



Water-Data Report 2006

01398000 NESHANIC RIVER AT REAVILLE, NJ

RARITAN RIVER BASIN

LOCATION.--Lat 40°28'24", long 74°49'40" referenced to North American Datum of 1983, Raritan Township, Hunterdon County, NJ, Hydrologic Unit 02030105, on left bank 50 ft downstream from bridge on Everitts Road, 0.6 mi southwest of Reaville, 1.5 mi downstream from Third Neshanic River, and 2.2 mi upstream from Back Brook.

DRAINAGE AREA.--25.7 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--June 1930 to current year.

REVISED RECORDS.--WSP 1552: 1933, 1934(M), 1936(M), 1938, 1940(M), 1942(M), 1945-46, 1951, 1952(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 26, 1935. Datum of gage is 109.46 ft above NGVD of 1929.

REMARKS.--Records good, except for discharges less than 2.0 ft³/s and estimated daily discharges, which are fair. Several measurements of water temperature, other than those published, were made during the year. Occasional regulation possibly due to irrigation pumpage. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 09	0100	3,530	9.81
Oct 12	0700	3,720	9.97
Nov 30	0430	2,140	8.32
Jun 03	0000	2,430	8.68
Jun 28	0900	*7,500	*11.96

01398000 NESHANIC RIVER AT REAVILLE, NJ—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES
[*e*, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.13	19	95	46	32	e15	7.8	17	27	49	11	4.7
2	0.13	17	63	82	28	e17	7.3	15	456	34	8.6	208
3	0.09	14	44	554	90	e18	7.1	14	649	30	7.4	127
4	0.08	13	41	135	88	e14	11	13	134	23	9.7	32
5	0.20	12	33	88	91	14	8.6	12	83	53	6.6	23
6	0.08	11	30	64	54	13	8.1	10	51	53	5.5	27
7	0.34	11	25	48	43	13	7.8	8.7	155	27	5.4	16
8	381	9.9	21	42	37	12	43	8.4	130	20	5.1	13
9	632	11	e22	37	32	13	30	8.0	103	17	4.3	11
10	39	15	e22	31	28	14	e16	7.5	68	28	5.0	8.8
11	23	10	e19	46	26	12	14	7.4	45	14	6.3	7.3
12	1,090	8.6	e16	80	e28	15	12	42	33	12	4.1	6.4
13	142	8.1	e12	43	e28	15	12	12	27	24	3.5	5.9
14	177	7.8	e10	184	e25	14	13	9.9	22	12	3.2	24
15	106	7.6	e13	126	e27	12	14	16	19	11	3.1	59
16	50	17	530	70	51	11	12	54	14	10	2.9	75
17	32	95	130	54	180	10	10	24	11	7.9	2.5	29
18	25	29	77	e430	79	9.6	9.1	15	9.8	7.2	2.1	19
19	19	23	59	132	e47	9.4	8.6	16	8.6	10	2.0	15
20	16	20	44	83	e39	9.1	8.0	15	7.7	6.4	2.0	12
21	15	22	34	64	33	8.8	7.1	11	6.4	147	1.7	9.9
22	25	219	29	48	29	8.8	45	9.1	5.7	243	1.4	8.6
23	78	83	28	200	29	8.2	421	7.8	5.4	57	1.3	11
24	36	58	27	93	26	7.8	124	6.9	147	27	1.6	9.7
25	285	40	45	68	22	8.6	71	6.7	61	20	1.7	7.9
26	120	31	107	50	20	16	46	6.9	116	15	13	6.6
27	62	28	54	39	e17	11	35	6.8	64	13	5.2	6.1
28	44	25	41	36	e16	9.2	27	5.4	1,670	41	25	5.9
29	34	28	77	37	---	8.6	22	4.9	128	24	10	9.8
30	27	566	63	38	---	7.8	19	5.5	64	14	9.7	6.5
31	22	---	48	40	---	7.6	---	4.5	---	12	6.3	---
Total	3,481.05	1,459.0	1,859	3,088	1,245	362.5	1,076.5	400.4	4,320.6	1,061.5	177.2	805.1
Mean	112	48.6	60.0	99.6	44.5	11.7	35.9	12.9	144	34.2	5.72	26.8
Max	1,090	566	530	554	180	18	421	54	1,670	243	25	208
Min	0.08	7.6	10	31	16	7.6	7.1	4.5	5.4	6.4	1.3	4.7
Cfsm	4.37	1.89	2.33	3.88	1.73	0.46	1.40	0.50	5.60	1.33	0.22	1.04
In.	5.04	2.11	2.69	4.47	1.80	0.52	1.56	0.58	6.25	1.54	0.26	1.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2006, BY WATER YEAR (WY)

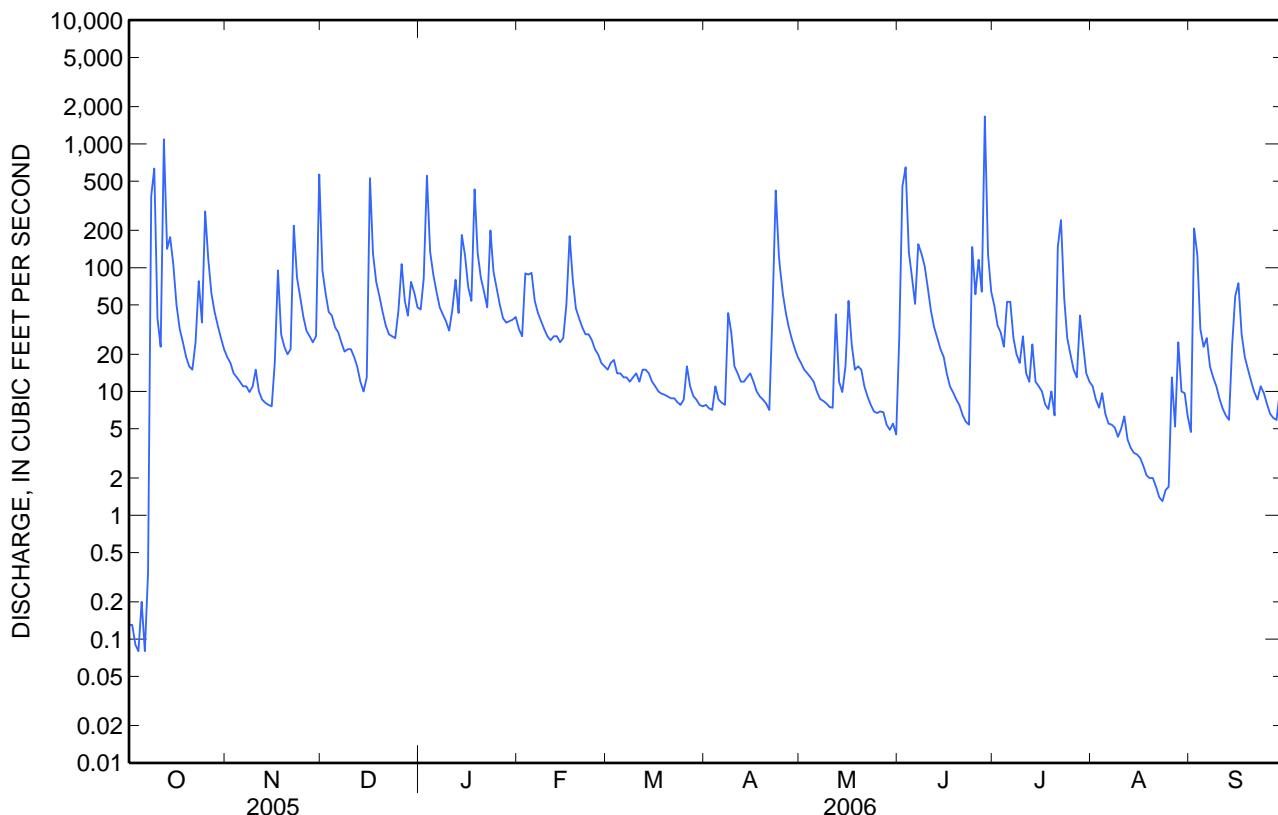
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	17.0	34.4	50.4	56.8	58.3	75.3	55.0	32.5	24.2	18.8	17.8	19.1
Max	147	139	206	280	147	201	200	135	144	138	216	283
(WY)	(1997)	(1933)	(1997)	(1994)	(1939)	(1994)	(1983)	(1989)	(2006)	(1938)	(1971)	(1999)
Min	0.67	0.90	1.42	1.14	3.92	11.7	7.20	3.78	1.11	0.07	0.44	0.47
(WY)	(1965)	(1966)	(1999)	(1981)	(1934)	(2006)	(1985)	(1963)	(1965)	(1999)	(1964)	(1965)

01398000 NESHANIC RIVER AT REAVILLE, NJ—Continued**SUMMARY STATISTICS**

	Calendar Year 2005	Water Year 2006	Water Years 1931 - 2006
Annual total	15,949.66	19,335.85	
Annual mean	43.7	53.0	38.2
Highest annual mean			70.8
Lowest annual mean			14.2
Highest daily mean	1,150	Apr 2	1,670 Jun 28
Lowest daily mean	0.01	Sep 7	0.08 Oct 4, 6
Annual seven-day minimum	0.07	Sep 5	0.15 Oct 1
Maximum peak flow			7,500 Jun 28
Maximum peak stage			11.96 Jun 28
Instantaneous low flow			0.05 Oct 6
Annual runoff (cfsm)	1.70	2.06	1.49
Annual runoff (inches)	23.09	27.99	20.20
10 percent exceeds	87	104	77
50 percent exceeds	17	19	13
90 percent exceeds	0.37	6.0	1.4

^a From rating curve extended above 3,300 ft³/s on basis of slope-area measurement 0.7 mi downstream (adjusted to present site) at gage height 11.90 ft.

^b From high-water mark in gage house.



01398000 NESHANIC RIVER AT REAVILLE, NJ—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1957, 1962, 1979 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: October 1997 to August 1998.

REMARKS.--Total nitrogen (00600) equals the sum of filtered ammonia plus organic nitrogen (00623), filtered nitrite plus nitrate nitrogen (00631), and total particulate nitrogen (49570). Bacteria samples were collected synoptically over a 30-day period during the summer.

COOPERATIVE NETWORK SITE DESCRIPTOR: Agricultural Land Use Indicator, New Jersey Department of Environmental Protection (NJDEP)
Watershed Management Area 8.

COOPERATION.--Physical measurements and samples for laboratory analyses were provided by personnel of the NJDEP. Bacteria samples were provided by the local county health department under the direction of the NJDEP through the County Environmental Health Act. Determinations of filtered ammonia, filtered orthophosphorus, BOD, total suspended residue, fecal coliform, E. coli, and enterococcus bacteria were performed by the NJ Department of Health and Senior Services.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006**

Part 1 of 4

[Remark codes: <, less than; E, estimated.]

Date	Time	Turbdty white light, det ang 90+/-30 corrctd	UV absorb- ance, 254 nm, wat flt units	UV absorb- ance, 280 nm, wat flt units	Baro- metric pres- sure, mm Hg	Dis- solved oxygen, mg/L	Dis- solved oxygen, percent of sat- uration	pH, water, unfltrd field, std	Specif. conduc- tance, wat unf uS/cm	Temper- ature, air, deg C	Temper- ature, water, deg C	Temper- ature, water, deg C	Hard- ness, water, mg/L as CaCO ₃
		NTRU (00061)	/cm (50624)	/cm (61726)	(00025)	(00300)	(00301)	(00400)	25 degC (00095)	(00020)	(00010)		
Nov													
16...	1100	7.6	.8	.071	.055	758	10.1	99	8.1	338	20.7	14.2	120
Feb													
15...	0900	E27	2.2	.049	.038	764	14.4	98	8.0	503	8.1	.0	110
Jun													
07...	1000	39	3.9	.095	.071	754	8.7	90	8.0	265	20.0	16.4	79
Sep													
06...	0900	29	3.4	.153	.117	760	9.3	98	8.4	264	19.1	17.4	84

01398000 NESHANIC RIVER AT REAVILLE, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 2 of 4

[Remark codes: <, less than; E, estimated.]

Date	ANC, wat unf								Residue water, filtrd, sum of consti- tuents	Residue on evap. at 180degC	Residue total at 105 deg. C,	Ammonia + org-N, water, filtrd, mg/L as N (00623)	
	Calcium water, filtrd, mg/L (00915)	Magnes- ium, water, filtrd, mg/L (00925)	Potas- sium, water, filtrd, mg/L (00935)	Sodium, water, filtrd, mg/L (00930)	fixed end pt, lab, mg/L as CaCO ₃ (90410)	Chlor- ide, water, filtrd, mg/L (00940)	Fluor- ide, water, filtrd, mg/L (00950)	Silica, water, filtrd, mg/L (00955)	Sulfate water, filtrd, mg/L (00945)	mg/L (70301)	mg/L (70300)	mg/L (00530)	
Nov 16...	30.2	10.8	2.40	19.1	73	30.0	E.09	3.6	36.1	180	194	<1	.26
Feb 15...	28.9	9.45	2.01	54.5	51	106	E.07	10.4	26.4	276	287	1	.17
Jun 07...	20.2	6.87	2.08	17.0	57	26.6	E.08	12.6	23.1	150	162	5	.29
Sep 06...	22.1	7.03	2.81	16.6	62	21.2	E.09	12.6	23.8	150	165	4	.39

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 3 of 4

[Remark codes: <, less than; E, estimated.]

Date	Ortho- phosphate, water, filtrd, mg/L as P (00671)								Total carbon, suspd sediment	Inor- ganic carbon, suspd sediment	Organic carbon, suspd sediment	Organic carbon, water, filtrd, mg/L (00681)	BOD, water, unfiltrd 5 day, 20 degC (00310)
	Nitrite + nitrate water, filtrd, mg/L as N (00631)	Partic- ulate nitro- gen, susp, water, filtrd, mg/L (49570)	Total nitro- gen, water, filtrd, mg/L (00602)	Total nitro- gen, water, unfiltrd mg/L (00600)	Phos- phorus, water, filtrd, mg/L (00666)	Phos- phorus, water, unfiltrd mg/L (00665)	Total mg/L (00694)	Total mg/L (00688)	Total mg/L (00689)				
Nov 16...	.038	.70	.06	.96	1.0	.011	<.04	E.03	.3	<.1	.3	2.6	<1.0
Feb 15...	.046	1.66	.04	1.8	1.9	.014	<.04	E.03	.3	<.1	.3	1.6	<1.1
Jun 07...	.048	1.52	.10	1.8	1.9	.051	.05	.09	.6	<.1	.6	3.1	<1.0
Sep 06...	.027	1.45	.05	1.8	1.9	.080	.09	.09	.2	<.1	.2	4.1	<1.0

01398000 NESHANIC RIVER AT REAVILLE, NJ—Continued

**WATER-QUALITY
DATA
WATER YEAR
OCTOBER 2005 TO
SEPTEMBER 2006**

Part 4 of 4

[Remark codes:
<, less than;
E, estimated.]

	Boron, water, fltrd,
Date	ug/L (01020)
Nov	
16...	45
Feb	
15...	28
Jun	
07...	29
Sep	
06...	37

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006**

[Remark codes: <, less than.]

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, deg C (00010)	Enter- cocci,		E coli, m-TEC (31649)	Fecal coli- form, ECbroth (31633)
				m-E MF,	water, col/ 100 mL (31649)		
Jul							
12...	1000	12	23.4	40	220	230	
19...	1010	9.4	24.0	470	1,200	800	
26...	1000	16	21.5	270	150	300	
Aug							
02...	1000	9.0	26.4	240	<10	1,400	
09...	1005	4.2	21.9	70	40	130	