.0
27	12.4	11.8	12.0	5.1	3.6	4.5	2.9	2.4	2.7	1.2	-0.1	0.5
28	11.9	10.4	11.4	5.0	4.1	4.6	3.6	2.8	3.2	1.8	0.5	0.9
29	10.4	8.8	9.6	4.2	3.4	3.9	4.0	3.5	3.7	1.4	0.4	1.0
30	9.5	8.3	8.8	3.8	2.8	3.4	3.6	2.3	3.2	2.2	1.1	1.6
31	9.8	8.3	9.0	---	---	---	2.6	2.0	2.3	1.5	0.4	0.9
Month	19.6	8.3	14.4	9.6	1.7	5.4	4.0	-0.3	1.2	3.9	-0.2	1.4

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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	0.5	0.1	0.3	0.8	-0.2	0.3	5.4	3.0	3.9	12.5	7.8	10.3
2	1.4	0.2	0.8	2.3	0.2	1.1	5.4	4.2	5.1	11.1	10.1	10.5
3	2.4	0.9	1.5	3.6	1.2	2.2	4.5	3.3	3.9	10.8	10.2	10.5
4	1.7	1.3	1.6	3.1	2.0	2.6	4.2	3.8	4.0	13.3	9.8	11.4
5	1.9	1.3	1.6	2.0	0.8	1.3	4.7	3.8	4.2	15.8	10.3	13.1
6	2.1	1.5	1.8	2.7	0.9	1.7	5.8	3.9	4.7	16.2	11.5	14.1
7	2.2	1.7	1.9	2.7	1.9	2.4	5.8	5.2	5.5	18.5	12.5	15.6
8	2.1	1.5	1.8	2.6	2.2	2.5	7.1	5.4	6.2	18.2	15.2	16.5
9	1.9	1.6	1.8	2.3	1.5	1.9	8.0	6.5	7.3	16.0	13.3	14.6
10	2.1	0.4	1.6	2.2	1.1	1.7	9.2	7.2	8.2	14.4	12.1	13.3
11	0.5	-0.2	0.0	3.1	1.5	2.3	8.5	7.2	7.9	15.7	11.1	13.5
12	0.2	-0.1	0.0	3.1	2.2	2.8	9.7	7.0	8.2	13.3	11.4	12.3
13	0.1	-0.1	0.0	2.9	1.7	2.3	9.2	7.2	8.5	16.6	10.3	13.6
14	0.4	0.0	0.1	3.3	2.4	2.8	8.1	6.3	7.0	18.2	12.1	15.4
15	1.0	0.2	0.6	3.6	2.9	3.2	8.4	5.6	6.9	17.2	15.0	16.1
16	1.2	0.3	0.7	3.8	2.8	3.4	9.9	6.4	8.0	15.7	12.7	14.1
17	0.7	0.2	0.5	3.5	2.1	2.8	11.7	7.5	9.5	15.9	11.5	13.8
18	2.0	0.6	1.4	3.6	2.6	3.0	13.7	8.9	11.3	13.7	12.1	13.2
19	2.1	1.4	1.7	2.9	2.7	2.8	16.1	10.6	13.4	13.2	10.9	12.0
20	1.5	0.5	1.0	3.2	2.6	2.8	14.6	12.6	13.6	12.3	9.9	11.2
21	1.0	0.1	0.6	2.7	2.0	2.4	17.3	12.6	14.9	13.4	10.1	11.8
22	0.9	-0.2	0.2	3.0	1.9	2.6	18.0	12.9	15.5	13.7	10.3	11.9
23	0.9	-0.2	0.3	3.4	2.0	2.7	17.6	13.5	15.5	14.7	10.9	12.8
24	1.5	0.1	0.8	3.8	2.4	3.1	16.3	12.5	14.5	16.4	11.6	14.2
25	2.1	0.6	1.3	4.2	2.4	3.3	16.0	11.4	13.8	18.8	12.1	15.7
26	1.7	0.3	1.1	4.8	3.5	4.1	16.9	12.6	14.8	20.7	14.0	17.7
27	1.5	0.3	0.8	4.1	3.6	3.8	17.5	13.7	15.4	21.6	17.4	19.4
28	0.8	-0.2	0.2	3.8	2.9	3.5	15.7	12.6	13.7	20.6	15.9	18.4
29	0.3	-0.2	0.0	3.9	2.3	3.1	12.7	10.5	11.8	20.3	14.8	17.9
30	---	---	---	4.3	2.3	3.4	12.1	9.1	10.6	21.3	15.3	18.5
31	---	---	---	3.9	3.0	3.4	---	---	---	20.8	17.6	19.3
Month	2.4	-0.2	0.9	4.8	-0.2	2.6	18.0	3.0	9.6	21.6	7.8	14.3

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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	21.9	18.0	20.1	25.7	22.4	24.4	26.0	21.8	24.0	20.6	15.8	18.4
2	22.3	17.6	20.2	26.3	22.0	24.5	24.5	21.6	23.0	21.8	17.3	19.7
3	22.7	18.0	20.5	24.6	22.3	23.2	24.0	20.7	22.5	23.4	19.0	21.3
4	21.2	19.3	20.1	23.8	21.7	22.8	24.0	20.5	22.3	23.9	20.1	22.1
5	21.1	18.6	19.8	24.8	21.2	23.2	25.0	20.4	22.9	23.8	20.5	22.3
6	22.6	18.7	20.5	23.9	20.6	22.3	25.5	22.2	23.8	22.1	20.6	21.1
7	25.7	20.8	23.3	26.2	21.6	24.1	25.3	21.7	23.7	22.2	19.4	20.9
8	26.5	22.8	25.0	27.7	24.5	26.1	23.9	21.5	22.9	23.2	19.5	21.5
9	28.4	23.2	26.0	26.7	24.9	25.8	24.2	20.6	22.5	21.8	19.4	20.3
10	29.3	24.5	27.1	26.5	23.8	25.3	22.3	20.3	21.2	21.1	17.6	19.4
11	27.8	24.5	26.3	25.8	22.4	24.5	21.1	19.0	20.1	20.7	17.2	19.1
12	26.1	22.5	24.5	27.1	23.4	25.2	21.4	17.9	19.7	19.8	18.5	18.8
13	26.4	21.4	24.1	23.8	20.9	22.0	22.3	18.2	20.4	20.1	18.3	19.2
14	25.7	23.1	24.6	22.2	20.1	21.2	23.2	19.3	21.5	22.6	19.1	20.8
15	26.1	22.7	24.4	25.7	20.5	23.2	23.6	20.3	22.1	22.3	20.1	21.3
16	24.9	21.3	23.1	26.8	21.0	24.2	23.6	20.0	21.9	20.2	18.2	19.3
17	22.9	20.5	21.8	26.8	23.1	25.2	23.1	19.3	21.4	20.7	16.8	18.9
18	21.1	19.2	20.1	28.0	23.7	26.0	23.5	19.7	21.8	19.8	17.4	18.9
19	20.8	17.6	19.4	28.0	24.5	26.3	22.5	20.1	21.4	19.0	15.9	17.7
20	20.8	17.9	19.5	25.4	23.1	24.3	21.6	17.6	19.8	19.2	15.6	17.5
21	23.1	17.9	20.7	25.0	22.4	23.7	21.4	17.0	19.4	18.4	15.6	17.1
22	23.1	19.2	21.2	25.5	22.4	24.2	22.1	17.7	20.0	18.3	15.4	16.9
23	24.4	20.2	22.2	24.4	19.7	22.4	22.1	18.3	20.3	18.5	14.5	16.6
24	23.6	20.8	22.3	19.7	18.0	18.7	21.8	18.4	20.1	17.8	14.3	16.2
25	24.5	19.9	22.4	19.6	17.7	18.7	21.2	18.7	19.8	16.6	14.2	15.5
26	23.3	21.1	22.1	21.2	18.6	19.8	20.2	16.7	18.7	15.4	14.0	14.7
27	23.3	21.2	22.4	22.2	20.0	20.9	20.1	16.0	18.2	16.6	14.8	15.6
28	25.1	21.6	23.5	22.0	19.6	20.7	19.9	16.4	18.3	16.7	15.7	16.3
29	24.2	22.9	23.6	23.2	19.5	21.4	18.3	17.1	17.6	16.9	16.0	16.5
30	25.8	22.1	24.1	24.4	20.2	22.3	18.1	16.6	17.3	17.8	15.1	16.4
31	---	---	---	25.2	21.4	23.4	19.4	15.1	17.4	---	---	---
Month	29.3	17.6	22.5	28.0	17.7	23.2	26.0	15.1	20.8	23.9	14.0	18.7

	Max	Min	Mean
Year	29.3	-0.3	11.3