



Water-Data Report 2006

01409387 MULLICA RIVER AT OUTLET OF ATSION LAKE, AT ATSION, NJ

MULLICA RIVER BASIN

LOCATION.--Lat 39°44'25", long 74°43'36" referenced to North American Datum of 1983, Shamong Township, Burlington County, NJ, Hydrologic Unit 02040301, at bridge on U.S. Route 206 in Atsion, at outlet of Atsion Lake, and 0.2 mi upstream from Wesickaman Creek.

DRAINAGE AREA.--26.7 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Miscellaneous measurements, water years 1980 to current year.

GAGE.--Staff gage.

REMARKS.--Occasional regulation by Atsion Lake and small ponds upstream.

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

Date	Discharge, in ft ³ /s
Dec 5, 2005	76.0
Feb 23, 2006	50.8
May 31, 2006	3.99
Aug 14, 2006	11.7

01409387 MULLICA RIVER AT OUTLET OF ATSION LAKE, AT ATSION, NJ—Continued**WATER-QUALITY RECORDS**

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

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: Undeveloped Land Use Indicator; Trace Element (303d) and Low-Level Mercury Assessments special study site, New Jersey Department of Environmental Protection (NJDEP) Watershed Management Area 14. The sample on Nov. 18 was for the low-level mercury assessment; the sample on June 26 was for the trace element assessment (303d).

COOPERATION.--Physical measurements and samples for laboratory analyses on Nov. 18 and June 26 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 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 units	UV absorb- ance, 280 nm, wat flt units	Baro- metric pres- sure, mm Hg (61726)	Dis- solved oxygen, mg/L (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfiltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm (00095)	Temper- ature, air, deg C (00020)
Nov													
18...	0930	Field Blank	--	--	--	--	--	--	--	--	--	--	--
18...	1000	Environmental	--	1.1	--	--	770	10.0	88	4.7	60	1.4	
Dec													
05...	1030	Environmental	76	.9	.441	.340	766	12.1	90	3.7	64	3.5	
Feb													
23...	0850	Environmental	51	.9	.275	.209	759	12.4	95	3.7	71	4.0	
May													
31...	1210	Environmental	4.0	4.2	.372	.292	766	7.1	81	4.6	47	25.5	
Jun													
26...	1040	Field Blank	--	--	--	--	--	--	--	--	--	--	
26...	1045	Environmental	--	4.5	--	--	765	7.1	82	4.8	40	24.5	
Aug													
14...	0930	Environmental	12	24	1.22	.984	761	6.6	77	4.6	44	24.5	

01409387 MULLICA RIVER AT OUTLET OF ATSION LAKE, AT ATSION, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 2 of 5

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

Date	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO ₃ (00900)	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)	ANC, wat unf fixed end pt, mg/L as CaCO ₃ (90410)	Chlor- ide, lab, mg/L as CaCO ₃ (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Residue	
											on evap.	Residue at 105 deg. C, suspended, mg/L (00530)
Nov												
18...	--	--	--	--	--	--	--	--	--	--	--	--
18...	10.1	--	--	--	--	--	--	--	--	--	--	--
Dec												
05...	3.1	7	1.33	.786	.89	5.11	--	7.62	<.10	4.0	8.63	41
Feb												
23...	3.8	7	1.48	.831	.89	6.24	--	10.0	E.06	3.0	7.17	38
May												
31...	22.0	6	1.27	.636	.61	4.53	<5	7.83	<.10	2.8	4.02	36
Jun												
26...	--	--	<.02	<.008	--	--	--	--	--	--	--	--
26...	22.8	5	1.01	.550	--	--	--	--	--	--	--	--
Aug												
14...	22.9	6	1.28	.667	.81	3.92	<5	6.20	<.10	6.7	4.12	37
												18

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 3 of 5

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

Date	Ammonia + org-N, water, fltrd, mg/L as N (00623)		Nitrite water, fltrd, mg/L as N (00608)	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)
	Ammonia water, fltrd, mg/L as N (00608)	Nitrite water, fltrd, mg/L as N (00631)											
Nov													
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
Dec													
05...	.26	.026	E.04	<.02	--	--	E.004	E.002	.007	.2	<.1	.2	9.5
Feb													
23...	.21	.042	.16	<.02	.38	--	E.004	E.003	.007	.2	<.1	.2	5.7
May													
31...	.27	.044	.09	.15	.35	.51	E.005	<.004	.009	2.0	<.1	2.0	6.4
Jun													
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--	--	--
Aug													
14...	.55	.150	.07	.37	.62	.99	.012	E.003	.031	11.0	<.1	11.0	15.2

01409387 MULLICA RIVER AT OUTLET OF ATSION LAKE, AT ATSION, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 4 of 5

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

Date	BOD, water, unfltrd 5 day, 20 degC	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, 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)	Mercury water, fltrd, ug/L (71890)
Nov													
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
Dec													
05...	<1.0	--	--	16	--	--	--	--	--	--	--	--	--
Feb													
23...	<1.0	--	--	14	--	--	--	--	--	--	--	--	--
May													
31...	<1.0	--	--	14	--	--	--	--	--	--	--	--	--
Jun													
26...	--	<.12	--	--	<.04	--	.04	--	<.4	--	<.08	--	<.010
26...	--	.71	1.1	--	.04	E.03	.28	.49	2.9	.9	.44	1.28	<.010
Aug													
14...	E1.4	--	--	15	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 5 of 5

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

Date	Mercury water, fltrd, recover low level, ng/L (50287)	Mercury water, unfltrd recover -able, ug/L (71900)	Nickel, water, unfltrd recover -able, ug/L (01065)	Nickel, water, fltrd, ug/L (01067)	Selen- ium, water, recover -able, ug/L (01145)	Selen- ium, water, unfltrd fltrd, ug/L (01147)	Zinc, water, unfltrd recover -able, ug/L (01090)	Zinc, water, unfltrd recover -able, ug/L (01092)
Nov								
18...	<.04	--	--	--	--	--	--	--
18...	.96	--	--	--	--	--	--	--
Dec								
05...	--	--	--	--	--	--	--	--
Feb								
23...	--	--	--	--	--	--	--	--
May								
31...	--	--	--	--	--	--	--	--
Jun								
26...	--	--	<.06	--	<.08	--	.7	--
26...	--	<.010	1.01	.72	.09	.15	5.6	4
Aug								
14...	--	--	--	--	--	--	--	--

01409387 MULLICA RIVER AT OUTLET OF ATSION LAKE, AT ATSION, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
[Remark codes: <, less than.]

Date	Time	Enter-		Fecal	
		cocci, m-E water, water, deg C (00010)	MF, water, col/ (31649)	E coli, m-TEC water, col/ (31633)	coli- form, ECbroth water, MPN/ (31615)
May					
03...	1100	17.8	<10	<10	<20
10...	1050	19.3	<10	<10	<20
17...	1125	19.6	10	<10	<20
24...	1110	19.6	<10	<10	<20
31...	1115	26.7	40	<10	20