

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 sea level.

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. National Weather Service telephone gage-height telemeter at station. Information on the above reservoirs can be found in the annual Water Data Report NY-99-1.

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, 38,800 ft³/s, Jan. 24, gage height, 12.89 ft; minimum, 630 ft³/s, Oct. 1, Sept. 9, gage height, 2.33 ft.

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	669	1220	954	e720	e2000	1820	4490	1520	1500	1100	1540	1130
2	829	1310	910	e880	3100	2330	4450	1380	1330	883	1640	1140
3	1300	1280	987	e1000	6360	1900	4310	1300	1360	898	1710	1100
4	1300	1310	1020	e1100	5960	6620	4070	1240	1260	1010	1680	1290
5	1050	1300	1110	e1300	4890	8270	3840	1240	1080	1020	1570	1340
6	1010	1300	1030	e1600	4110	5460	3350	1190	984	1290	1460	1050
7	997	1330	1100	e1100	3580	4420	2990	1110	954	1200	1510	808
8	1120	1300	1070	e1200	3250	e3000	2690	1150	990	1540	1510	749
9	1850	1380	1010	e1300	2870	e2700	2470	1580	999	1140	1470	759
10	1700	1300	1330	1400	2560	e2600	2790	1540	1020	996	1500	1020
11	1230	1090	1130	2420	2360	e2300	2500	1270	1070	1140	1500	1160
12	1120	977	1160	2000	2360	e2000	2460	1140	1080	1060	1600	1220
13	925	1550	1070	1520	3770	e1800	2920	1050	1050	979	1620	1210
14	803	1290	1130	e1300	3520	e1800	2720	993	944	1040	1700	1080
15	940	1210	1060	e1200	e2500	1800	2330	943	983	1220	1750	1070
16	1100	1140	1200	e1300	e2500	1730	2170	894	943	1270	1290	1540
17	886	1190	1100	1510	2690	1760	2370	847	784	1350	1150	12400
18	803	1220	1240	1850	2530	2230	2810	897	827	1320	999	6520
19	912	1180	1130	e7000	2480	2770	2630	1220	1150	1150	1150	3110
20	1010	1240	1200	7190	2230	2610	2450	1710	1180	1180	1170	1870
21	1050	1400	1070	4960	1970	2320	2300	1730	1010	1200	1360	1470
22	1170	1400	1220	4220	e1300	5550	2090	1220	952	1290	1370	2140
23	1250	1180	e1400	4840	e1100	7270	2100	1120	915	1320	1230	3550
24	1250	1180	e1300	18100	e1200	5660	3190	2100	908	1410	1100	2630
25	1420	1120	e1200	25900	e1400	5130	2940	5560	958	1510	1110	1860
26	1350	1240	1050	11300	1460	4630	2510	4820	1060	1280	1150	1430
27	1430	1440	e1100	7280	1310	4240	2280	3660	1290	1300	1160	1190
28	1340	1750	e1200	5560	1280	4280	2050	2940	1010	1310	1370	1050
29	1230	1070	e1200	4560	---	4570	1860	2360	893	1290	1310	960
30	1210	1050	e1000	3700	---	4890	1670	1930	1010	1370	1110	1030
31	1170	---	e860	e2600	---	4760	---	1640	---	1600	1040	---
TOTAL	35424	37947	34541	131910	76640	113220	83800	53294	31494	37666	42829	58876
MEAN	1143	1265	1114	4255	2737	3652	2793	1719	1050	1215	1382	1963
MAX	1850	1750	1400	25900	6360	8270	4490	5560	1500	1600	1750	12400
MIN	669	977	860	720	1100	1730	1670	847	784	883	999	749

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1999, BY WATER YEAR (WY)

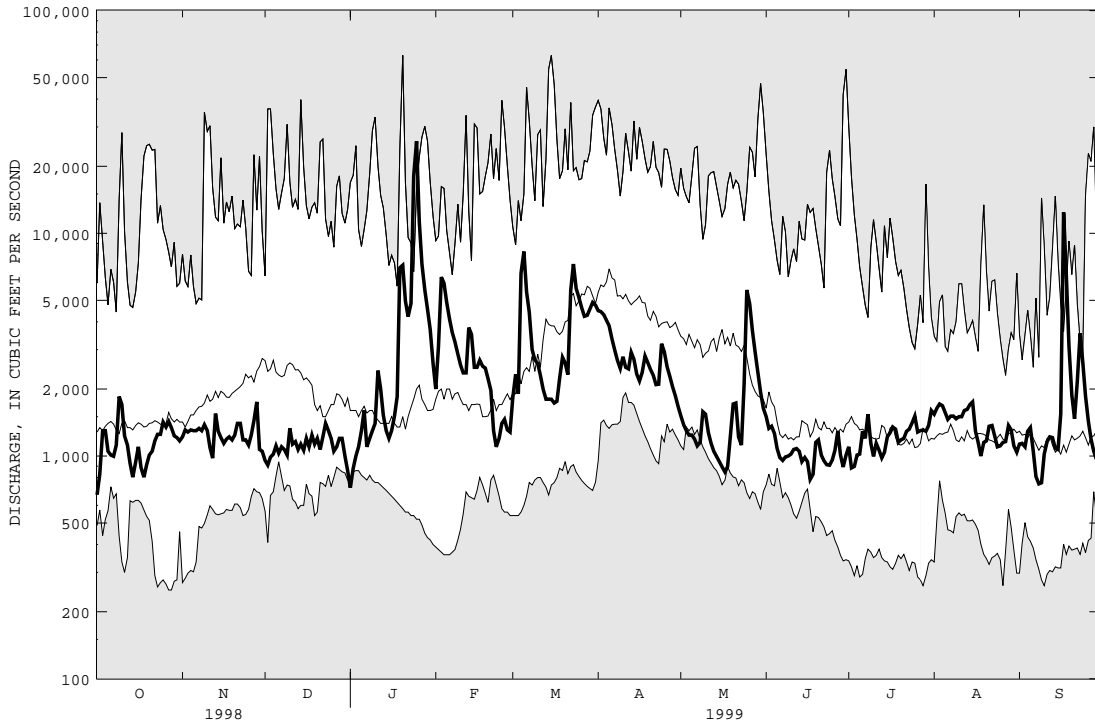
MEAN	2024	2779	3109	2840	2980	5119	6432	4037	2233	1651	1392	1497
MAX	7404	7448	11940	8335	9389	12050	16500	8615	6701	4087	3033	4186
(WY)	1978	1997	1997	1978	1976	1977	1993	1984	1972	1996	1994	1987
MIN	527	610	1114	687	712	1399	1878	1161	673	328	465	448
(WY)	1964	1965	1999	1977	1980	1981	1985	1965	1965	1965	1965	1965

e Estimated.

DELAWARE RIVER BASIN

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SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1964 - 1999	
ANNUAL TOTAL	1303738		737641			
ANNUAL MEAN	3572		2021		3006	
HIGHEST ANNUAL MEAN					4650	1973
LOWEST ANNUAL MEAN					1297	1965
HIGHEST DAILY MEAN	28900	Jan 9	25900	Jan 25	63000	Jan 20 1996
LOWEST DAILY MEAN	613	Sep 10	669	Oct 1	250	Oct 27 1963
ANNUAL SEVEN-DAY MINIMUM	889	Jul 26	910	Oct 13	264	Oct 23 1963
10 PERCENT EXCEEDS	8330		4090		6620	
50 PERCENT EXCEEDS	1480		1300		1630	
90 PERCENT EXCEEDS	1030		984		860	



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

DELAWARE RIVER BASIN

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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), 32.5°C, July 9, 10, 1993; minimum (water years 1968, 1977-99), 0.0°C, on many days during winter periods, each year except water years 1980-82.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURES: Maximum, 31.5°C, July 5, 6; minimum, 0.0°C on many days during winter period.

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	19.5	15.0	17.5	9.5	8.5	9.0	8.5	5.5	6.5	.5	.0	.0
2	17.0	13.5	15.0	10.0	8.5	9.0	8.0	4.5	6.0	.0	.0	.0
3	14.5	13.0	14.0	10.0	7.5	8.5	8.0	5.0	6.5	.0	.0	.0
4	15.5	12.5	13.5	8.5	6.5	7.5	9.5	6.0	7.0	.0	.0	.0
5	16.5	11.5	14.0	8.5	6.5	7.5	7.5	7.0	7.0	.5	.0	.0
6	15.5	11.5	13.5	7.5	6.5	7.0	9.0	7.0	8.0	.0	.0	.0
7	13.5	12.5	13.0	7.0	5.5	6.5	9.5	7.5	8.5	.5	.0	.0
8	14.0	13.0	13.5	7.0	6.0	6.5	8.0	7.0	7.5	.0	.0	.0
9	14.0	13.5	13.5	8.5	6.5	7.0	8.0	6.0	7.0	.0	.0	.0
10	14.5	13.5	14.0	7.5	6.5	7.0	6.5	5.0	5.5	.5	.0	.0
11	14.5	14.0	14.0	10.5	7.5	8.5	5.0	3.5	4.0	.0	.0	.0
12	15.5	13.5	14.5	9.0	7.0	7.5	4.0	2.5	3.0	.0	.0	.0
13	16.0	14.0	15.0	7.0	6.0	6.5	3.0	1.5	2.0	2.5	.0	.5
14	18.0	14.5	15.5	8.0	5.5	6.5	3.0	1.0	1.5	.0	.0	.0
15	15.0	13.5	14.5	8.5	6.5	7.0	2.5	.0	1.0	.0	.0	.0
16	16.5	13.0	14.5	7.5	6.0	7.0	1.0	.0	1.0	.0	.0	.0
17	16.0	12.5	14.0	7.0	6.5	7.0	1.5	1.0	1.0	4.5	.0	1.0
18	16.5	13.0	14.5	8.0	6.0	6.5	2.0	.5	1.0	3.0	1.0	2.0
19	17.5	14.5	15.5	6.0	5.0	5.5	1.5	.5	1.0	3.0	2.0	2.5
20	16.5	13.0	14.0	6.0	5.0	5.5	2.5	1.5	2.0	3.0	2.0	2.5
21	13.5	11.5	12.0	6.5	5.0	5.5	3.5	2.5	3.0	2.5	2.0	2.5
22	11.5	10.0	10.5	7.0	4.5	5.5	4.5	1.5	3.5	3.0	2.5	2.5
23	12.0	9.0	10.5	7.5	4.5	6.0	2.0	.5	1.0	3.5	3.0	3.0
24	13.0	8.5	10.5	7.5	5.0	6.0	1.0	.0	.5	3.5	3.0	3.5
25	13.0	9.5	11.0	7.0	4.5	5.5	1.5	.0	.5	4.5	3.0	3.5
26	13.0	11.0	12.0	6.5	5.5	6.0	1.0	.0	.0	3.5	2.0	2.0
27	12.5	12.0	12.0	6.0	5.5	5.5	2.0	.0	.5	2.0	1.0	1.5
28	12.5	11.5	12.0	6.5	4.5	5.5	1.5	1.5	1.5	2.5	1.5	2.0
29	12.0	10.5	11.5	7.0	4.5	5.5	2.0	.0	1.0	3.0	1.5	2.0
30	12.5	9.5	10.5	7.0	6.0	6.0	1.5	.0	1.0	1.5	.5	1.5
31	11.0	8.5	9.5	---	---	---	.0	.0	.0	1.0	.0	.5
MONTH	19.5	8.5	13.5	10.5	4.5	6.5	9.5	.0	3.0	4.5	.0	1.0

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WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1.0	.0	.5	2.5	1.5	2.0	9.0	7.5	8.5	18.5	13.0	16.0
2	1.0	.0	.5	4.0	1.5	2.5	9.5	9.0	9.0	19.0	14.0	16.5
3	1.5	.0	1.0	4.5	2.0	3.5	11.0	9.5	10.0	16.5	15.0	15.5
4	2.5	1.5	2.0	4.5	2.5	3.5	11.5	10.5	11.0	16.5	14.5	15.0
5	2.5	1.5	2.0	2.5	1.5	2.5	12.5	10.0	11.0	20.0	15.0	17.0
6	2.0	1.0	1.5	2.0	1.5	1.5	11.5	10.0	10.5	19.5	17.0	18.0
7	1.5	1.0	1.5	1.5	.5	.5	13.0	10.0	11.0	17.5	16.5	17.0
8	2.5	1.0	1.5	2.0	.0	.5	14.5	11.0	12.5	17.5	16.0	16.5
9	2.5	1.0	1.5	1.0	.5	.5	12.5	10.5	11.5	17.5	15.5	16.0
10	3.0	1.0	2.0	1.5	.5	.5	12.5	9.5	11.0	19.0	14.5	16.5
11	4.0	1.5	2.5	2.5	.0	1.0	10.0	8.0	9.0	20.0	14.5	17.5
12	4.0	2.5	3.0	1.5	.5	.5	10.0	7.5	8.5	21.0	15.5	18.5
13	3.5	2.0	2.5	3.0	.5	1.5	10.0	7.5	8.5	22.0	16.5	19.0
14	4.0	1.0	2.0	2.5	.5	1.5	11.0	8.0	9.5	22.5	16.5	19.5
15	5.0	.5	2.5	3.5	1.0	2.0	11.5	8.5	10.0	22.5	17.0	19.5
16	8.0	4.0	6.0	5.0	1.5	3.0	10.0	9.0	9.5	22.5	17.0	19.5
17	7.0	5.0	5.5	7.0	2.5	4.5	9.5	8.0	8.5	22.5	17.5	20.0
18	6.5	5.0	5.5	7.5	4.5	5.5	10.0	8.0	9.0	23.0	18.5	20.5
19	8.0	4.5	6.0	6.5	5.0	5.5	11.0	8.5	9.5	21.0	19.0	20.0
20	6.5	4.0	5.5	7.0	4.5	5.5	10.5	9.0	9.5	21.0	17.5	19.0
21	4.0	2.0	3.5	5.0	4.0	4.5	11.5	8.5	9.5	21.0	16.5	19.0
22	2.5	.0	1.5	4.0	3.0	3.5	11.0	9.5	10.5	21.5	17.5	19.5
23	2.0	.0	1.0	4.0	2.0	3.0	10.5	9.5	10.0	19.5	18.0	18.5
24	2.0	.5	1.0	4.0	3.0	3.5	11.0	8.5	9.5	18.5	17.0	18.0
25	2.5	.5	1.0	5.0	3.5	4.5	11.5	8.5	10.0	17.0	15.0	15.5
26	3.0	.5	1.5	6.0	4.0	5.0	13.0	9.5	11.0	15.0	14.0	14.5
27	3.5	.5	1.5	7.0	4.5	5.5	14.0	10.0	12.0	16.0	13.5	14.5
28	2.0	1.5	1.5	7.0	6.0	6.5	15.0	11.0	13.0	17.5	14.5	16.0
29	---	---	---	9.0	6.5	7.5	16.0	12.0	14.0	20.0	15.5	17.5
30	---	---	---	9.0	7.0	8.0	17.5	12.0	14.5	22.5	17.5	20.0
31	---	---	---	9.5	7.0	8.0	---	---	---	24.0	19.0	21.5
MONTH	8.0	.0	2.5	9.5	.0	3.5	17.5	7.5	10.5	24.0	13.0	18.0
	JUNE			JULY			AUGUST			SEPTEMBER		
1	24.5	21.0	22.5	25.5	23.0	24.0	26.0	22.5	24.0	24.0	19.5	21.5
2	25.5	22.0	23.5	27.0	24.0	25.0	25.0	21.0	23.0	24.5	20.0	22.0
3	24.0	22.0	23.0	29.5	24.5	26.5	23.5	20.0	21.5	25.5	21.0	23.0
4	25.0	20.5	22.5	30.0	25.5	27.5	22.5	19.0	20.5	25.5	22.0	23.5
5	24.5	20.0	22.0	31.5	27.0	29.0	22.5	19.0	21.0	24.5	22.5	23.5
6	25.0	19.5	22.5	31.5	27.5	29.5	23.5	19.0	21.0	27.0	22.5	24.5
7	27.5	22.0	24.5	30.0	27.0	28.5	23.5	19.5	21.5	24.5	23.5	24.0
8	28.5	24.0	26.0	27.5	24.5	26.0	23.0	20.0	21.0	25.5	23.0	24.0
9	28.0	23.5	26.0	25.0	23.0	24.0	22.0	18.5	20.5	26.5	23.5	25.0
10	26.0	22.5	24.0	25.5	22.5	23.5	20.5	17.5	19.0	25.0	23.0	24.0
11	26.0	21.0	23.5	25.0	20.5	23.0	20.5	17.5	19.0	26.0	21.5	23.0
12	26.0	21.0	23.5	24.5	20.5	22.5	22.0	18.0	20.0	25.5	20.5	22.5
13	26.0	23.0	24.5	26.0	21.5	23.5	21.5	19.0	20.5	24.5	20.5	22.0
14	25.0	23.0	23.5	25.0	21.5	23.0	22.5	20.0	21.0	23.0	20.5	21.5
15	26.0	22.0	23.5	26.0	21.0	23.5	22.0	19.5	20.5	22.0	20.5	21.0
16	24.5	20.0	22.0	27.0	22.5	25.0	23.5	18.5	21.0	20.5	17.0	19.0
17	21.5	19.0	20.5	27.5	23.5	25.5	25.0	20.0	22.5	17.5	15.5	16.0
18	24.5	18.5	21.0	28.0	24.0	26.0	24.5	21.5	23.0	17.0	15.0	16.0
19	23.5	18.5	21.5	26.5	24.0	25.0	25.0	21.0	23.0	18.0	16.0	17.0
20	24.5	20.0	22.0	27.5	23.5	25.0	22.5	20.0	21.5	18.5	16.5	17.5
21	25.0	20.0	22.5	25.5	23.0	24.0	20.0	18.0	19.0	18.0	16.5	17.5
22	26.0	21.0	23.5	24.5	22.0	23.0	19.5	17.5	18.0	16.5	14.0	15.5
23	---	---	---	26.0	21.5	24.0	21.0	16.5	19.0	15.5	13.5	14.5
24	---	---	---	25.5	22.5	24.0	22.5	18.0	20.5	17.0	14.0	15.5
25	26.0	23.0	24.0	26.0	22.5	24.0	24.0	20.0	22.0	18.5	15.5	17.0
26	28.5	23.0	25.5	26.5	21.5	24.0	22.0	21.0	21.5	19.5	15.5	17.5
27	27.5	23.5	25.5	26.5	21.5	24.0	23.0	20.5	21.5	19.0	16.5	17.5
28	26.5	24.0	25.5	27.0	22.0	24.5	25.0	21.0	23.0	19.5	17.5	18.5
29	28.0	24.5	26.0	26.5	22.0	24.5	25.5	22.0	23.0	20.0	18.5	19.0
30	26.0	23.0	24.5	26.5	22.5	24.0	24.0	20.0	22.0	20.5	17.5	19.0
31	---	---	---	25.5	22.5	24.0	23.5	19.0	21.5	---	---	---
MONTH	---	---	---	31.5	20.5	25.0	26.0	16.5	21.0	27.0	13.5	20.0