

DELAWARE RIVER BASIN

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY

LOCATION.--Lat 41°30'32", long 74°59'10", Sullivan County, Hydrologic Unit 02040101, on left bank, 1.6 mi upstream from Lackawaxen River, and 4.6 mi northwest of Barryville. Water-quality sampling site at discharge station.

DRAINAGE AREA.--2,020 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1940 to current year.

REVISED RECORDS.--WDR NY-82-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 600.22 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Subsequent to September 1954, entire flow from 371 mi² of drainage area controlled by Pepacton Reservoir, and subsequent to October 1963, entire flow from 454 mi² of drainage area controlled by Cannonsville Reservoir. Part of flow of 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. Information on the above reservoirs can be found in the annual Water-Data Report NY-04-1.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 130,000 ft³/s, Aug. 19, 1955, gage height, 26.40 ft, from floodmarks in gage house, from rating curve extended above 55,000 ft³/s, on basis of slope-area measurement at gage height 23.19 ft; minimum discharge, 122 ft³/s, Sept. 5, 1953, gage height, 1.11 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35,300 ft³/s, Mar. 22, Sept. 4, gage height, 12.26 ft; minimum, 642 ft³/s, Oct. 3, gage height, 2.34 ft.

REVISIONS.--Revised daily (in **Bold**), monthly and yearly discharges for 2003 water year and statistical summaries for period of record through 2003 water year are given below. These figures supersede those published in the report for 2003.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	884	1,770	e2,300	2,760	e1,800	e2,500	11,300	4,160	6,380	2,000	1,260	1,240
2	734	1,640	e2,000	8,870	e1,700	e2,400	9,820	4,970	8,620	1,670	2,140	10,900
3	662	1,540	e1,800	8,170	e1,700	e2,400	9,420	8,220	6,870	1,440	2,600	15,300
4	932	1,450	1,560	6,180	e1,700	e2,400	8,760	8,060	6,230	1,310	2,620	26,300
5	1,010	1,360	1,420	5,020	e1,900	e2,300	8,680	6,920	5,770	1,270	4,060	22,000
6	913	1,760	e1,500	e4,000	e2,500	e2,300	8,680	6,080	5,130	1,260	4,800	13,800
7	972	2,430	e1,300	e3,500	e2,400	e2,200	8,420	5,290	4,820	1,170	4,480	9,900
8	946	2,210	e1,200	e3,100	e2,200	e2,200	7,730	4,600	5,040	1,220	3,300	7,610
9	888	1,890	e1,300	e2,800	e2,000	e2,100	6,980	4,020	4,330	1,540	3,690	6,030
10	974	1,730	1,150	e2,500	e1,900	e2,100	6,350	3,520	3,700	1,410	3,290	5,080
11	1,170	1,670	1,100	e2,100	e1,900	e2,000	6,360	3,010	3,330	1,560	4,310	4,230
12	5,190	1,710	e1,100	e1,900	e2,000	1,910	7,420	3,910	3,750	2,940	8,400	3,270
13	7,030	3,020	e2,000	e1,700	e2,000	1,910	6,940	4,510	5,970	1,750	6,410	2,530
14	4,370	3,460	e2,500	e1,600	e2,000	1,860	6,110	4,300	9,810	1,280	5,830	2,240
15	3,120	2,920	4,130	e1,500	e1,900	1,840	5,490	4,100	10,600	1,130	4,980	3,340
16	3,680	2,670	3,940	e1,500	e1,900	2,270	5,090	3,800	8,170	1,080	3,970	7,090
17	14,600	5,650	3,120	1,510	e1,800	4,090	4,650	3,480	6,620	1,330	4,450	5,050
18	8,980	8,610	2,330	e1,600	e1,700	10,200	4,220	3,110	5,520	1,290	3,000	4,180
19	5,800	7,030	2,010	e1,600	e1,700	16,800	3,860	2,780	4,890	1,190	2,520	3,950
20	4,430	5,590	3,050	e1,900	e1,800	14,300	3,510	2,470	4,320	1,350	2,230	3,910
21	3,520	5,070	6,950	e2,100	e1,800	28,200	3,140	2,340	8,370	1,090	1,910	2,980
22	2,810	5,040	5,430	e2,200	e1,900	34,100	3,030	2,310	9,680	1,730	1,590	2,320
23	2,340	6,400	4,520	e2,100	e2,100	30,500	3,050	2,100	9,390	3,290	1,420	9,190
24	2,010	5,990	3,850	e2,000	e2,600	21,300	2,880	1,910	7,440	2,920	1,230	15,300
25	1,760	4,960	3,420	e1,900	e3,400	16,500	2,680	2,110	5,870	2,200	1,090	9,580
26	2,500	4,290	2,820	e2,000	e3,400	15,400	2,620	2,450	4,800	1,730	1,040	7,480
27	3,650	3,840	2,990	e1,900	e3,200	13,800	5,530	3,040	4,230	1,560	999	6,220
28	2,930	3,420	2,880	e2,000	e2,800	11,200	5,600	2,820	3,480	1,570	1,090	8,770
29	2,440	2,980	2,700	e2,000	---	10,200	5,100	2,650	2,680	1,450	1,110	13,200
30	2,160	2,710	2,470	e2,100	---	14,100	4,580	2,380	2,320	1,270	1,470	9,880
31	1,960	---	2,380	e1,900	---	13,500	---	2,290	---	1,150	1,310	---
TOTAL	95,365	104,810	81,220	86,010	59,700	288,880	178,000	117,710	178,130	49,150	91,389	242,870
MEAN	3,076	3,494	2,620	2,775	2,132	9,319	5,933	3,797	5,938	1,585	2,948	8,096
MAX	14,600	8,610	6,950	8,870	3,400	34,100	11,300	8,220	10,600	3,290	8,400	26,300
MIN	662	1,360	1,100	1,500	1,700	1,840	2,620	1,910	2,320	1,080	999	1,240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

MEAN	2,018	2,708	3,052	2,725	2,935	5,195	6,448	4,066	2,436	1,616	1,426	1,640
MAX	7,404	7,448	11,940	8,335	9,389	12,050	16,500	8,615	6,701	4,087	3,033	8,096
(WY)	(1978)	(1997)	(1997)	(1978)	(1976)	(1977)	(1993)	(1984)	(1972)	(1996)	(1994)	(2003)
MIN	527	610	1,114	687	712	1,399	1,878	1,161	673	328	465	448
(WY)	(1964)	(1965)	(1999)	(1977)	(1980)	(1981)	(1985)	(1965)	(1965)	(1965)	(1965)	(1965)

e Estimated.

DELAWARE RIVER BASIN

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003--Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	935,734		1,573,234			
ANNUAL MEAN	2,564		4,310		3,020	
HIGHEST ANNUAL MEAN					4,650	
LOWEST ANNUAL MEAN					1,297	
HIGHEST DAILY MEAN	14,600	Oct 17	34,100	Mar 22	63,000	Jan 20, 1996
LOWEST DAILY MEAN	606	Sep 20	662	Oct 3	250	Oct 27, 1963
ANNUAL SEVEN-DAY MINIMUM	690	Sep 17	872	Oct 1	264	Oct 23, 1963
10 PERCENT EXCEEDS	5,600		8,760		6,710	
50 PERCENT EXCEEDS	1,890		2,820		1,640	
90 PERCENT EXCEEDS	819		1,300		873	

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8,010	15,400	10,000	7,050	e1,100	1,100	5,560	5,150	3,580	1,110	3,570	4,050
2	6,730	11,800	8,580	6,230	e1,100	1,280	6,620	4,480	3,930	964	3,810	2,790
3	5,790	9,630	7,150	5,870	e1,100	2,660	6,050	6,140	4,250	1,160	2,950	2,280
4	5,060	8,060	6,030	7,220	e1,100	5,070	5,430	6,160	3,850	1,320	2,340	1,970
5	6,290	7,080	5,340	11,200	e1,100	6,560	4,960	5,330	3,360	1,360	2,330	1,650
6	5,880	7,440	4,960	10,300	e1,000	10,400	4,340	5,330	3,060	1,300	2,510	1,490
7	5,050	6,370	4,560	8,280	e1,000	16,500	3,950	5,140	2,860	1,320	1,890	1,420
8	4,430	5,340	4,030	6,980	e1,000	12,600	3,980	4,600	2,480	1,570	1,590	1,370
9	3,970	4,620	3,690	e5,600	e1,000	9,730	3,870	4,260	2,100	1,300	1,430	4,390
10	3,600	4,350	3,360	e4,200	e1,000	7,970	3,420	3,990	1,980	1,380	1,290	7,410
11	3,230	4,170	10,600	e3,800	e1,000	6,810	2,960	5,060	1,790	1,340	1,250	5,740
12	2,890	4,180	24,300	e3,500	e1,000	6,150	2,640	5,340	1,550	1,160	2,730	4,240
13	2,600	4,150	15,300	e3,200	e1,000	5,390	3,410	6,100	1,350	1,170	26,500	3,300
14	2,330	3,920	11,400	e2,800	e1,000	4,570	6,130	5,860	1,220	1,140	13,900	2,710
15	5,040	3,650	9,770	e2,700	e1,000	4,530	6,440	5,180	1,110	2,260	7,000	2,350
16	6,900	3,400	8,140	e2,100	e1,000	4,400	5,670	4,950	1,070	2,300	9,750	2,100
17	5,460	3,210	7,160	e1,800	e1,000	3,720	5,160	4,340	1,050	2,040	9,880	2,030
18	4,740	3,160	8,740	e1,700	1,000	3,390	4,590	3,900	1,350	1,830	7,700	76,400
19	4,310	3,310	8,170	e1,600	1,060	3,090	4,200	3,650	1,660	2,130	6,040	60,600
20	4,580	19,500	7,350	e1,500	1,030	2,790	3,940	3,110	1,240	2,230	5,000	28,800
21	4,190	21,500	6,540	e1,400	980	3,310	3,700	2,580	1,060	1,900	5,020	16,900
22	3,900	15,900	5,780	e1,400	1,000	3,800	3,460	2,420	959	1,820	5,730	11,500
23	3,590	12,200	5,300	e1,400	1,180	3,120	3,560	2,170	954	1,930	4,860	8,560
24	3,300	9,790	9,650	e1,300	1,180	2,980	4,230	2,200	923	2,620	4,120	7,400
25	3,030	8,960	26,800	e1,300	1,220	3,300	3,780	2,060	893	2,550	3,760	6,470
26	2,800	8,020	20,700	e1,200	1,110	3,720	5,210	2,230	1,010	1,720	3,530	5,320
27	5,680	6,910	15,100	e1,200	1,010	4,600	8,160	3,370	1,370	1,810	3,090	4,680
28	22,000	6,460	11,600	e1,200	1,020	6,890	7,070	4,600	1,100	11,300	2,760	6,770
29	24,700	11,900	9,440	e1,200	1,050	6,800	6,270	4,980	931	8,760	2,610	12,200
30	32,400	11,800	8,240	e1,200	---	6,100	5,760	4,350	1,010	5,760	2,540	10,900
31	21,700	---	7,890	e1,200	---	5,550	---	3,740	---	3,980	3,130	---
TOTAL	224,180	246,180	295,670	111,630	30,340	168,880	144,520	132,770	55,050	74,534	154,610	307,790
MEAN	7,232	8,206	9,538	3,601	1,046	5,448	4,817	4,283	1,835	2,404	4,987	10,260
MAX	32,400	21,500	26,800	11,200	1,220	16,500	8,160	6,160	4,250	11,300	26,500	76,400
MIN	2,330	3,160	3,360	1,200	980	1,100	2,640	2,060	893	964	1,250	1,370

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2004, BY WATER YEAR (WY)

MEAN	2,145	2,843	3,210	2,746	2,888	5,201	6,408	4,072	2,421	1,635	1,512	1,850
MAX	7,404	8,206	11,940	8,335	9,389	12,050	16,500	8,615	6,701	4,087	4,987	10,260
(WY)	(1978)	(2004)	(1997)	(1978)	(1976)	(1977)	(1993)	(1984)	(1972)	(1996)	(2004)	(2004)
MIN	527	610	1,114	687	712	1,399	1,878	1,161	673	328	465	448
(WY)	(1964)	(1965)	(1999)	(1977)	(1980)	(1981)	(1985)	(1965)	(1965)	(1965)	(1965)	(1965)

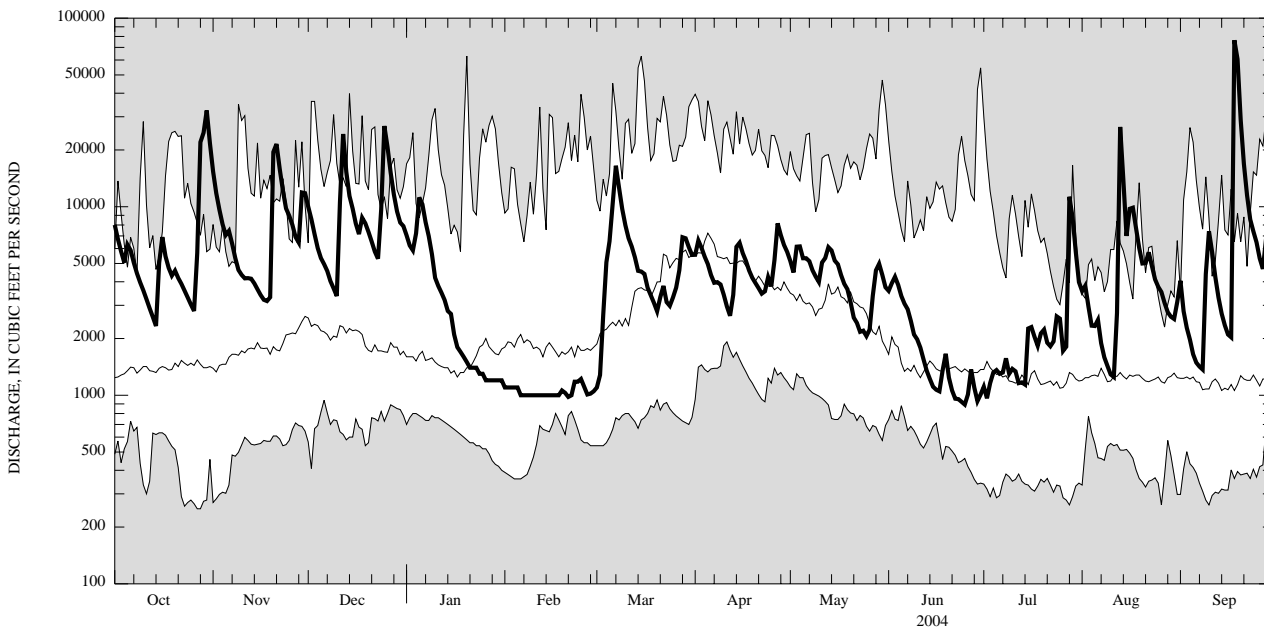
e Estimated.

DELAWARE RIVER BASIN

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1964 - 2004	
ANNUAL TOTAL	2,057,869		1,946,154			
ANNUAL MEAN	5,638		5,317		3,076	
HIGHEST ANNUAL MEAN					5,317	
LOWEST ANNUAL MEAN					1,297	
HIGHEST DAILY MEAN	34,100	Mar 22	76,400	Sep 18	76,400	Sep 18, 2004
LOWEST DAILY MEAN	999	Aug 27	893	Jun 25	250	Oct 27, 1963
ANNUAL SEVEN-DAY MINIMUM	1,140	Aug 23	1,000	Feb 6	264	Oct 23, 1963
10 PERCENT EXCEEDS	11,300		9,920		6,800	
50 PERCENT EXCEEDS	3,950		3,860		1,670	
90 PERCENT EXCEEDS	1,580		1,100		880	



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.

DELAWARE RIVER BASIN

01428500 DELAWARE RIVER ABOVE LACKAWAXEN RIVER NEAR BARRYVILLE, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to current year.

CHEMICAL DATA: 1971-73 (a).

NUTRIENT DATA: 1971 (a).

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: October 1967 to current year (no winter record for water years 1969-76).

INSTRUMENTATION.--Water-temperature recorder provides 15-minute-interval readings. From October 1975 to September 1995, water-temperature recorder provided one-hour-interval readings. Prior to October 1975, water-temperature recorder provided continuous readings.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum (water years 1968-75, 1980-81, 1983, 1985-96, 1999-2001, 2003-04), 32.5°C, July 9, 10, 1993; minimum (water years 1968, 1977-2004), 0.0°C, on many days during winters, each year except water years 1980-82.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 28.0°C, July 2; minimum, 0.0°C on many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	14.5	14.0	14.0	11.0	10.0	10.5	5.5	5.0	5.0	3.0	2.5	3.0
2	14.0	13.0	13.5	11.5	11.0	11.5	5.0	3.5	4.0	3.0	2.5	3.0
3	13.0	12.0	12.5	12.0	11.0	11.5	3.5	1.5	2.5	4.0	3.0	3.5
4	12.5	11.5	11.5	12.0	12.0	12.0	1.5	1.0	1.5	4.5	4.0	4.0
5	11.5	10.5	11.0	12.0	11.5	11.5	1.5	1.0	1.0	4.5	3.5	4.0
6	11.5	10.5	11.0	11.5	11.0	11.0	1.5	1.0	1.0	3.5	2.0	3.0
7	12.0	10.5	11.0	11.0	10.5	11.0	1.0	0.5	1.0	2.0	0.0	1.0
8	12.5	11.0	12.0	10.5	8.0	9.0	1.0	0.0	0.5	0.0	0.0	0.0
9	14.0	12.5	13.0	8.0	6.0	6.5	1.0	0.5	0.5	0.0	0.0	0.0
10	15.5	13.5	14.5	6.0	5.0	5.0	3.0	1.0	2.0	0.0	0.0	0.0
11	16.5	14.5	15.5	5.0	4.5	4.5	4.5	3.0	4.0	0.0	0.0	0.0
12	16.5	14.5	15.5	6.5	4.5	5.5	4.5	3.5	4.0	0.0	0.0	0.0
13	16.5	14.0	15.0	7.5	6.0	7.0	3.5	2.5	3.0	0.5	0.0	0.0
14	15.0	13.5	14.5	6.0	5.0	5.5	3.0	1.0	2.0	0.0	0.0	0.0
15	14.0	12.0	13.0	5.0	3.5	4.5	1.0	0.5	1.0	0.0	0.0	0.0
16	12.0	10.5	11.0	4.0	3.5	4.0	2.5	1.0	1.5	0.0	0.0	0.0
17	10.5	9.5	10.0	5.0	4.0	4.5	3.0	2.0	2.5	0.0	0.0	0.0
18	10.0	9.5	9.5	6.5	5.0	6.0	3.0	2.0	2.5	0.0	0.0	0.0
19	10.0	9.0	9.5	8.5	6.5	7.5	2.5	2.0	2.0	0.0	0.0	0.0
20	10.0	9.0	9.5	9.5	8.0	9.0	2.5	2.0	2.0	0.0	0.0	0.0
21	10.5	9.5	10.0	8.0	7.0	7.5	2.0	1.5	1.5	0.0	0.0	0.0
22	10.5	9.5	10.0	8.0	7.5	7.5	1.5	1.0	1.5	0.0	0.0	0.0
23	9.5	7.5	8.5	8.0	7.5	7.5	3.0	1.5	2.5	0.0	0.0	0.0
24	8.0	6.5	7.5	8.0	7.0	7.5	3.5	3.0	3.5	0.0	0.0	0.0
25	8.0	6.5	7.0	8.0	6.5	7.5	3.5	3.0	3.5	0.0	0.0	0.0
26	9.0	7.5	8.0	6.5	5.5	6.0	3.5	3.5	3.5	0.0	0.0	0.0
27	11.0	9.0	10.0	6.5	5.5	6.0	4.0	3.5	3.5	0.0	0.0	0.0
28	11.0	10.0	10.0	7.0	6.0	6.5	3.5	3.0	3.5	0.0	0.0	0.0
29	10.0	9.5	10.0	7.5	6.5	7.0	3.0	2.5	3.0	0.0	0.0	0.0
30	10.0	9.5	10.0	6.5	5.0	5.5	3.5	3.0	3.0	0.0	0.0	0.0
31	10.5	10.0	10.0	---	---	---	3.5	3.0	3.5	0.0	0.0	0.0
MONTH	16.5	6.5	11.2	12.0	3.5	7.5	5.5	0.0	2.5	4.5	0.0	0.7

