Water-Data Report 2008

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 mi^2.

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 ft^3/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 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb 13	1645	2,270	8.49
Mar 8	1645	*4,670	*10.59

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.16	10	16	94	283	51	27	14	17	2.3	1.5	0.16
2	0.11	8.3	14	69	147	41	26	13	12	2.0	2.7	0.09
3	0.14	7.3	56	44	63	38	19	13	10	1.7	3.2	0.03
4	0.26	6.7	31	38	50	40	41	13	53	1.6	1.6	0.01
5	0.30	5.7	23	35	51	333	29	11	38	2.2	1.2	0.00
6	0.35	11	19	35	58	97	23	10	20	2.3	1.1	127
7	0.17	8.6	15	34	57	104	21	9.3	16	2.1	1.0	78
8	0.12	6.2	15	32	40	1,120	20	9.2	13	1.8	0.76	8.5
9	0.10	5.7	18	30	36	224	18	58	11	1.6	0.59	14
10	4.9	5.5	52	25	43	103	18	45	8.8	1.5	0.71	8.5
11	1.5	5.0	29	76	25	77	17	22	8.5	1.2	2.8	4.2
12	16	4.7	27	57	24	62	135	33	6.9	0.89	1.6	5.7
13	3.3	7.2	e60	43	1,150	49	40	28	6.0	0.76	1.0	8.8
14	1.6	6.3	e105	75	240	42	30	19	12	9.7	0.89	5.0
15	1.2	14	68	60	118	40	25	16	37	3.3	1.1	3.6
16	0.90	15	152	43	81	37	22	112	10	1.7	1.6	2.5
17	0.78	10	101	37	65	30	20	95	7.8	1.2	0.80	2.1
18	0.78	9.4	53	137	179	27	19	71	7.1	2.6	0.57	2.0
19	3.8	15	44	77	94	130	17	60	7.7	1.4	0.42	1.6
20	31	18	47	55	61	237	15	74	5.8	0.93	0.25	1.5
21	5.0	18	44	36	47	78	14	70	5.1	1.9	0.18	1.4
22	2.8	16	40	33	46	58	13	45	4.7	0.97	0.16	1.2
23	2.0	15	e215	32	44	45	13	34	4.5	31	0.13	1.0
24	1.9	11	e400	26	39	38	12	27	4.3	58	0.09	0.92
25	4.1	e10	83	21	48	33	11	23	3.4	9.5	0.07	0.93
26	6.5	e70	63	22	76	30	10	19	3.2	4.9	0.07	6.4
27	393	93	e95	20	118	27	11	25	3.3	3.8	0.04	7.7
28	61	34	e65	19	60	26	45	24	3.0	3.7	0.01	61
29	25	26	e245	17	42	23	43	16	2.9	2.7	0.00	39
30	16	21	e90	24	---	20	18	13	2.6	2.1	0.15	15
31	13	---	e200	17	---	20	---	21	---	1.8	0.28	---
Total	597.77	493.6	2,485	1,363	3,385	3,280	772	1,042.5	344.6	163.15	26.57	407.84
Mean	19.3	16.5	80.2	44.0	117	106	25.7	33.6	11.5	5.26	0.86	13.6
Max	393	93	400	137	1,150	1,120	135	112	53	58	3.2	127
Min	0.10	4.7	14	17	24	20	10	9.2	2.6	0.76	0.00	0.00
Cfsm	0.75	0.64	3.12	1.71	4.54	4.12	1.00	1.31	0.45	0.20	0.03	0.53
In.	0.87	0.71	3.60	1.97	4.90	4.75	1.12	1.51	0.50	0.24	0.04	0.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	17.4	35.1	50.6	57.0	58.5	75.9	56.7	32.4	23.9	18.5	17.4	18.8
Max	147	139	206	280	147	201	219	135	144	138	216	283
(WY)	(1997)	(1933)	(1997)	(1994)	(1939)	(1994)	(2007)	(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)

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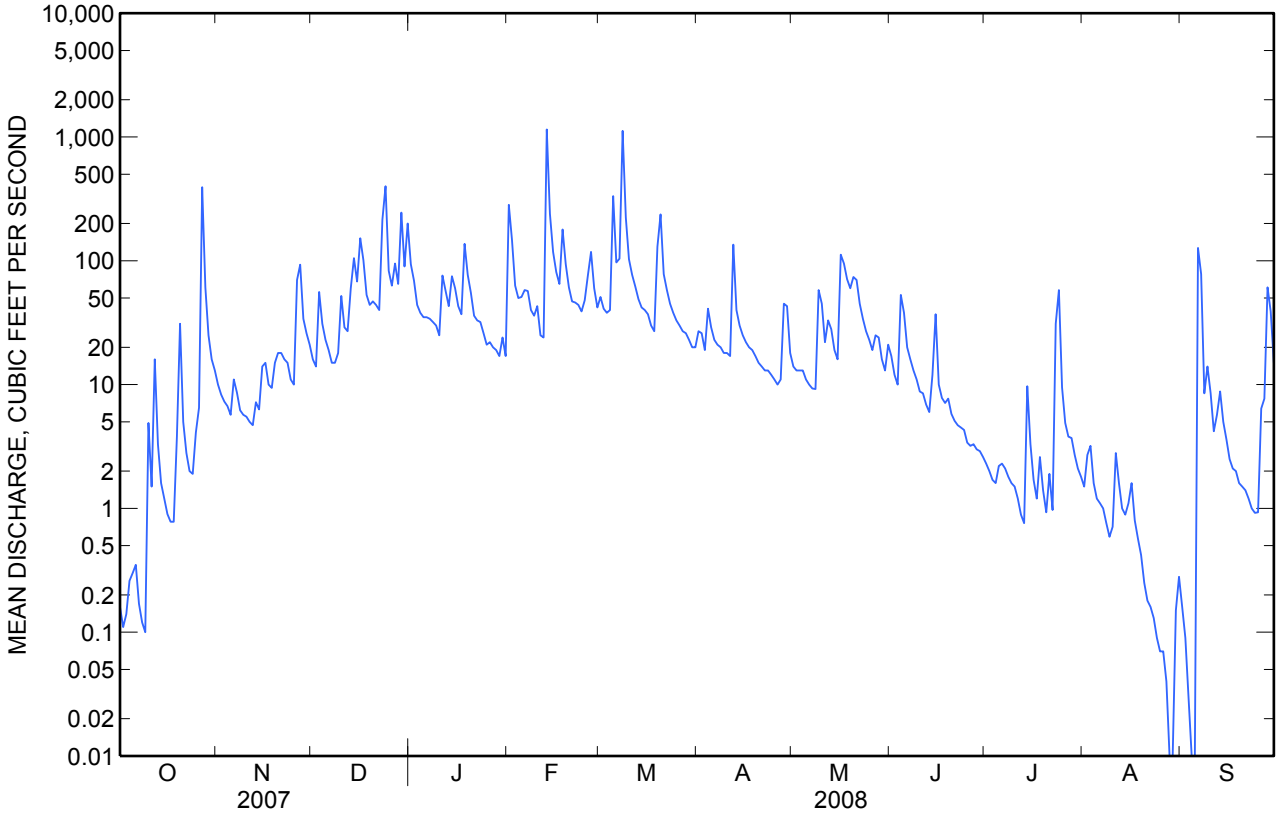
SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1931 - 2008	
Annual total	17,060.79		14,361.03			
Annual mean	46.7		39.2		38.4	
Highest annual mean					70.8	1994
Lowest annual mean					14.2	2002
Highest daily mean	1,920	Apr 15	1,150	Feb 13	7,000	Sep 16, 1999
Lowest daily mean	0.10	Oct 9	0.00	Aug 29, Sep 5	0.00	Jul 29, 1965
Annual seven-day minimum	0.16	Sep 27	0.06	Aug 23	0.00	Aug 4, 1966
Maximum peak flow			4,670	Mar 8	[a]23,100	Sep 16, 1999
Maximum peak stage			10.59	Mar 8	[b]15.33	Sep 16, 1999
Instantaneous low flow			0.00	Many days	0.00	Jul 29, 1965
Annual runoff (cfsm)	1.82		1.53		1.50	
Annual runoff (inches)	24.69		20.79		20.32	
10 percent exceeds	79		78		77	
50 percent exceeds	11		16		13	
90 percent exceeds	0.77		0.89		1.3	

[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.--Cooperative Network Site Descriptor: Agricultural Land Use Indicator, New Jersey Department of Environmental Protection Watershed Management Area 8.

COOPERATION.--Physical measurements and samples for laboratory analyses were provided by personnel of the NJ Department of Environmental Protection. Determinations of dissolved ammonia, dissolved orthophosphate, and suspended residue were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 1 of 3
[Remark codes: <, less than; E, estimated.]

Date	Time	Instantaneous discharge, ft3/s (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	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 unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
Nov													
14...	1100	6.1	1.4	.085	.066	758	11.4	91	7.9	353	15.3	5.5	120
Feb													
14...	1000	194	20	.123	.096	760	11.8	92	8.2	245	2.4	5.0	50
May													
27...	0900	37	7.5	.084	.065	756	8.4	89	9.4	272	22.7	17.8	84
Aug													
28...	1030	.02	2.7	.134	.100	760	6.9	80	8.7	351	22.0	19.8	120

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 2 of 3
[Remark codes: <, less than; E, estimated.]

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 unf 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 as SiO2 (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 non-filterable, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
Nov													
14...	31.4	11.0	2.34	18.6	82	29.1	E.07	8.1	36.4	E192	207	1	.25
Feb													
14...	12.9	4.24	1.88	21.6	30	36.4	E.06	8.6	14.6	E124	140	13	.25
May													
27...	21.5	7.35	1.91	17.6	63	25.9	E.11	3.4	23.7	E143	129	6	.28
Aug													
28...	27.6	12.1	2.85	21.3	91	26.9	.14	1.4	37.7	185	208	5	.48

01398000 NESHANIC RIVER AT REAVILLE, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 3 of 3
[Remark codes: <, less than; E, estimated.]

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite water fltrd, mg/L as N (00631)	Particulate nitrogen, susp, water, mg/L (49570)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L as P (00666)	Phosphorus, water, unfltrd mg/L as P (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Boron, water, fltrd, µg/L (01020)
Nov													
14...	E.009	1.18	E.03	1.4	E1.5	.020	E.03	E.03	.2	<.04	.2	2.7	46
Feb													
14...	.032	1.35	.07	1.6	1.7	.055	.07	.10	.4	<.04	.4	3.3	14
May													
27...	.012	.76	.07	1.0	1.1	.017	E.03	.04	.5	<.04	.5	2.9	32
Aug													
28...	.016	<.04	.14	--	--	.070	.08	.10	1.1	<.04	1.1	5.0	68