



Water-Data Report 2006

**01457400 MUSCONETCONG RIVER AT RIEGELSVILLE, NJ**

DELAWARE RIVER BASIN

LOCATION.--Lat 40°35'33", long 75°11'10" referenced to North American Datum of 1983, Pohatcong Township, Warren County, NJ, Hydrologic Unit 02040105, at bridge on Riegelsville-Milford Road (County Route 627) in Riegelsville, 0.2 mi north of Mount Joy, and 0.2 mi upstream from mouth.

DRAINAGE AREA.--156 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--Miscellaneous measurements, water years 1940-55, 1973, 1977 to current year.

GAGE.--Staff gage.

**DISCHARGE MEASUREMENTS  
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006**

Date	Discharge, in ft <sup>3</sup> /s
Dec 7, 2005	443
Feb 9, 2006	553
May 2, 2006	203
Aug 3, 2006	160

**01457400 MUSCONETCONG RIVER AT RIEGELSVILLE, NJ—Continued****WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1962, 1976 to current year.

REMARKS.--Water-quality samples do not include Riegelsville Paper Company bypass flow. 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: Watershed Integrator and Trace Element Assessment (303d) special study site, New Jersey Department of Environmental Protection (NJDEP) Watershed Management Area 1. The sample on Oct. 11 was part of the 2005-water-year trace element assessment (303d).

COOPERATION.--Physical measurements and samples for laboratory analyses on Oct. 11 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, ammonia+organic nitrogen in bed sediment, phosphorous in bed sediment, 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 5

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

Date	Time	Sample type	Instan- taneous dis- charge, cfs (00061)	Turbdty white light, det ang 90+/-30 corctd	UV absorb- ance, 254 nm, wat flt	UV absorb- ance, 280 nm, wat flt	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. conduc- tance, wat unf uS/cm (00095)	Temper- ature, air, deg C (00020)
<b>Oct</b>												
11...	1015	Field Blank	--	--	--	--	--	--	--	--	--	--
11...	1030	Environmental	--	8.9	--	--	760	9.1	92	8.0	359	18.0
<b>Dec</b>												
07...	0920	Environmental	443	2.6	.065	.048	762	14.0	102	7.6	410	-1.0
<b>Feb</b>												
09...	0900	Environmental	553	2.6	.057	.043	763	13.4	100	7.6	391	-1.0
<b>May</b>												
02...	0840	Environmental	203	2.0	.061	.047	759	10.3	99	8.1	418	12.0
<b>Aug</b>												
03...	1010	Environmental	160	2.6	.060	.048	755	8.5	102	8.1	442	27.5

## 01457400 MUSCONETCONG RIVER AT RIEGELSVILLE, NJ—Continued

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

Part 2 of 5

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

Date	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO <sub>3</sub> (00900)	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)	ANC, wat unf			Chlor- ide, lab, mg/L as CaCO <sub>3</sub> (90410)	Fluor- ide, water, filtrd, mg/L (00950)	Silica, water, filtrd, mg/L (00955)	Sulfate water, filtrd, mg/L (00945)	Residue water, filtrd, sum of consti- tuents mg/L (70301)	Residue on evap. 180degC wat flt mg/L (70300)
							fixed pt,	end pt, lab, mg/L as CaCO <sub>3</sub> (90410)	Chlor- ide, water, filtrd, mg/L (00940)						
Oct															
11...	--	--	<.02	<.008	--	--	--	--	--	--	--	--	--	--	
11...	15.6	120	28.5	12.3	--	--	--	--	--	--	--	--	--	--	
Dec															
07...	2.2	120	26.3	12.5	1.62	31.6	83	59.7	E.08	8.6	15.6	213	222		
Feb															
09...	3.1	120	27.0	12.3	1.50	28.5	83	56.3	.10	8.3	15.8	207	216		
May															
02...	13.5	150	33.6	16.5	1.79	23.3	114	49.5	E.08	3.3	15.6	221	227		
Aug															
03...	23.6	160	34.9	18.4	1.94	21.1	133	44.3	E.07	5.4	15.3	233	241		

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

Part 3 of 5

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

Date	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Ammonia + org-N, water, filtrd, mg/L (00623)		Nitrite + nitrate, water, filtrd, mg/L (00608)		Partic- ulate nitro- gen, susp, water, mg/L (00631)		Total nitro- gen, water, filtrd, mg/L (49570)	Total nitro- gen, water, unfiltrd mg/L (00602)	Ortho- phosphate, water, filtrd, mg/L (00600)	Phos- phorus, water, filtrd, mg/L (00671)	Phos- phorus, water, unfiltrd mg/L (00666)	Total carbon, suspnd sediment total, mg/L (00665)	Inor- ganic carbon, suspnd sediment total, mg/L (00694)	Organic carbon, suspnd sediment total, mg/L (00688)
		Ammonia as N (00608)	Nitrite as N (00631)	Ammonia as N (00608)	Nitrite as N (00631)	Total nitro- gen, water, filtrd, mg/L (49570)	Total nitro- gen, water, unfiltrd mg/L (00602)	Ortho- phosphate, water, filtrd, mg/L (00600)	Phos- phorus, water, filtrd, mg/L (00671)	Phos- phorus, water, unfiltrd mg/L (00665)	Total carbon, suspnd sediment total, mg/L (00665)	Inor- ganic carbon, suspnd sediment total, mg/L (00688)	Organic carbon, suspnd sediment total, mg/L (00689)		
Oct															
11...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
11...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Dec															
07...	2	.23	.017	1.71	.04	1.9	2.0	.013	.011	.019	.5	<.1	.5		
Feb															
09...	3	.16	.040	1.69	.02	1.9	1.9	.013	.008	.017	.3	<.1	.3		
May															
02...	5	.24	.034	2.11	.04	2.3	2.4	E.007	.010	.026	.3	<.1	.3		
Aug															
03...	2	.28	E.007	2.57	.06	2.8	2.9	E.008	.010	.017	.4	<.1	.4		

## 01457400 MUSCONETCONG RIVER AT RIEGELSVILLE, NJ—Continued

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

Part 4 of 5

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

Date	Organic carbon, water, unfltrd mg/L (00681)	BOD, 5 day, 20 degC mg/L (00310)	Arsenic water, unfltrd ug/L (01000)	Arsenic water, unfltrd ug/L (01002)	Boron water, filtrd, ug/L (01020)	Cadmium water, filtrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chrom- ium, water, unfltrd recover -able, ug/L (01030)	Chrom- ium, water, unfltrd recover -able, ug/L (01034)	Copper, water, unfltrd recover -able, ug/L (01040)	Copper, water, unfltrd recover -able, ug/L (01042)	Lead, water, unfltrd recover -able, ug/L (01049)	Lead, water, unfltrd recover -able, ug/L (01051)
<b>Oct</b>													
11...	--	--	<.12	--	--	<.04	--	<.04	--	<.4	--	<.08	--
11...	--	--	.71	.82	--	.06	<.04	.16	.42	11.6	2.5	.38	1.07
<b>Dec</b>													
07...	2.2	<1.0	--	--	17	--	--	--	--	--	--	--	--
<b>Feb</b>													
09...	1.8	<1.0	--	--	14	--	--	--	--	--	--	--	--
<b>May</b>													
02...	2.0	E1.6	--	--	18	--	--	--	--	--	--	--	--
<b>Aug</b>													
03...	1.8	<1.0	--	--	20	--	--	--	--	--	--	--	--

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

Part 5 of 5

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

Date	Mercury water, recover ug/L (71890)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, unfltrd ug/L (01065)	Nickel, water, recover ug/L (01067)	Selen- ium, water, unfltrd recover -able, ug/L (01145)	Selen- ium, water, unfltrd recover -able, ug/L (01147)	Zinc, water, unfltrd recover -able, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
<b>Oct</b>								
11...	<.010	--	<.06	--	<.08	--	<.60	--
11...	<.010	E.007	1.09	.94	.18	.17	9.0	3
<b>Dec</b>								
07...	--	--	--	--	--	--	--	--
<b>Feb</b>								
09...	--	--	--	--	--	--	--	--
<b>May</b>								
02...	--	--	--	--	--	--	--	--
<b>Aug</b>								
03...	--	--	--	--	--	--	--	--

## 01457400 MUSCONETCONG RIVER AT RIEGELSVILLE, NJ—Continued

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

Part 1 of 4

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

Date	Time	Ammonia			Inor-			Chrom-					
		pH bed sedimnt std	+ org-N, bed sedimnt total, mg/kg (70310)	Phos- phorus, bed sedimnt total, mg/kg (00626)	Total carbon, bed sedimnt total, g/kg (00693)	Inor- ganic carbon, bed sedimnt total, g/kg (00686)	Arsenic bed sedimnt recover -able, ug/g (64847)	Cadmium bed sedimnt recover -able, ug/g (01028)	ium, 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 03...	1010	7.50	230	2,900	8.7	.8	4.0	.080	11	4.2	6	15,000	14

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

Part 2 of 4

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

Date	Mangan- ese, bed sedimnt recover -able, ug/g (01053)	Mercury bed sedimnt recover -able, ug/g (71921)	Nickel, bed sedimnt recover -able, ug/g (01068)	Sele- nium, bed sedimnt recover -able, ug/g (64848)	Zinc, bed sedimnt recover -able, ug/g (01093)	1,2-Di- methyl- naphth- alene, <2 mm, ug/kg (49403)	1,6-Di- methyl- naphth- alene, <2 mm, ug/kg (49404)	1Methyl -9H- fluor- ene, <2 mm, ug/kg (49398)	1-Methyl- phenan- threne, <2 mm, ug/kg (49410)	1- Methyl- pyrene, wsv nat ug/kg (49388)	236Tri- methyl- naphth- alene, <2 mm, ug/kg (49405)	2,6-Di- methyl- naphth- alene, <2 mm, ug/kg (49406)	2-Ethyl naphth- alene bed sed bed sed
Aug 03...	220	.022	6.0	.6	60	<53	E10	E11	E34	E36	E10	E24	<53

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

Part 3 of 4

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

Date	2- Methyl- anthra- cene, bed sed <2 mm, bs <2mm ug/kg (49435)	4H-Cyc- lopenta- ene, bed sed <2 mm, wsv nat ug/kg (49411)	9H- Fluor- ene, bed sed <2 mm, wsv nat ug/kg (49399)	Ace- naphth- ylene, bed sed field, wsv nat ug/kg (49429)	Ace- naphth- ylene, bed sed field, wsv nat ug/kg (49428)	Anthra- cene, bed sed field, wsv nat ug/kg (49434)	Benzo- [a]- anthra- cene, bed sed field, wsv nat ug/kg (49436)	Benzo- [a]- pyrene, bed sed field, wsv nat ug/kg (49389)	Benzo- [b]- fluor- ene, bed sed field, wsv nat ug/kg (49458)	Benzo- [ghi]- peryl- ene, bed sed field, wsv nat ug/kg (49408)	Benzo- [k]- fluor- ene, bed sed field, wsv nat ug/kg (49397)	Chry- sene, bed sed field, wsv nat ug/kg (49450)	Dibenzo- [a,h]- anthra- cene, bed sed field, wsv nat ug/kg (49461)
Aug 03...	E23	E38	E18	E8	E31	60	210	210	280	160	120	220	E57

## 01457400 MUSCONETCONG RIVER AT RIEGELSVILLE, NJ—Continued

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

Part 4 of 4

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

Date	Fluor-anthene <2 mm wsv nat field, ug/kg (49466)	Indeno-[1,2,- 3-cd]- bed sed pyrene, bed sed bed sed wsv nat ug/kg (49390)	Iso-phrone bed sed <2 mm, bed sed wsv nat ug/kg (49400)	Naphth-alene, bed sed <2 mm wsv nat ug/kg (49402)	p-PCBs, bed sed bed sedimnt ug/kg (39519)	Phenan-Cresol, <2 mm, wsv nat ug/kg (49451)	Phenan-threne, <2 mm, wsv nat ug/kg (49409)	Phenan-thri-dine, <2 mm, wsv nat ug/kg (49393)	Pyrene, bed sed <2 mm, wsv nat ug/kg (49387)	Bed sediment, dry svd sve dia percent <.063mm (80164)	Bed sediment, fallidia dst wat percent <.004mm (80157)
Aug 03...	410	E120	<53	E4	E3.65	<53	180	<53	370	4	1

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

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

Date	Time	Enterococci m-E Temper- ature, water, deg C (00010)	E coli, m-TEC MF, water, col/ 100 mL (31649)	Fecal coli-form, MF, water, col/ 100 mL (31633)	ECbroth water, MPN/ 100 mL (31615)
Aug 10...	0925	--	120	<10	110
17...	0920	19.6	140	60	170
24...	0930	19.6	150	60	300
31...	0940	17.7	350	10	170
Sep 07...	0940	16.7	130	<10	230