

## DELAWARE RIVER BASIN

## 01438500 DELAWARE RIVER AT MONTAGUE, NJ

**LOCATION**--Lat 41°18'33", long 74°47'43", Pike County, PA, Hydrologic Unit 02040104, on right bank 1,500 ft upstream from toll bridge (on U.S. Route 206) between Montague, NJ and Milford, PA, 0.8 mi downstream from Sawkill Creek, and at river mile 246.3.

**DRAINAGE AREA**--3,480 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

**PERIOD OF RECORD**--March 1936 to September 1939 (gage heights only, published as "at Milford, PA"). October 1939 to current year. Monthly discharge only for some periods, published in WSP 1302.

**REVISED RECORDS**--WDR-NJ-81-2: 1980.

**GAGE**--Water-stage recorder. Datum of gage is 369.93 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 9, 1940, nonrecording gage on upstream side of left span of subsequently dismantled bridge at present site at datum 70 ft lower.

**REMARKS**--Records good except those for estimated daily discharges, which are fair. Diurnal fluctuation at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack (station 01431700), Cliff Lake, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, and Neversink Reservoirs. Information on the above lakes and reservoirs can be found in the annual Water-Data Report NJ-03-1. Several measurements of water temperature were made during the year. Satellite telemetry at station.

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	1,800	3,580	4,960	6,760	e3,440	e5,150	18,700	5,720	9,560	5,600	2,630	2,120
2	1,460	3,480	5,100	14,500	e3,120	e4,470	16,300	5,450	19,700	5,140	3,040	10,700
3	1,410	3,320	4,790	17,600	e3,260	e4,720	15,500	8,600	15,000	4,500	3,680	26,400
4	1,560	3,020	4,260	13,500	e3,710	e5,200	14,400	9,800	12,800	3,930	3,690	28,500
5	2,030	2,810	3,990	11,300	e3,650	e4,990	14,000	8,530	11,900	3,710	5,640	34,100
6	1,990	2,960	3,860	9,810	e4,190	e4,790	14,000	7,510	10,700	3,630	7,140	21,300
7	1,850	4,360	3,750	8,810	e4,470	e4,940	13,400	6,760	9,590	3,490	7,330	15,200
8	1,960	4,230	3,250	8,130	e3,990	e4,650	12,800	6,030	11,100	3,190	5,720	11,800
9	1,830	3,800	3,210	7,820	e3,740	e4,140	12,000	5,710	9,860	3,070	5,590	9,530
10	1,890	3,180	e2,910	7,400	e3,650	4,360	11,300	4,990	8,410	2,910	6,120	7,850
11	2,410	3,100	3,510	6,730	e3,570	4,390	11,300	4,450	7,340	2,800	6,340	6,910
12	8,080	3,190	4,250	6,310	e3,300	3,930	12,100	4,540	7,440	4,080	12,200	5,720
13	12,600	4,480	4,770	e5,680	e2,960	4,030	11,500	5,960	9,440	3,180	11,000	4,570
14	8,980	5,750	6,520	e5,160	e3,090	3,990	10,400	5,640	11,300	2,470	9,510	4,030
15	6,490	5,000	8,780	e4,540	e3,010	3,880	9,550	5,400	15,300	e2,770	8,560	4,560
16	5,700	4,870	8,700	e4,530	e2,270	3,980	8,640	5,030	12,100	2,500	7,100	12,500
17	19,000	8,490	7,590	e3,880	e1,940	7,180	7,930	4,740	9,790	2,400	5,360	11,400
18	17,100	15,100	6,590	e3,380	e2,240	13,800	7,230	4,280	8,530	2,640	4,730	9,020
19	10,900	14,200	5,730	e3,480	e2,860	24,800	6,530	3,930	7,970	2,500	4,350	8,510
20	8,230	11,300	6,310	e3,390	e3,100	23,200	5,740	3,780	7,020	2,000	3,960	8,260
21	6,590	9,970	10,500	e3,360	e2,740	38,000	5,450	3,710	11,200	2,030	3,600	6,820
22	5,480	9,540	11,000	e3,040	e3,060	49,900	5,750	3,530	20,500	2,850	3,320	5,660
23	4,700	10,700	9,350	e3,120	e4,550	46,400	5,720	3,420	21,600	4,690	2,980	11,700
24	3,820	10,700	8,350	e3,360	e6,230	34,400	5,510	3,260	16,600	5,260	2,250	26,200
25	3,620	9,250	7,690	e3,410	e6,810	26,700	4,950	3,190	12,300	4,260	2,040	17,400
26	4,050	8,070	7,120	e3,610	e6,220	23,700	4,720	4,300	10,300	3,460	2,680	13,600
27	6,420	7,390	7,330	e3,420	e6,050	21,700	6,160	6,100	8,840	2,980	2,500	11,200
28	5,600	6,690	7,060	e3,090	e5,930	18,400	7,820	5,620	7,970	3,350	2,460	12,100
29	4,670	5,680	6,810	e3,330	---	16,700	6,880	5,250	6,750	3,460	1,960	18,600
30	4,190	5,180	5,930	e3,530	---	22,400	6,190	4,840	6,100	3,210	2,410	15,300
31	3,850	---	5,940	e3,500	---	22,200	---	4,400	---	3,090	2,150	---
TOTAL	170,260	193,390	189,910	189,480	107,150	461,880	292,470	164,470	337,010	105,150	152,040	381,560
MEAN	5,492	6,446	6,126	6,112	3,827	14,900	9,749	5,305	11,230	3,392	4,905	12,720
MAX	19,000	15,100	11,000	17,600	6,810	49,900	18,700	9,800	21,600	5,600	12,200	34,100
MIN	1,410	2,810	2,910	3,040	1,940	3,880	4,720	3,190	6,100	2,000	1,960	2,120

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	3,311	5,012	6,089	5,763	5,889	9,941	11,770	7,356	4,579	3,045	2,613	2,793
MAX	15,690	11,760	18,830	15,600	15,120	24,480	31,560	16,090	15,200	11,220	14,230	12,720
(WY)	(1956)	(1952)	(1997)	(1996)	(1976)	(1945)	(1940)	(1943)	(1972)	(1945)	(1955)	(2003)
MIN	807	995	1,665	1,318	1,748	3,191	3,322	2,215	1,214	864	715	892
(WY)	(1942)	(1965)	(1999)	(1981)	(1980)	(1981)	(1985)	(1965)	(1965)	(1954)	(1954)	(1941)

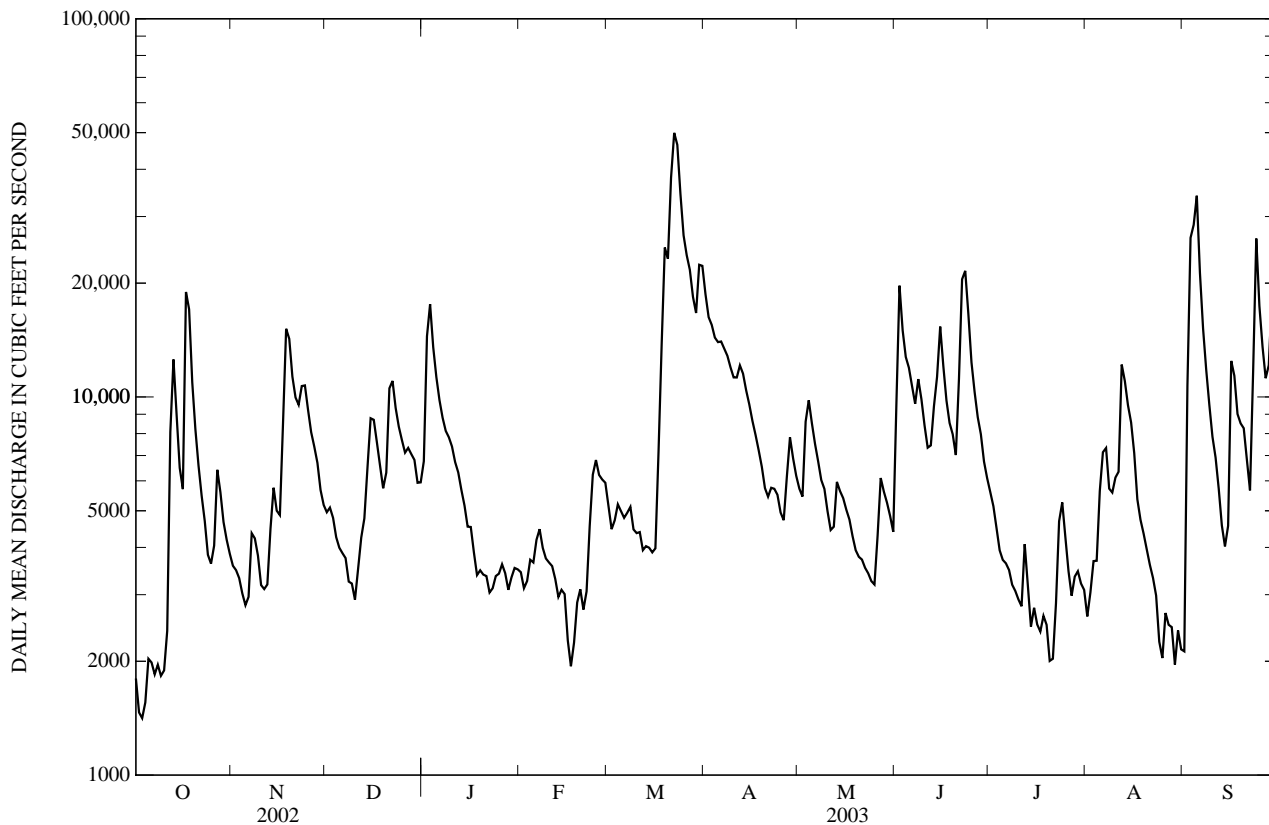
e Estimated.

DELAWARE RIVER BASIN

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SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	1,673,524		2,744,770		5,675	
ANNUAL MEAN	4,585		7,520		8,621	
HIGHEST ANNUAL MEAN					2,309	
LOWEST ANNUAL MEAN					1965	
HIGHEST DAILY MEAN	23,800	May 14	49,900	Mar 22	187,000	Aug 19, 1955
LOWEST DAILY MEAN	943	Jan 21	1,410	Oct 3	412	Aug 23, 1954
ANNUAL SEVEN-DAY MINIMUM	1,050	Jan 16	1,730	Oct 1	565	Jul 1, 1965
MAXIMUM PEAK FLOW			51,100	Mar 22	250,000a	Aug 19, 1955
MAXIMUM PEAK STAGE			16.03	Mar 22	35.15	Aug 19, 1955
INSTANTANEOUS LOW FLOW			1,210	Oct 3	382	Aug 24, 1954
10 PERCENT EXCEEDS	9,340		14,400		12,000	
50 PERCENT EXCEEDS	3,370		5,600		3,430	
90 PERCENT EXCEEDS	1,620		2,860		1,600	

a From rating curve extended above 90,000 ft<sup>3</sup>/s on basis of flood-routing study.



## DELAWARE RIVER BASIN

## 01438500 DELAWARE RIVER AT MONTAGUE, NJ--Continued

## WATER-QUALITY RECORDS

**PERIOD OF RECORD.**--Water years 1956-73, 1976-78, July 1991 to current year.

**COOPERATION.**--Field data and samples for laboratory analyses were provided by the New Jersey Department of Environmental Protection. Determination of dissolved ammonia, total ammonia, dissolved nitrite, dissolved orthophosphate, biochemical oxygen demand, total suspended solids, fecal coliform, E. coli, and enterococcus bacteria was performed by the New Jersey Department of Health and Senior Services, Public Health and Environmental Laboratories, Environmental and Chemical Laboratory Services. Determination of chlorophyll a was performed by the New Jersey Department of Environmental Protection, Bureau of Freshwater and Biological Monitoring Laboratory.

**COOPERATIVE NETWORK SITE DESCRIPTOR.**-- Delaware River Main Stem, New Jersey Department of Environmental Protection Watershed Management Area 1.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfltrd field, NTU (61028)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd $\mu$ S/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)
Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
Date	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Particulate nitrogen, susp, water, mg/L (49570)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)
NOV 19...	1230	14,000	4.6	0.146	0.112	758	12.2	97	6.7	71	3.0	5.5	17
MAR 12...	1230	3,740	1.2	0.067	0.051	753	13.2	95	7.2	112	7.0	1.3	23
JUN 09...	1200	10,100	3.5	0.118	0.090	748	9.7	98	7.2	80	22.0	15.2	19
SEP 03...	1130	27,300	49	0.219	0.168	756	8.5	88	7.1	62	19.0	16.5	17
NOV 19...	5.13	1.09	0.75	5.13	E10	7.63	<0.17	3.5	7.2	--	44	7	0.27
MAR 12...	6.95	1.42	0.64	9.17	13	17.3	<0.17	2.7	8.4	56	65	1	0.14
JUN 09...	5.79	1.18	0.67	6.42	12	10.3	<0.17	2.8	6.6	42	46	6	0.17
SEP 03...	5.35	0.910	1.12	4.24	12	6.79	<0.17	3.1	5.3	35	54	63	0.30
NOV 19...	0.030	<0.030	0.17	<0.003	<0.020	0.08	0.012	0.030	0.44	0.53	0.7	<0.1	0.7
MAR 12...	<0.030	<0.030	0.34	<0.003	<0.020	0.05	0.006	0.010	0.48	0.53	0.3	<0.1	0.3
JUN 09...	<0.030	<0.030	0.18	<0.003	<0.020	0.06	0.011	0.029	0.35	0.41	0.6	<0.1	0.6
SEP 03...	0.022	0.033	0.18	<0.003	<0.020	0.37	0.024	0.132	0.49	0.86	3.3	<0.1	3.3

## DELAWARE RIVER BASIN

## 01438500 DELAWARE RIVER AT MONTAGUE, NJ--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Organic carbon, water, fltrd, mg/L (00681)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Chlorophyll a fluorometric method, corrcrtd µg/L (32209)	Boron, water, fltrd, µg/L (01020)
NOV 19...	3.9	E1.1	--	<13
MAR 12...	2.4	E1.8	--	E6.2
JUN 09...	3.0	E1.9	3.10	10
SEP 03...	5.8	E1.9	10.2	11

Remark codes used in this table:

&lt; -- Less than

E -- Estimated value

## WATER-COLUMN BACTERIA ANALYSES

Samples were collected synoptically over a 30-day period during the summer.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Enterococci, m-E MF, water, col/ 100 mL (31649)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli-form, ECbroth water, MPN/ 100 mL (31615)	Date	Time	Enterococci, m-E MF, water, col/ 100 mL (31649)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli-form, ECbroth water, MPN/ 100 mL (31615)
MAY 15...	0840	<10	<100	<20	JUN 05...	0845	50	700	<20
22...	0900	10	<100	220	12...	0815	320	100	<20
29...	0810	1,400	<100	<20					

Remark codes used in this table:

&lt; -- Less than