

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 gage-height and temperature telemeter and National Weather Service telephone gage-height telemeter at station. Information on the above reservoirs can be found in the annual Water-Data Report NY-02-1.

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, 15,200 ft³/s, June 7, gage height, 8.07 ft; minimum, 519 ft³/s, Sept. 23, gage height, 2.13 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1200	1440	1340	e900	5250	1530	5560	5790	6270	1200	867	1190
2	1260	1460	2020	e860	5730	1380	4970	5610	5140	1230	854	988
3	1250	1440	1490	e820	4590	1480	4130	6150	3750	1230	1100	806
4	1270	1360	1190	e800	3770	2070	3750	4940	2920	1250	1290	894
5	1330	1370	1040	e780	3100	2020	3210	4070	2920	1160	1220	980
6	1480	1370	954	e760	2590	1680	2790	3480	4640	963	1170	978
7	1460	1360	884	736	2400	1630	2470	3030	13700	995	1110	1210
8	1430	1300	926	735	2050	1550	2200	2740	10000	852	1120	1310
9	1460	1250	973	857	1890	1470	2060	2520	6580	918	1130	996
10	1550	1290	873	945	1740	1560	2000	2580	4880	936	1250	789
11	1590	1300	892	883	4960	1890	1960	2360	3830	831	1300	807
12	1560	1230	907	882	6690	1760	1730	2160	3150	714	1300	826
13	1540	1240	774	860	4900	1660	1590	5680	3000	771	1290	885
14	1420	1230	845	829	3580	1630	1950	12500	3180	941	1320	968
15	1570	1250	1310	770	2990	1630	3340	9520	4570	833	1350	938
16	1570	1270	1660	742	2740	1640	4250	6720	5670	696	1420	934
17	1680	1280	1500	704	2470	1850	3460	5240	4710	671	1480	635
18	1580	1280	2520	716	2220	1790	2990	6620	3670	756	1410	609
19	1520	1260	4850	686	1920	1690	2620	8570	3350	765	1360	665
20	1520	1270	3630	660	1740	1740	2370	6240	2720	924	1370	606
21	1540	1290	2880	648	1790	2050	2200	5090	2290	1190	1370	746
22	1560	1330	2370	780	2280	2530	2010	4280	2100	993	1360	725
23	1560	1290	1980	816	2270	2300	1900	3620	1930	857	1270	841
24	1560	1320	1790	773	1960	2100	1740	3080	1910	908	1280	1270
25	1730	1270	1840	851	1760	2110	1650	2660	1890	1080	1480	851
26	1690	1360	1680	1530	1660	2190	2160	2350	1600	711	1020	767
27	1550	1530	1350	1830	1650	9220	2200	2160	1960	1060	703	889
28	1610	1190	1160	1750	1670	9280	3060	3820	1840	1190	954	2070
29	1570	1120	1160	1800	---	6900	8000	6990	1560	934	994	2060
30	1620	1080	1050	2180	---	6070	7180	4370	1270	846	1060	1240
31	1470	---	e960	5640	---	6040	---	3800	---	818	878	---
TOTAL	46700	39030	48798	34523	82360	84440	91500	148740	117000	29223	37080	29473
MEAN	1506	1301	1574	1114	2941	2724	3050	4798	3900	942.7	1196	982.4
MAX	1730	1530	4850	5640	6690	9280	8000	12500	13700	1250	1480	2070
MIN	1200	1080	774	648	1650	1380	1590	2160	1270	671	703	606

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2002, BY WATER YEAR (WY)

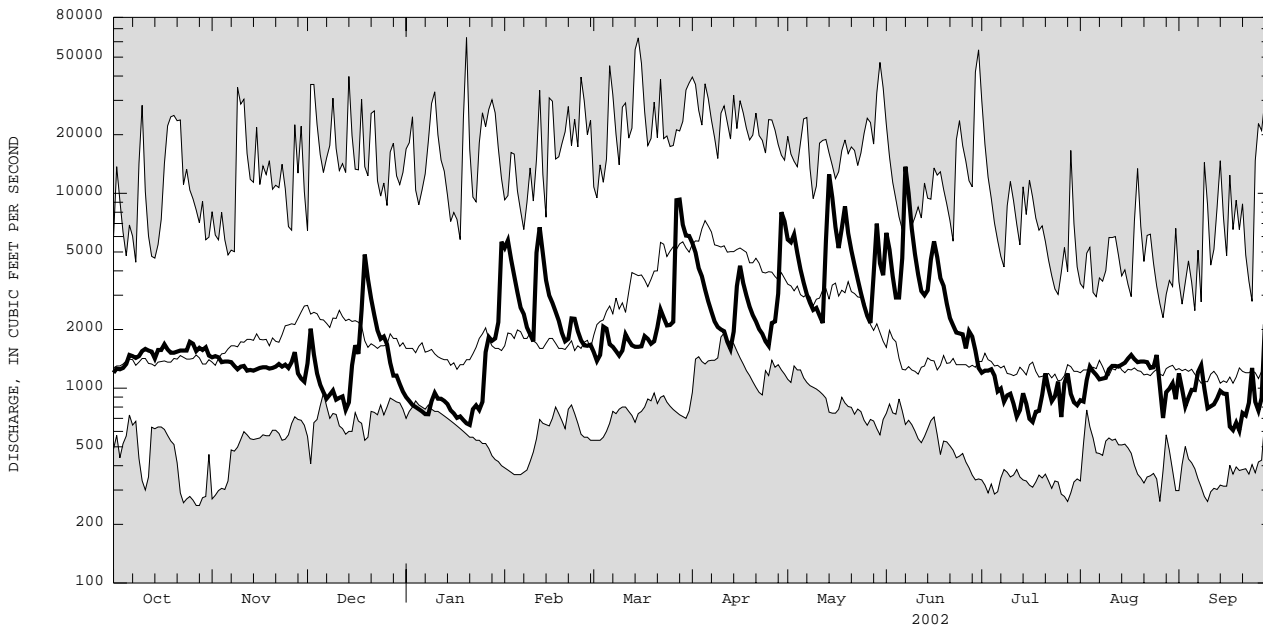
MEAN	1991	2688	3063	2723	2955	5089	6461	4073	2346	1617	1387	1474
MAX	7404	7448	11940	8335	9389	12050	16500	8615	6701	4087	3033	4186
(WY)	1978	1997	1997	1978	1976	1977	1993	1984	1972	1996	1994	1987
MIN	527	610	1114	687	712	1399	1878	1161	673	328	465	448
(WY)	1964	1965	1999	1977	1980	1981	1985	1965	1965	1965	1965	1965

e Estimated.

DELAWARE RIVER BASIN

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SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1964 - 2002	
ANNUAL TOTAL	810351		788867			
ANNUAL MEAN	2220		2161		2986	
HIGHEST ANNUAL MEAN					4650 1973	
LOWEST ANNUAL MEAN					1297 1965	
HIGHEST DAILY MEAN	25800	Apr 10	13700	Jun 7	63000	Jan 20 1996
LOWEST DAILY MEAN	744	May 15	606	Sep 20	250	Oct 27 1963
ANNUAL SEVEN-DAY MINIMUM	872	May 11	690	Sep 17	264	Oct 23 1963
10 PERCENT EXCEEDS	3770		4860		6630	
50 PERCENT EXCEEDS	1380		1530		1610	
90 PERCENT EXCEEDS	986		824		866	



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. Prior to October 1995, water-temperature recorder provided one-hour-interval readings. Prior to October 1975, water-temperature recorder provided continuous readings.**REMARKS.**--Interruption of record was due to malfunction of recording instrument.**EXTREMES FOR PERIOD OF DAILY RECORD.**--

WATER TEMPERATURES: Maximum (water years 1968-75, 1980-81, 1983, 1985-96, 1999-2001), 32.5°C, July 9, 10, 1993; minimum (water years 1968, 1977-2002), 0.0°C, on many days during winters, each year except water years 1980-82.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum recorded, 32.0°C, July 4; minimum, 0.0°C on many days during winter.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	17.5	13.5	15.0	10.5	8.0	9.0	10.5	8.5	9.5	0.5	0.0	0.0
2	18.0	14.0	16.0	10.5	8.5	9.5	9.0	8.0	8.5	0.5	0.0	0.0
3	19.0	15.0	17.0	12.5	10.0	11.0	9.0	7.0	7.5	1.0	0.0	0.0
4	20.0	16.0	18.0	13.0	10.5	11.5	8.0	6.0	7.0	0.5	0.0	0.0
5	20.0	16.5	18.5	11.0	9.0	10.0	8.5	6.5	7.5	0.5	0.0	0.0
6	18.0	16.0	17.5	10.0	8.0	8.5	9.5	6.5	7.5	0.5	0.0	0.0
7	16.0	13.0	14.5	9.0	7.0	8.0	9.0	6.5	7.5	0.0	0.0	0.0
8	14.0	11.0	12.5	8.5	6.5	7.5	6.5	4.0	5.5	0.0	0.0	0.0
9	13.0	10.0	11.5	8.0	6.0	7.0	5.0	4.0	4.5	0.0	0.0	0.0
10	14.0	10.0	12.0	8.0	5.5	6.5	4.5	3.0	3.5	0.0	0.0	0.0
11	15.5	11.5	13.5	6.5	5.0	5.5	5.0	3.0	4.0	0.5	0.0	0.0
12	16.5	13.5	15.0	5.5	3.5	4.5	4.0	2.5	3.5	0.5	0.0	0.0
13	18.0	15.0	16.5	6.0	3.0	4.5	4.5	3.5	4.0	0.5	0.0	0.0
14	17.0	16.0	16.5	6.0	3.0	4.5	5.0	4.0	4.5	0.5	0.0	0.0
15	17.5	15.5	16.5	7.0	4.5	5.5	5.0	3.5	4.0	0.5	0.0	0.0
16	16.0	14.5	15.0	8.5	5.5	6.5	4.0	3.0	3.5	0.5	0.0	0.0
17	14.5	11.5	13.5	8.5	6.0	7.0	3.5	3.0	3.0	0.5	0.0	0.0
18	13.0	10.5	11.5	8.5	5.5	6.5	3.5	3.0	3.5	0.5	0.0	0.0
19	12.0	9.5	11.0	8.0	6.0	7.0	4.0	3.0	3.5	0.0	0.0	0.0
20	12.5	10.0	11.0	7.5	5.5	6.5	4.0	3.0	3.5	0.0	0.0	0.0
21	13.5	10.5	12.0	7.0	4.5	5.5	3.5	2.5	3.0	0.0	0.0	0.0
22	14.0	12.0	13.0	6.0	3.5	5.0	3.0	1.5	2.0	0.0	0.0	0.0
23	14.0	13.0	13.5	6.0	3.5	5.0	2.0	1.0	1.5	0.0	0.0	0.0
24	16.5	14.0	15.0	6.0	4.5	5.0	2.5	1.5	2.0	0.0	0.0	0.0
25	16.5	14.0	15.0	8.0	6.0	7.0	2.0	1.0	1.5	1.0	0.0	0.0
26	14.0	11.5	13.5	9.5	7.5	8.5	1.5	0.0	0.5	0.5	0.0	0.0
27	11.5	9.5	11.0	9.0	8.0	8.5	0.5	0.0	0.0	0.5	0.0	0.0
28	10.5	8.5	9.5	10.0	8.5	9.0	0.5	0.0	0.0	0.5	0.0	0.0
29	10.0	7.0	---	9.0	8.5	9.0	0.0	0.0	0.0	0.5	0.0	0.0
30	10.5	8.0	9.0	9.5	8.5	9.0	0.0	0.0	0.0	0.5	0.0	0.0
31	8.5	8.0	8.5	---	---	---	0.5	0.0	0.0	0.0	0.0	0.0
MONTH	20.0	7.0	---	13.0	3.0	7.3	10.5	0.0	3.7	1.0	0.0	0.0

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	0.5	0.0	0.5	5.0	2.0	3.5	9.5	8.5	9.0	10.0	7.5	9.0
2	1.0	0.0	0.5	3.5	1.5	2.5	8.5	7.5	8.0	10.0	10.0	10.0
3	1.0	0.0	0.5	6.0	3.0	4.5	8.0	7.0	7.5	10.5	9.5	10.0
4	1.0	0.0	0.5	4.5	2.5	3.5	8.0	6.0	7.0	11.5	9.0	10.0
5	1.0	0.0	0.0	3.5	1.5	2.5	6.5	5.0	6.0	13.5	10.5	12.0
6	1.5	0.0	0.5	4.5	1.0	2.5	6.5	4.5	5.0	15.0	12.5	14.0
7	1.5	0.0	0.5	5.0	1.5	3.5	7.0	4.0	5.5	16.5	14.5	15.5
8	2.5	0.0	1.0	7.0	2.5	5.0	7.5	5.0	6.5	17.5	15.5	16.5
9	4.0	1.0	2.5	8.0	5.5	6.5	9.5	6.5	8.0	16.0	14.0	15.0
10	3.5	2.0	2.5	8.5	5.5	7.0	12.5	8.5	10.5	16.5	13.5	15.0
11	3.0	1.5	2.5	6.0	4.0	5.0	13.5	9.5	11.5	17.0	13.5	15.0
12	1.5	0.5	1.0	4.0	3.5	---	12.5	10.0	11.5	14.5	13.5	14.0
13	1.5	0.5	1.0	3.5	3.0	3.0	13.5	11.5	12.5	13.5	11.0	12.5
14	1.5	0.0	0.5	7.5	3.0	5.0	15.0	12.0	14.0	11.0	10.5	10.5
15	1.0	0.0	0.5	9.5	5.0	7.0	17.0	14.5	15.5	11.5	9.5	10.5
16	2.5	0.5	1.5	8.5	7.0	8.0	18.5	16.0	17.5	13.5	10.5	12.0
17	3.5	1.5	2.5	8.0	6.0	6.5	20.0	17.5	18.5	14.5	13.0	14.0
18	3.5	1.5	2.0	6.0	4.5	5.0	21.5	19.0	20.0	14.0	11.5	13.0
19	3.5	1.0	2.5	5.0	4.0	4.5	21.5	19.5	20.0	11.5	10.0	10.5
20	3.5	2.0	3.0	4.0	3.5	4.0	19.5	17.0	19.0	10.0	9.0	9.5
21	5.5	3.0	4.0	6.0	3.0	4.5	17.0	13.5	15.5	10.5	9.0	9.5
22	5.5	4.0	4.5	4.5	2.5	3.5	13.5	11.0	12.5	12.0	9.5	10.5
23	5.5	3.5	4.5	5.0	2.0	3.0	11.0	9.0	10.5	14.5	11.5	13.0
24	5.5	3.0	4.0	6.0	2.5	4.5	13.5	8.0	10.5	16.5	13.5	15.0
25	5.5	3.0	4.0	6.0	4.5	5.0	10.5	9.5	10.0	18.0	14.5	16.0
26	6.5	3.0	5.0	4.5	4.0	4.0	11.0	8.0	9.5	18.0	16.0	17.0
27	6.0	4.0	5.0	4.0	3.0	3.5	12.5	8.5	10.5	18.5	16.5	17.5
28	5.0	2.5	3.5	4.5	2.5	3.5	10.5	9.5	10.0	19.0	16.5	17.5
29	---	---	---	6.5	4.0	5.5	9.5	8.5	9.0	16.5	15.5	16.0
30	---	---	---	8.5	6.5	7.5	8.5	7.5	8.0	18.0	15.5	17.0
31	---	---	---	---	8.5	---	---	---	---	19.5	17.5	18.5
MONTH	6.5	0.0	2.2	---	1.0	---	21.5	4.0	11.3	19.5	7.5	13.4
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.0	18.0	18.5	28.0	24.0	26.0	30.0	24.5	27.0	20.5	19.0	19.5
2	18.5	17.0	18.0	29.0	24.5	27.0	30.5	25.5	27.5	21.0	18.5	19.5
3	18.5	17.0	17.5	31.5	26.5	28.5	30.5	25.5	28.0	24.5	19.0	22.0
4	19.0	17.0	18.0	32.0	27.5	---	29.5	25.0	27.0	27.0	21.5	24.0
5	20.5	17.0	18.5	29.5	25.0	27.5	28.0	25.0	26.0	25.0	21.0	22.5
6	19.0	17.5	18.5	26.5	23.0	24.5	26.0	22.0	24.0	25.0	19.5	22.0
7	17.5	15.5	16.5	27.0	21.5	24.0	23.5	20.5	22.0	24.0	19.5	21.5
8	17.0	15.5	16.0	28.0	22.0	25.0	24.0	19.5	22.0	24.5	19.5	21.5
9	18.5	16.0	17.0	27.0	23.5	25.0	25.0	19.0	22.0	25.5	19.5	22.5
10	20.0	17.5	19.0	28.5	23.5	25.5	25.5	20.0	22.5	26.0	21.0	23.5
11	22.0	19.5	21.0	27.0	21.5	24.0	26.0	20.5	23.5	23.5	19.5	22.0
12	22.0	21.0	21.5	27.0	21.0	24.0	26.0	21.5	24.0	22.5	17.5	20.0
13	21.0	19.5	20.5	26.5	22.0	24.0	27.5	22.5	24.5	23.0	17.0	19.5
14	19.5	17.0	18.5	26.0	22.5	24.0	27.5	23.0	25.0	22.5	17.5	20.0
15	17.0	16.0	16.5	28.0	23.0	25.0	26.5	22.5	24.5	21.0	20.0	20.5
16	17.0	15.0	16.0	---	24.0	---	26.0	23.0	24.5	22.5	20.0	21.0
17	18.0	16.0	17.0	---	---	---	26.0	23.0	24.5	23.5	19.0	21.0
18	20.0	17.0	18.5	---	---	---	26.5	23.0	24.5	22.5	19.0	20.5
19	21.0	18.5	19.5	---	---	---	26.5	22.5	24.5	22.5	19.5	21.0
20	23.0	19.5	21.0	---	---	---	25.5	22.5	24.0	23.5	20.0	22.0
21	24.0	20.5	22.5	---	---	---	26.0	21.0	23.5	23.5	21.5	22.5
22	25.5	21.5	23.5	---	---	---	23.5	21.0	22.5	24.0	22.0	22.5
23	26.0	23.0	24.5	30.0	25.0	26.5	24.5	21.0	22.5	23.0	20.0	21.5
24	26.0	23.0	24.5	30.0	24.0	26.5	22.5	20.5	21.0	22.5	18.5	20.5
25	27.0	23.5	25.0	28.5	24.0	25.5	23.0	19.5	21.0	21.0	17.5	19.0
26	27.0	24.0	25.5	24.5	22.0	23.5	24.5	19.5	22.0	18.5	17.0	18.0
27	27.0	24.5	25.5	25.0	21.5	23.0	24.5	20.5	22.5	17.0	16.5	17.0
28	26.0	24.0	25.0	25.5	22.5	23.5	24.0	21.0	22.0	17.5	16.0	17.0
29	27.0	22.5	24.5	29.5	23.0	25.5	21.5	19.5	20.0	18.0	15.5	16.5
30	28.0	23.0	25.5	29.5	24.5	26.5	22.5	19.0	20.0	19.5	15.5	17.0
31	---	---	---	---	23.5	---	23.5	19.0	21.0	---	---	---
MONTH	28.0	15.0	20.4	---	---	---	30.5	19.0	23.5	27.0	15.5	20.6