



Water-Data Report 2007

**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<sup>2</sup>.

**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<sup>3</sup>/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<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov 8	1645	3,490	9.77
Jan 1	1230	1,780	7.81
Mar 2	0930	2,400	8.65
Apr 15	2315	4,250	10.33
Apr 27	0615	*4,860	*10.70

## Water-Data Report 2007

## 01398000 NESHANIC RIVER AT REAVILLE, NJ—Continued

**DISCHARGE, CUBIC FEET PER SECOND**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**  
**DAILY MEAN VALUES**  
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	12	30	37	529	11	22	25	47	7.1	2.7	3.2	1.4
2	8.5	48	40	e95	15	817	32	134	5.3	2.1	2.6	1.2
3	6.3	30	26	84	18	95	25	50	6.7	1.8	1.9	0.88
4	5.8	24	24	69	9.8	56	78	40	28	1.8	1.5	0.75
5	88	22	22	64	e8.0	39	50	33	9.9	12	1.1	0.61
6	22	20	20	69	e10	e26	34	27	6.7	56	0.89	0.49
7	17	18	20	57	e10	e23	30	24	5.5	11	0.94	0.47
8	14	1,260	17	479	e8.0	21	25	22	5.1	5.7	0.91	0.45
9	12	217	15	e104	e8.0	19	23	20	4.6	4.2	0.71	0.43
10	11	89	15	e97	e9.0	18	20	18	4.4	3.3	4.6	0.40
11	38	63	15	80	e8.0	33	19	17	4.1	2.9	2.4	3.7
12	114	52	14	75	e7.0	22	99	15	7.2	2.7	1.3	2.7
13	32	72	e16	69	6.9	21	47	22	6.2	2.0	0.90	1.0
14	23	99	17	66	7.2	23	34	14	4.4	1.7	0.62	0.68
15	18	59	15	62	7.1	29	1,920	13	4.0	1.4	0.46	0.66
16	15	198	13	57	6.3	68	1,690	17	3.7	1.2	0.39	0.63
17	81	170	12	46	6.6	53	184	18	3.0	0.99	12	0.46
18	115	73	12	38	6.9	47	103	12	2.8	3.0	6.0	0.45
19	43	55	11	38	5.9	47	76	11	2.4	3.7	2.1	0.37
20	125	44	11	35	6.2	184	58	11	20	1.8	7.6	0.38
21	59	35	11	e27	26	160	47	9.7	10	1.2	58	0.37
22	40	32	13	e26	36	243	39	8.3	13	0.89	28	0.80
23	32	174	261	e26	25	260	34	7.6	4.7	12	11	0.76
24	25	136	70	e25	12	144	29	6.9	3.6	6.0	7.1	0.51
25	21	66	90	e23	9.6	89	27	6.6	3.2	2.8	5.1	0.32
26	18	51	211	e19	14	66	30	6.1	3.1	2.1	4.3	0.23
27	16	43	76	17	74	55	1,480	6.7	2.7	4.4	3.4	0.18
28	430	36	54	19	37	43	151	11	10	40	2.6	0.15
29	85	32	44	20	---	34	86	6.4	6.0	13	2.0	0.18
30	48	29	39	14	---	30	63	5.4	3.8	7.8	1.7	0.21
31	37	---	35	14	---	27	---	4.8	---	4.4	1.5	---
Total	1,611.6	3,277	1,276	2,443	408.5	2,814	6,558	644.5	201.2	216.58	176.82	21.82
Mean	52.0	109	41.2	78.8	14.6	90.8	219	20.8	6.71	6.99	5.70	0.73
Max	430	1,260	261	529	74	817	1,920	134	28	56	58	3.7
Min	5.8	18	11	14	5.9	18	19	4.8	2.4	0.89	0.39	0.15
Cfsm	2.02	4.25	1.60	3.07	0.57	3.53	8.51	0.81	0.26	0.27	0.22	0.03
In.	2.33	4.74	1.85	3.54	0.59	4.07	9.49	0.93	0.29	0.31	0.26	0.03

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2007, BY WATER YEAR (WY)

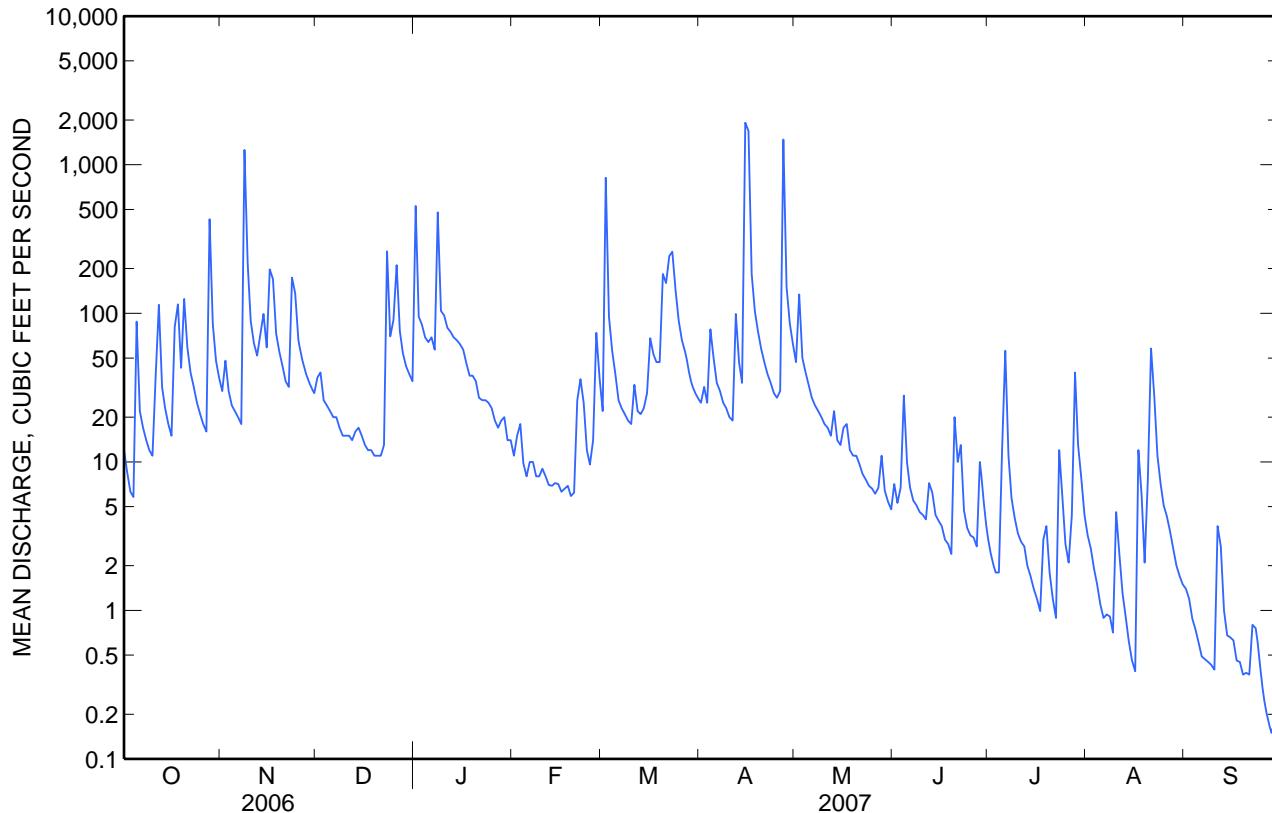
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	17.4	35.4	50.3	57.1	57.8	75.5	57.1	32.4	24.0	18.7	17.7	18.9
Max	147	139	206	280	147	201	219	135	144	138	216	283
(WY)	(1997)	(1933)	(1997)	(1994)	(1939)	(1994)	(2007)	(1989)	(2006)	(1938)	(1971)	(1999)
Min	0.67	0.90	1.42	1.14	3.92	11.7	7.20	3.78	1.11	0.07	0.44	0.47
(WY)	(1965)	(1966)	(1999)	(1981)	(1934)	(2006)	(1985)	(1963)	(1965)	(1999)	(1964)	(1965)

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

	<b>Calendar Year 2006</b>		<b>Water Year 2007</b>		<b>Water Years 1931 - 2007</b>	
<b>Annual total</b>	18,701.4		19,649.02			
<b>Annual mean</b>	51.2		53.8		38.4	
<b>Highest annual mean</b>					70.8	1994
<b>Lowest annual mean</b>					14.2	2002
<b>Highest daily mean</b>	1,670	Jun 28	1,920	Apr 15	7,000	Sep 16, 1999
<b>Lowest daily mean</b>	1.3	Aug 23	0.15	Sep 28	0.00	Jul 29, 1965
<b>Annual seven-day minimum</b>	1.7	Aug 19	0.25	Sep 24	0.00	Aug 4, 1966
<b>Maximum peak flow</b>			4,860	Apr 27	<sup>a</sup> 23,100	Sep 16, 1999
<b>Maximum peak stage</b>			10.70	Apr 27	<sup>b</sup> 15.33	Sep 16, 1999
<b>Instantaneous low flow</b>			0.11	Sep 28, 29	0.00	Jul 29, 1965
<b>Annual runoff (cfsm)</b>	1.99		2.09		1.49	
<b>Annual runoff (inches)</b>	27.07		28.44		20.31	
<b>10 percent exceeds</b>	101		88		77	
<b>50 percent exceeds</b>	19		17		13	
<b>90 percent exceeds</b>	6.4		1.1		1.4	

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

<sup>b</sup> 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). Cooperative Network Site Descriptor: Agricultural Land Use Indicator and Pesticide Assessment special study site, New Jersey Department of Environmental Protection Watershed Management Area 8. The sample on Jul 3 was for the pesticide assessment special study.

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 2006 TO SEPTEMBER 2007**

Part 1 of 3

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

Date	Time	Turbdty white light, det ang 90+/-30 corctd cfs (00061)	UV absorb- ance, 254 nm, wat flt units (63676)	UV absorb- ance, 280 nm, wat flt units (50624)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif- ic conduc- tance, μS/cm 25 degC (00095)	Temper- ature, wat unf std units (00020)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO <sub>3</sub> (00900)
Nov 28...	0900	38	2.0	.057	.043	768	11.3	93	8.0	242	11.6	7.3	80
Feb 27...	0930	13	2.3	.053	.038	758	14.5	100	7.8	1,380	5.6	.2	200
May 15...	1000	13	1.1	.062	.048	760	10.9	108	8.4	296	20.0	14.7	94
Jul 03...	0815	1.9	2.2	--	--	761	7.0	75	8.0	508	20.5	18.0	--
Aug 13...	1000	.98	1.2	.113	.083	758	4.8	58	8.6	343	25.3	24.4	120

## Water-Data Report 2007

## 01398000 NESHANIC RIVER AT REAVILLE, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 2 of 3

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

Date	ANC, wat unf fixed						Residue water, fltrd, sum of consti- tuents			Residue on evap.		Residue total non- filter- able,		Ammonia + org-N, water, fltrd, mg/L as N (00623)
	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	CaCO <sub>3</sub> (90410)	Chlor- ide, lab, mg/L as CaCO <sub>3</sub> (90940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	180degC wat flt mg/L (70301)	(70300)	(00530)		
Nov 28...	20.5	6.88	1.79	14.0	57	18.4	<.10	11.7	22.8	137	136	<1	.27	
Feb 27...	53.0	16.3	3.08	164	55	362	E.08	7.3	29.0	674	688	<1	.26	
May 15...	23.8	8.41	1.69	19.0	67	29.5	.10	2.3	27.3	155	192	<1	.26	
Jul 03...	--	--	--	--	--	--	--	--	--	--	--	--	--	
Aug 13...	30.6	10.8	2.69	19.8	91	26.4	.11	7.0	38.4	190	197	1	.29	

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 3 of 3

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

Date	Nitrate Ammonia water, fltrd, mg/L as N (00608)	Nitrite water, fltrd, mg/L as N (00631)	Partic- ulate nitro- gen, susp., water, mg/L (49570)	Total nitro- gen, water, fltrd, mg/L (00602)	Total nitro- gen, water, unfltrd mg/L (00600)	Ortho- phosphate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor- ganic 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 28...	.013	1.56	.03	1.8	1.9	.022	E.02	.04	.2	<.1	.2	2.1	27
Feb 27...	E.008	1.55	.05	1.8	1.9	E.009	<.04	<.04	.3	<.1	.3	2.5	26
May 15...	.010	.66	.05	.92	.97	E.004	<.04	E.02	.3	<.1	.3	2.3	33
Jul 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
Aug 13...	.036	E.04	.11	--	--	.047	.06	.06	.5	<.1	.5	4.0	63

## 01398000 NESHANIC RIVER AT REAVILLE, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 1 of 7

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

Date	1-Naph-thol, water, fltrd 0.7u GF	2,6-Di-ethyl-aniline water, fltrd 0.7u GF	2Chloro- -2',6'-diethyl acetanilide water flt	CIAT, water, fltrd, 0.7u GF	2-Ethyl- -6-methyl-chloro-aniline water, fltrd, 0.7u GF	3,4-Di-chloro-aniline water, fltrd, 0.7u GF	3,5-Di-chloro-aniline water, fltrd, 0.7u GF	4-Chloro- 2methyl-phenol, water, fltrd, 0.7u GF	Aceto-chlor, water, fltrd, 0.7u GF	Ala-chlor, water, fltrd, 0.7u GF	alpha-Endosulfan, water, fltrd, 0.7u GF	Atra-zine, water, fltrd, 0.7u GF	Azin-phos-methyl oxon, water, fltrd, 0.7u GF
	µg/L (49295)	µg/L (82660)	µg/L (61618)	µg/L (04040)	µg/L (61620)	µg/L (61625)	µg/L (61627)	µg/L (61633)	µg/L (49260)	µg/L (46342)	µg/L (34362)	µg/L (39632)	µg/L (61635)
Jul 03...	<.09	<.006	<.006	E.019	<.010	<.004	<.012	<.005	<.006	<.005	<.011	.045	<.04

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 2 of 7

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

Date	Azin-phos-methyl, water, fltrd 0.7u GF	Ben-flur-alin, water, fltrd 0.7u GF	Car-baryl, water, fltrd 0.7u GF	Carbo-furan, water, fltrd 0.7u GF	Chlor-pyrifos oxon, water, fltrd 0.7u GF	Chlor-pyrifos water, fltrd, 0.7u GF	Per-methrin water, fltrd, 0.7u GF	Propi-conazole, water, fltrd, 0.7u GF	Cyana-zine, water, fltrd, 0.7u GF	Cyflu-thrin, water, fltrd, 0.7u GF	Lambda-cyathrin, water, fltrd, 0.7u GF	Cyhalothrin, water, fltrd, 0.7u GF	Cyper-methrin, water, fltrd, 0.7u GF	DCPA, water, fltrd 0.7u GF
	µg/L (82686)	µg/L (82673)	µg/L (82680)	µg/L (82674)	µg/L (61636)	µg/L (38933)	µg/L (82687)	µg/L (79846)	µg/L (04041)	µg/L (61585)	µg/L (61595)	µg/L (61586)	µg/L (82682)	
Jul 03...	<.080	<.010	<.060	<.020	<.06	<.005	<.010	<.013	<.018	<.053	<.014	<.046	<.003	

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 3 of 7

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

Date	Desulf-inyl-fipro-nil, water, fltrd 0.7u GF	Diazi-non, water, fltrd 0.7u GF	Dicro-tophos, water, fltrd 0.7u GF	Diel-drin, water, fltrd 0.7u GF	Dimeth-oate, water, fltrd 0.7u GF	Disulf-ton, sulfone water, fltrd 0.7u GF	Disul-foton, water, fltrd 0.7u GF	Endo-sulfan, sulfate water, fltrd 0.7u GF	EPTC, water, fltrd 0.7u GF	Ethion, monoxon water, fltrd 0.7u GF	Ethion, water, fltrd 0.7u GF	Etho-prop, water, fltrd 0.7u GF	Fenami-phos sulfone, water, fltrd 0.7u GF
	µg/L (62170)	µg/L (39572)	µg/L (38454)	µg/L (39381)	µg/L (82662)	µg/L (61640)	µg/L (82677)	µg/L (61590)	µg/L (82668)	µg/L (61644)	µg/L (82346)	µg/L (82672)	µg/L (61645)
Jul 03...	<.012	<.005	<.08	<.009	<.006	<.01	<.02	<.022	<.002	<.02	<.016	<.012	<.053

## 01398000 NESHANIC RIVER AT REAVILLE, NJ—Continued

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 4 of 7

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

Date	Fenami-phos sulf-oxide, water, fltrd, µg/L (61646)	Fenami-phos, water, fltrd, µg/L (61591)	Desulf-inyl-amide, wat flt µg/L (62169)	Fipro-nil sulfide µg/L (62167)	Fipro-nil sulfone µg/L (62168)	Fipro-nil, water, fltrd, µg/L (62166)	Fonofos water, fltrd, µg/L (04095)	Hexa-zinone, water, fltrd, µg/L (04025)	Ipro-dione, water, fltrd, µg/L (61593)	Isofen-phos, water, fltrd, µg/L (61594)	Mala-oxon, water, fltrd, µg/L (61652)	Mala-thion, water, fltrd, µg/L (39532)	Meta-laxyl, water, fltrd, µg/L (61596)
Jul 03...	<.04	<.03	<.029	<.013	<.024	<.016	<.006	<.026	<.026	<.011	<.039	<.016	<.007

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 5 of 7

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

Date	Methi-althion water, fltrd, µg/L (61598)	Methyl para-thion, water, fltrd, 0.7u GF µg/L (61664)	Methyl para-chlor, water, fltrd, 0.7u GF µg/L (82667)	Metola-chlor, water, fltrd, µg/L (39415)	Metribuzin, water, fltrd, µg/L (82630)	Moli-nate, water, fltrd, 0.7u GF µg/L (82671)	Myclo-butanol water, fltrd, µg/L (61599)	Oxy-fluor-fen, water, fltrd, 0.7u GF µg/L (61600)	Pendi-methalin, water, fltrd, 0.7u GF µg/L (82683)	Phorate oxon, water, fltrd, 0.7u GF µg/L (61666)	Phorate oxon, water, fltrd, 0.7u GF µg/L (82664)	Phosmet oxon, water, fltrd, µg/L (61668)	Phosmet oxon, water, fltrd, µg/L (61601)
Jul 03...	<.009	<.02	<.008	.019	<.012	<.003	<.033	<.017	<.020	<.03	<.020	<.05	<.008

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Part 6 of 7

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

Date	Prome-ton, water, fltrd, µg/L (04037)	Prome-tryn, water, fltrd, 0.7u GF µg/L (04036)	Propy-zamide, water, fltrd, 0.7u GF µg/L (82676)	Propanil, water, fltrd, 0.7u GF µg/L (82679)	Propar-gite, water, fltrd, 0.7u GF µg/L (82685)	Tebu-simazine, water, fltrd, 0.7u GF µg/L (04035)	Tebu-thiuron, water, fltrd, 0.7u GF µg/L (82670)	Ter-bufos, Teflu-thrin, oxon sulfone water, water, fltrd, fltrd, µg/L µg/L (61606)	Terbu-fos, Teflu-thrin, water, water, fltrd, fltrd, µg/L µg/L (61674)	Ter-butyl-azine, water, water, fltrd, fltrd, µg/L µg/L (82675)	Ter-benzene, water, water, fltrd, fltrd, µg/L µg/L (04022)	Thio-bencarb, water, water, fltrd, fltrd, µg/L µg/L (82681)	trans-Propi-conazole, water, water, fltrd, fltrd, µg/L µg/L (79847)
Jul 03...	E.01	<.006	<.004	<.011	<.02	E.004	<.02	<.003	<.04	<.01	<.01	<.010	<.03

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

**WATER-QUALITY DATA  
WATER YEAR OCTOBER 2006 TO  
SEPTEMBER 2007**

Part 7 of 7

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

Date	Tri-	flur-	Di-
	Tribu- phos, water, water, filtrd,	alin, water, filtrd 0.7u GF	chlor- vos, water, filtrd,
	µg/L (61610)	µg/L (82661)	µg/L (38775)
Jul <b>03...</b>	<.035	<.009	<.01