



Water-Data Report 2007

**0140940200 HAYS MILL CREEK NEAR CHESILHURST, NJ**

MULLICA RIVER BASIN

LOCATION.--Lat 39°45'02", long 74°50'27" referenced to North American Datum of 1983, Waterford Township, Camden County, NJ, Hydrologic Unit 02040301, at bridge on Tremont Avenue in Wharton State Forest, 0.3 mi southeast from Hunt Boulevard (Maple Island Road), 0.5 mi upstream from Cooper Branch, and 2.0 mi northeast of Chesilhurst.

DRAINAGE AREA.--7.13 mi<sup>2</sup>.

**SURFACE-WATER RECORDS**

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1974-80, 1991 to current year. Annual maximum, water years 1976-79.

GAGE.--Reference point only.

**DISCHARGE MEASUREMENTS  
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Date	Discharge, in ft <sup>3</sup> /s
Dec 12, 2006	12.6
Mar 29, 2007	12.3
Aug 13, 2007	6.69
Sep 20, 2007	5.06

## 0140940200 HAYS MILL CREEK NEAR CHESILHURST, NJ—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1991-2001, 2007.

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: Statewide Status, NJ Department of Environmental Protection Watershed Management Area 14.

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, suspended residue, ammonia-plus-organic nitrogen in bed sediment, and phosphorus in bed sediment 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 5

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

Date	Time	Turbdty white light, det ang 90+/-30 corrcrd	UV absorb- ance, 254 nm, wat flt	UV absorb- ance, 280 nm, wat flt	Baro- metric pressure, mm Hg	Dis- solved oxygen, mg/L (00025)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, unfltrd water, field, std units	Specif- ic conduc- tance, μS/cm (00095)	Temper- ature, wat unf air, deg C (00020)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
NTRU (63676)	/cm (50624)	/cm (61726)	mm Hg (00025)	mg/L (00300)	(00301)	μS/cm (00095)	deg C (00020)	deg C (00010)	mg/L (00900)	mg/L (00915)				
Nov 15...	1000	1.7	.839	.662	760	6.4	62	5.8	104	17.1	14.0	15	3.50	
Feb 22...	1000	1.2	.105	.079	752	11.1	86	6.0	196	7.6	4.7	22	5.07	
May 30...	1100	1.3	.194	.153	766	7.5	77	6.3	152	21.3	16.9	23	5.26	
Aug 07...	0930	3.0	.115	.092	758	7.1	80	6.4	155	26.1	21.0	23	5.28	

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

Part 2 of 5

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

Date	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, lab, mg/L as CaCO3	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents (70301)	Residue on evap. (70300)	Residue at 180degC (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)
	(00925)	(00935)	(00930)	(90410)	(00940)	(00950)	(00955)	(00945)	(70301)	(70300)	(00530)		
Nov 15...	1.55	2.02	10.8	7	17.1	<.10	4.3	5.13	50	90	2	.46	.028
Feb 22...	2.34	1.99	23.8	7	39.8	<.10	4.9	7.75	97	106	1	.18	.021
May 30...	2.37	2.03	16.4	13	28.0	<.10	5.1	6.12	79	87	2	.30	.015
Aug 07...	2.48	2.06	15.7	13	25.9	<.10	4.6	5.91	74	86	12	.19	.032

## 0140940200 HAYS MILL CREEK NEAR CHESILHURST, NJ—Continued

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

Part 3 of 5

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

Date	Nitrate + nitrite water fltrd, mg/L as N (00631)	Partic- ulate nitro- gen, water, fltrd, 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 (00671)			Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, susnd sedimnt total, mg/L (00694)	Inor- ganic carbon, susnd sedimnt total, mg/L (00688)	Organic carbon, susnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Arsenic water, fltrd, mg/L (01000)	Arsenic water, unfltrd mg/L (01002)
Nov 15...	.32	.04	.78	.82	E.002	.009	.015	.5	<.1	.5	14.8	--	--		
Feb 22...	1.67	.04	1.8	1.9	<.010	<.008	E.005	.3	<.1	.3	2.6	E.11	.23		
May 30...	1.29	.04	1.6	1.6	<.010	E.007	.008	.4	<.1	.4	3.7	--	--		
Aug 07...	1.02	.09	1.2	1.3	<.010	E.006	.019	1.0	<.1	1.0	2.4	.24	.41		

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

Part 4 of 5

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

Date	Barium, water, unfltrd recover -able, µg/L (01007)	Beryll- ium, water, unfltrd recover -able, µg/L (01012)	Boron, water, unfltrd recover -able, µg/L (01020)	Boron, water, unfltrd recover -able, µg/L (01022)	Cadmium water, unfltrd recover -able, µg/L (01027)	Chrom- ium, water, unfltrd recover -able, µg/L (01034)	Copper, water, unfltrd recover -able, µg/L (01042)	Iron, water, unfltrd recover -able, µg/L (01045)	Lead, water, unfltrd recover -able, µg/L (01051)	Mangan- ese, water, unfltrd recover -able, µg/L (01055)	Mercury water, unfltrd recover -able, µg/L (71900)	Nickel, water, unfltrd recover -able, µg/L (01067)	Selen- ium, water, unfltrd recover -able, µg/L (01147)	
Nov 15...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Feb 22...	42.9	<.06	21	21	.05	<.60	<1.2	154	.46	21.1	.017	.89	.08	
May 30...	--	--	25	--	--	--	--	--	--	--	--	--	--	--
Aug 07...	47.0	E.03	23	19	.03	<.60	<1.2	802	2.12	46.1	.018	.78	.12	

## 0140940200 HAYS MILL CREEK NEAR CHESILHURST, NJ—Continued

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

Part 5 of 5  
[Remark codes: <, less than;  
E, estimated.]

Date	Silver, water, recover -able, µg/L (01077)	Zinc, water, recover -able, µg/L (01092)
<b>Nov</b>		
15...	--	--
<b>Feb</b>		
22...	<.02	8
<b>May</b>		
30...	--	--
<b>Aug</b>		
07...	<.02	5.0

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

Part 1 of 7  
[Remark codes: <, less than; E, estimated.]

Date	1-Naph-thol, water, 0.7u GF	2,6-Di-ethyl-aniline water, 0.7u GF	2Chloro-diethyl acetanilide wat flt	CIAT, water, fltrd,	2-Ethyl-methyl aniline water, fltrd,	3,4-Di-chloro-aniline water, fltrd,	3,5-Di-chloro-aniline water, fltrd,	2methyl-Chloro-phenol, water, fltrd,	Aceto-chlor, water, fltrd,	Ala-chlor, water, fltrd,	alpha-Endo-sulfan, water, fltrd,	Atra-zine, water, fltrd,	Azin-phos-methyl oxon, water, fltrd,	
	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)	
May 30...	<.09	<.006	<.006	E.006	<.010	<.004	<.004	<.012	<.005	<.006	E.006	<.011	.009	<.04

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

Part 2 of 7  
[Remark codes: <, less than; E, estimated.]

Date	Azin-phos-methyl, water, 0.7u GF	Ben-flur-alin, water, 0.7u GF	Car-baryl, water, 0.7u GF	Carbo-furan, water, 0.7u GF	Chlor-pyrifos oxon, fltrd,	Chlor-pyrifos water, fltrd,	Per-methrin water, fltrd,	cis-Permethrin water, fltrd,	Propi-conazole, water, fltrd,	Cyana-zine, water, fltrd,	Cyflu-thrin, water, fltrd,	lambda-Cyhalothrin, water, fltrd,	Cyper-methrin, water, fltrd,	DCPA, water, 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)	
May 30...	<.080	<.010	<.060	<.020	<.06	<.005	<.010	<.013	<.018	<.053	<.014	<.046	<.003	

## 0140940200 HAYS MILL CREEK NEAR CHESILHURST, NJ—Continued

**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,  μg/L (62170)	Diazi- non, water, fltrd,  μg/L (39572)	Dicro- tophos, water, fltrd,  μg/L (38454)	Diel- drin, water, fltrd,  μg/L (39381)	Dimeth- oate, water, 0.7u GF  μg/L (82662)	Disulf- onate, water, fltrd,  μg/L (61640)	Disul- foton, water, fltrd,  μg/L (82677)	Endo- sulfan, water, fltrd,  μg/L (61590)	EPTC, water, fltrd,  μg/L (82668)	Ethion, monoxon, water, fltrd,  μg/L (61644)	Ethion, water, fltrd,  μg/L (82346)	Etho- prop, water, fltrd,  μg/L (82672)	Fenami- phos sulfone water, fltrd,  μg/L (61645)
May 30...	<.012	<.005	<.08	<.009	<.006	<.01	<.02	<.022	<.002	<.02	<.016	<.012	<.053

**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)	Desulf- inyl- fipro- nil Fenami- phos, water, fltrd,  μg/L (61591)	Fipro- nil sulfide Fenami- phos, amide, wat flt  μg/L (62169)	Fipro- nil sulfone Fipro- nil, water, fltrd,  μg/L (62167)	Fipro- nil sulfone Fipro- nil, water, fltrd,  μg/L (62168)	Fonofos water, fltrd,  μg/L (62166)	Hexa- zinone, water, fltrd,  μg/L (04095)	Ipro- dione, water, fltrd,  μg/L (04025)	Isofen- phos, water, fltrd,  μg/L (61593)	Mala- xon, water, fltrd,  μg/L (61594)	Mala- xon, water, fltrd,  μg/L (61652)	Meta- laxyl, water, fltrd,  μg/L (39532)	
May 30...	<.04	<.03	<.029	E.005	<.024	<.016	<.006	<.026	<.026	<.011	<.039	<.016	E.005

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

Part 5 of 7

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

Date	Methi- althon water, fltrd,  μg/L (61598)	Methyl para- thion, water, fltrd,  μg/L (61664)	Methyl para- thion, Metola- chlor, water, fltrd,  μg/L (82667)	Metri- buzin, water, fltrd,  μg/L (39415)	Moli- nate, water, fltrd,  μg/L (82630)	Myclo- butanil water, fltrd,  μg/L (82671)	Oxy- fluor- fen, water, fltrd,  μg/L (61599)	Pendi- meth- alin, water, fltrd,  μg/L (61600)	Phorate water, fltrd,  μg/L (82683)	Phorate water, fltrd,  μg/L (61666)	Phosmet water, fltrd,  μg/L (82664)	Prome- ton, water, fltrd,  μg/L (61601)	
May 30...	<.009	<.02	<.008	.015	<.012	<.003	<.033	<.017	<.020	<.03	<.020	<.008	<.01

## 0140940200 HAYS MILL CREEK NEAR CHESILHURST, NJ—Continued

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

Part 6 of 7

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

Date	Prometryn, water, fltrd, 0.7u GF µg/L (04036)	Propyzamide, 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)	Sima-zine, water, fltrd 0.7u GF µg/L (04035)	Tebu-thiuron, water, fltrd 0.7u GF µg/L (82670)	Teflu-thrin, water, fltrd 0.7u GF µg/L (61606)	Ter-bufos oxon sulfone water, fltrd, 0.7u GF µg/L (61674)	Terbu-fos, water, fltrd, 0.7u GF µg/L (82675)	Ter-buthyl-azine, water, fltrd, 0.7u GF µg/L (04022)	Thio-bencarb water, fltrd, 0.7u GF µg/L (82681)	trans-Propi-conazole, water, fltrd, 0.7u GF µg/L (79847)	Tribu-phos, water, fltrd, 0.7u GF µg/L (61610)
May 30...	<.006	<.004	<.011	<.02	<.006	<.02	<.003	<.04	<.01	<.01	<.010	<.03	<.035

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

Part 7 of 7  
[Remark codes: <, less than;  
E, estimated.]

Date	Tri-flur-alin, water, fltrd 0.7u GF µg/L (82661)	Di-chlor-vos, water, fltrd 0.7u GF µg/L (38775)
May 30...	<.009	<.01

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

Part 1 of 4

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

Date	Time	Ammonia			Inor-ganic			Chrom-					
		pH	+ org-N, bed sed	Phos-phorus, bed	Total carbon, bed	carbon, bed	Arsenic bed	Cadmium bed	ium, bed	Cobalt bed	Copper, bed	Iron, bed	Lead, bed
		sedimnt	total, std	total, mg/kg	total, mg/kg	total, g/kg	total, g/kg	-able, ug/g	-able, ug/g	-able, ug/g	-able, ug/g	total, ug/g	total, ug/g
Date	Time	units (70310)	as N (00626)	mg/kg (00668)	mg/kg (00693)	g/kg (00686)	g/kg (64847)	-able, ug/g (01028)	-able, ug/g (01029)	-able, ug/g (01038)	-able, ug/g (01043)	total, ug/g (01170)	total, ug/g (01052)
Aug 07...	0930	6.00	70	130	1.5	<.2	.8	.010	3.7	.3	<2	900	7.8

## 0140940200 HAYS MILL CREEK NEAR CHESILHURST, NJ—Continued

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

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, bed sed <2 mm, wsv nat (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 <2 mm wsv nat ug/kg (49948)
Aug 07...	9.6	<.007	.5	<.1	<3.1	<50	<50	<50	E20	<50	<50	<50	<50

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

Part 3 of 4

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

Date	2- Methyl- anthra- cene, bed sed <2 mm, ug/kg (49435)	4H-Cyc- lopenta -def]- phenan- threne, <2 mm, bs <2mm ug/kg (49411)	9H- Fluor- ene, bed sed <2 mm, wsv nat ug/kg (49399)	Ace- naphth- ene, bed sed <2 mm, wsv nat ug/kg (49429)	Ace- naphth- ylene, bed sed <2 mm, wsv nat ug/kg (49428)	Anthra- cene, bed sed <2 mm, wsv nat ug/kg (49434)	Benzo- [a]- anthra- cene, bed sed field, <2 mm, ug/kg (49436)	Benzo- [a]- pyrene, bed sed <2 mm, wsv nat ug/kg (49389)	Benzo- [b]- fluor- ene, bed sed <2 mm, bed sed ug/kg (49458)	Benzo- [ghi]- peryl- ene, bed sed <2 mm, bed sed ug/kg (49408)	Benzo- [k]- fluor- ene, bed sed <2 mm, wsv nat ug/kg (49397)	Chry- sene, bed sed <2 mm, bed sed ug/kg (49450)	Dibenzo- -[a,h]- anthra- cene, bed sed <2 mm, ug/kg (49461)
Aug 07...	<50	E7	E6	E16	E4	<50	E30	<50	<50	<50	<50	E21	<50

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

Part 4 of 4

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

Date	Fluor- anthene <2 mm, wsv nat ug/kg (49466)	Indeno- [1,2,- 3-cd]- pyrene, bed sed field, <2 mm, ug/kg (49390)	Iso- phorone bed sed <2 mm, wsv nat ug/kg (49400)	Naphth- alene, bed sed wsv nat field, <2 mm, ug/kg (49402)	p- Cresol, PCBs, <2 mm, wsv nat ug/kg (39519)	Phenan- threne, bed sed <2 mm, wsv nat field, ug/kg (49451)	Phenan- threne, bed sed <2 mm, wsv nat field, ug/kg (49409)	Pyrene, bed sed <2 mm, wsv nat field, ug/kg (49393)	Bed sediment, dry svd sve dia percent <.063mm
Aug 07...	E84	<50	<50	<50	<5.00	<50	<50	E64	.0