

## 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 NGVD 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 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, Cliff Lake, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, and Neversink Reservoirs. Information on the above lakes and reservoir can be found in the annual Water-Data Report NJ-04-1. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

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	12,400	24,200	16,000	12,100	e3,000	2,000	8,030	7,420	4,770	1,840	5,040	8,820
2	10,600	18,400	13,700	11,100	e2,750	2,530	9,860	6,640	5,480	1,720	5,570	6,560
3	9,250	15,600	12,000	10,200	e2,900	4,330	9,450	8,320	5,640	1,610	5,110	5,130
4	7,750	13,500	10,800	11,400	e3,100	7,760	8,270	10,800	5,540	1,720	4,280	4,240
5	8,140	12,200	9,930	18,100	e2,900	10,200	7,990	9,170	4,790	1,770	3,780	3,350
6	8,710	12,900	9,480	19,000	e2,850	12,200	7,750	8,940	4,230	1,810	3,990	2,920
7	7,360	12,000	9,000	15,300	e3,150	19,400	6,880	8,820	4,420	2,170	3,620	2,820
8	6,830	10,100	7,950	12,700	e2,900	17,400	6,200	7,880	4,230	2,340	2,520	3,180
9	6,100	8,810	7,130	e10,500	e2,700	14,600	6,080	6,790	3,950	2,230	2,220	7,110
10	5,620	8,120	6,790	e7,500	e2,850	12,200	5,610	6,940	3,870	2,080	2,470	14,200
11	5,210	7,780	15,200	e6,100	e3,000	10,600	4,700	7,960	3,290	1,870	2,550	11,800
12	4,760	7,690	43,600	e7,250	e2,900	9,710	4,200	9,110	3,040	1,730	2,890	8,780
13	4,450	8,190	29,400	e7,850	e2,900	8,590	5,450	9,880	2,260	2,010	32,200	6,980
14	4,450	7,450	21,600	e7,200	e2,900	7,300	9,400	9,720	2,050	2,170	28,900	5,940
15	7,390	6,830	18,300	e5,650	e2,450	6,740	11,100	8,100	2,210	2,390	16,300	5,290
16	11,500	6,520	15,800	e4,500	e2,150	7,060	9,510	6,850	2,080	3,400	13,600	4,730
17	9,310	6,020	14,100	e5,000	e2,350	6,430	8,290	6,900	2,150	3,300	15,200	4,700
18	7,790	5,710	16,400	e5,450	e2,600	5,970	7,050	6,510	2,700	2,540	13,000	81,700
19	6,700	5,930	15,000	e5,450	e2,500	5,620	6,470	6,360	2,750	2,660	10,500	116,000
20	6,850	21,900	12,900	e5,200	e2,500	5,260	6,180	5,910	2,300	3,510	9,140	49,200
21	6,920	30,700	11,800	e4,600	e2,700	5,160	5,870	5,170	1,760	3,070	8,690	31,000
22	6,520	22,900	10,400	e4,350	2,430	6,040	5,450	4,470	1,910	2,750	10,300	22,100
23	6,190	18,200	9,790	e3,900	2,230	5,780	5,450	3,650	1,840	2,680	8,710	16,800
24	5,800	14,900	14,000	e3,550	2,490	5,250	6,430	3,750	1,820	4,510	6,710	13,900
25	5,260	13,500	38,600	e3,350	2,410	5,580	5,960	4,350	1,790	4,430	5,700	12,300
26	4,500	12,500	32,000	e3,350	2,190	6,050	6,060	3,950	1,740	3,360	5,280	9,850
27	6,950	10,700	24,000	e3,250	2,140	6,330	11,600	4,660	1,730	3,010	4,790	e7,650
28	28,500	10,000	19,100	e3,200	2,060	8,130	10,700	6,140	1,930	10,700	4,490	e10,500
29	36,000	17,700	15,900	e3,350	1,870	8,730	9,160	6,300	1,780	11,800	3,980	20,100
30	49,900	19,300	14,000	e3,300	---	8,390	8,290	5,770	1,700	9,780	4,420	18,500
31	34,300	---	13,200	e3,250	---	8,010	---	4,860	---	6,350	8,020	---
TOTAL	342,010	390,250	507,870	227,000	75,870	249,350	223,440	212,090	89,750	107,310	253,970	516,150
MEAN	11,030	13,010	16,380	7,323	2,616	8,044	7,448	6,842	2,992	3,462	8,193	17,200
MAX	49,900	30,700	43,600	19,000	3,150	19,400	11,600	10,800	5,640	11,800	32,200	116,000
MIN	4,450	5,710	6,790	3,200	1,870	2,000	4,200	3,650	1,700	1,610	2,220	2,820

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2004, BY WATER YEAR (WY)

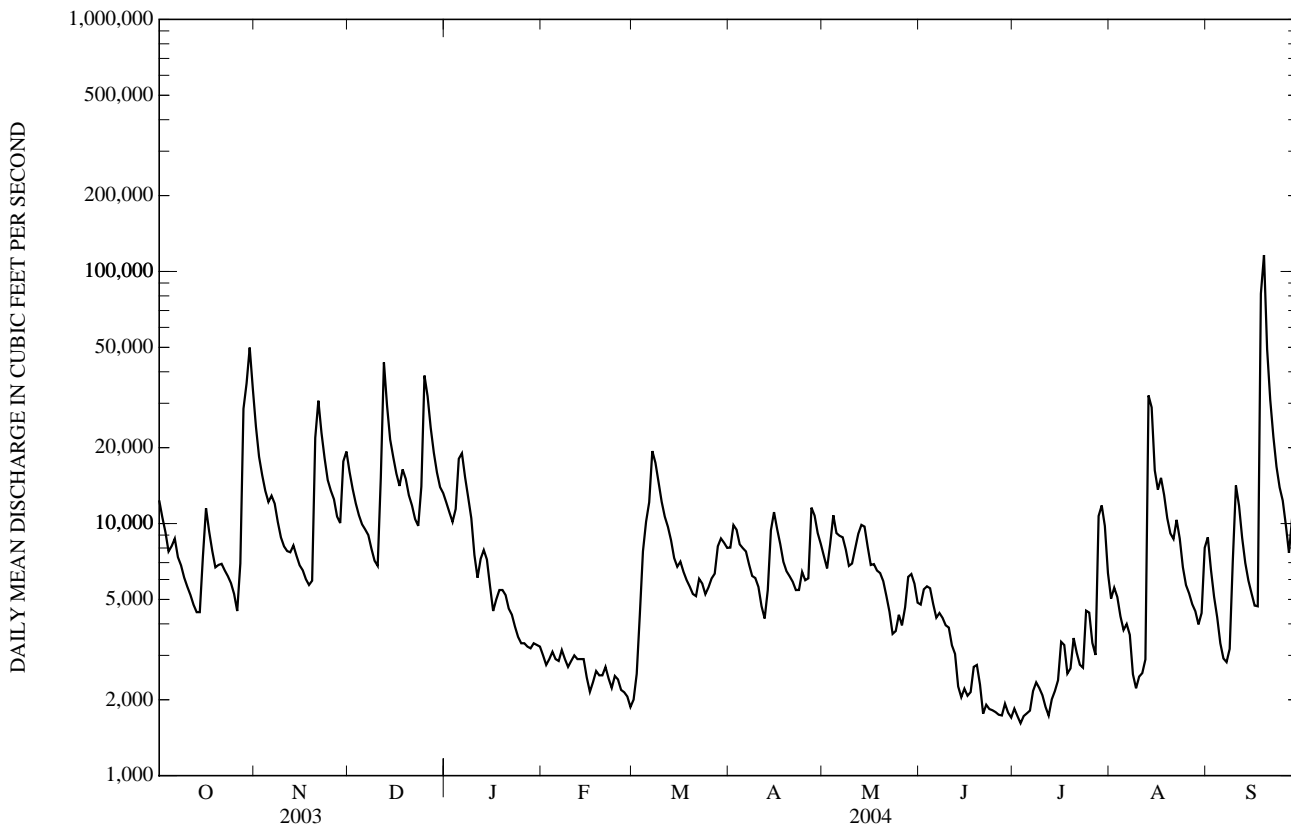
MEAN	3,430	5,135	6,247	5,787	5,837	9,912	11,710	7,348	4,554	3,052	2,699	3,015
MAX	15,690	13,010	18,830	15,600	15,120	24,480	31,560	16,090	15,200	11,220	14,230	17,200
(WY)	(1956)	(2004)	(1997)	(1996)	(1976)	(1945)	(1940)	(1943)	(1972)	(1945)	(1955)	(2004)
MIN	807	995	1,665	1,318	1,748	3,191	3,322	2,215	1,214	864	715	892
(WY)	(1942)	(1965)	(1999)	(1981)	(1980)	(1981)	(1985)	(1965)	(1965)	(1954)	(1954)	(1941)

DELAWARE RIVER BASIN

01438500 DELAWARE RIVER AT MONTAGUE, NJ--Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1940 - 2004	
ANNUAL TOTAL	3,430,550		3,195,060			
ANNUAL MEAN	9,399		8,730		5,722	
HIGHEST ANNUAL MEAN					8,730	
LOWEST ANNUAL MEAN					2,309	
HIGHEST DAILY MEAN	49,900	Mar 22	116,000	Sep 19	187,000	Aug 19, 1955
LOWEST DAILY MEAN	1,940	Feb 17	1,610	Jul 3	412	Aug 23, 1954
ANNUAL SEVEN-DAY MINIMUM	2,310	Aug 25	1,730	Jun 29	565	Jul 1, 1965
MAXIMUM PEAK FLOW			168,000	Sep 18	250,000a	Aug 19, 1955
MAXIMUM PEAK STAGE			28.37	Sep 18	35.15	Aug 19, 1955
INSTANTANEOUS LOW FLOW			1,410	Jul 3	382	Aug 24, 1954
10 PERCENT EXCEEDS	18,600		16,100		12,100	
50 PERCENT EXCEEDS	6,810		6,360		3,470	
90 PERCENT EXCEEDS	3,090		2,290		1,610	

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



## 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.

**REMARKS.**-- Total nitrogen (00600) equals the sum of dissolved ammonia plus organic nitrogen (00623), dissolved nitrite plus nitrate nitrogen (00631), and total particulate nitrogen (49570).

**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, total ammonia + organic nitrogen in bed sediment, total phosphorus in bed sediment, 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.

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

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 uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
NOV 06...	1045	13,100	2.3	.114	.087	755	9.9	92	7.2	71	13.5	11.6	19
MAR 03...	1200	4,390	3.2	.060	.046	759	14.3	103	7.2	110	6.0	1.9	26
MAY 27...	1145	4,710	2.5	.076	.058	745	8.7	99	7.5	90	23.5	20.4	22
AUG 26...	1115	5,240	2.0	.101	.077	759	7.6	83	7.2	81	22.5	19.8	23
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 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)
NOV 06...	5.59	1.17	.82	5.13	13	7.70	<.2	3.3	6.3	39	46	2	<.20
MAR 03...	7.73	1.59	.79	10.3	14	17.6	<.2	2.8	7.0	58	70	8	<.20
MAY 27...	6.78	1.34	.73	7.43	14	11.3	<.2	1.9	6.3	46	52	5	<.20
AUG 26...	7.04	1.27	.81	5.82	16	9.06	<.2	2.5	6.2	43	49	<13	.21
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)	Particulate nitrogen, susp, water, mg/L (49570)	Orthophosphate, water, fltrd, mg/L as P (00671)	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 06...	.024	.020	.19	.005	<.02	<.020	.010	.019	--	--	.3	<.1	.3
MAR 03...	<.020	--	.28	.004	.06	<.020	.009	.034	--	--	.4	<.1	.4
MAY 27...	E.007	--	.28	.004	.07	E.008	.006	.022	--	--	.5	<.1	.5
AUG 26...	E.006	--	.16	.003	.02	.012	.011	.018	.37	.39	.3	<.1	.3

## DELAWARE RIVER BASIN

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004--Continued

Date	Organic carbon, water, fltrd, mg/L (00681)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Boron, water, fltrd, ug/L (01020)
NOV 06...	3.2	<1.0	E6.5
MAR 03...	2.0	E1.8	E6.5
MAY 27...	2.2	2.2	E6.9
AUG 26...	2.8	E1.9	E6.8

Remark codes used in this table:

&lt; -- Less than

E -- Estimated value

## BED-MATERIAL TRACE-ELEMENT ANALYSES

The mercury-in-bed-sediment determination was not available at the time of publication; it is available in the files of the USGS New Jersey Water Science Center.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

Date	Time	pH bed sedimnt std units (70310)	Ammonia + org-N, bed sed total, mg/kg as N (00626)	Phosphorus, bed sedimnt total, mg/kg (00668)	Total carbon, bed sedimnt total, g/kg (00693)	Inorganic carbon, bed sedimnt total, g/kg (00686)	Arsenic bed sedimnt total, ug/g (01003)	Cadmium bed sedimnt recover -able, ug/g (01028)	Chromium, bed sedimnt recover -able, ug/g (01029)	Cobalt bed sedimnt recover -able, ug/g (01038)	Copper, bed sedimnt recover -able, ug/g (01043)	Iron, bed sedimnt total, ug/g (01170)	Lead, bed sedimnt recover -able, ug/g (01052)
AUG 26...	1115	7.20	450	6,000	7.9	<2	<1	.150	5.5	3.1	7	9,100	9.1
Date	Manganese, bed sedimnt recover -able, ug/g (01053)	Nickel, bed sedimnt recover -able, ug/g (01068)	Selenium, bed sedimnt total, ug/g (01148)	Zinc, bed sedimnt recover -able, ug/g (01093)	1,2-Dimethylnaphthalene, bed sed <2 mm, ug/kg (49403)	1,6-Dimethylnaphthalene, bed sed <2 mm, ug/kg (49404)	1Methyl-9H-fluorene, bed sed <2 mm, ug/kg (49398)	1-Methylphenanthrene, bed sed <2 mm, ug/kg (49410)	1-Methylpyrene, bed sed <2 mm, wsv nat ug/kg (49388)	236Tri-methylnaphthalene, bed sed <2 mm, ug/kg (49405)	2,6-Dimethylnaphthalene, bed sed <2 mm, ug/kg (49406)	2-Ethyl-naphthalene, bed sed <2 mm, wsv nat ug/kg (49948)	2-Methyl-anthracene, bed sed <2 mm, wsv nat ug/kg (49435)
AUG 26...	310	7.0	<1	52	<50	<50	<50	<50	E17	<50	<50	<50	E9
Date	45Methylene-phenanthrene, bed sed <2 mm, ug/kg (49411)	9H-Fluorene, bed sed <2 mm, wsv nat ug/kg (49399)	Ace-naphthene, bed sed <2 mm, wsv nat ug/kg (49429)	Ace-naphthylene, bed sed <2 mm, wsv nat ug/kg (49428)	Anthracene, bed sed <2 mm, wsv nat field, ug/kg (49434)	Benzo-[a]-anthracene, bed sed <2 mm, wsv nat ug/kg (49436)	Benzo-[a]-pyrene, bed sed <2 mm, wsv nat ug/kg (49389)	Benzo-[b]-fluoranthene, bed sed <2 mm, ug/kg (49458)	Benzo-[ghi]-perylene, bed sed <2 mm, ug/kg (49408)	Benzo-[k]-fluoranthene, bed sed <2 mm, ug/kg (49397)	Chrysene, bed sed <2 mm, wsv nat field, ug/kg (49450)	Dibenzo-[a,h]-anthracene, bed sed <2 mm, wsv nat field, ug/kg (49461)	Fluoranthene, bed sed <2 mm, wsv nat field, ug/kg (49466)
AUG 26...	E8	<50	E15	E32	E25	61	52	E43	E31	E42	55	<50	85

## DELAWARE RIVER BASIN

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004--Continued

Date	Indeno- [1,2,- 3-cd]- pyrene, bed sed <2 mm ug/kg (49390)	Iso- phorone bed sed <2 mm, wsv nat field, ug/kg (49400)	Naphth- alene, bed sed <2 mm wsv nat ug/kg (49402)	PCBs, bed sedimnt ug/kg (39519)	p- Cresol, bed sed <2 mm, wsv nat field, ug/kg (49451)	Phenan- threne, bed sed <2 mm, wsv nat field, ug/kg (49409)	Phenan- thri- dine, bed sed <2 mm, wsv nat field, ug/kg (49393)	Pyrene, bed sed <2 mm, wsv nat field, ug/kg (49387)	Bed sedi- ment, dry svd sve dia percent <.063mm (80164)	Bed sedi- ment, falldia dst wat percent <.004mm (80157)
AUG 26...	<50	<50	<50	<5	<50	E43	<50	68	8	2

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 2003 TO SEPTEMBER 2004

Date	Time	Instan- taneous dis- charge, cfs (00061)	Entero- cocci, 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 11...	0735	7,360	230	100	20
AUG 19...	0750	10,800	210	<100	20
26...	0900	5,880	330	<100	<20
31...	0910	8,870	1,900	1,000	1,300
SEP 09...	0900	5,610	2,800	4,900	300

Remark codes used in this table:

&lt; -- Less than