

## Water-Data Report 2007

**01407806 HANNABRAND BROOK AT OLD MILL ROAD, NEAR SPRING LAKE HEIGHTS, NJ**

SHARK RIVER BASIN

LOCATION.--Lat 40°08'36", long 74°03'12" referenced to North American Datum of 1983, Wall Township, Monmouth County, NJ, Hydrologic Unit 02030104, at bridge on Old Mill Road in Spring Lake Heights, 80 ft north from Butternut Road, 500 ft upstream from confluence with Wreck Pond Brook, and 0.7 mi southwest from Spring Lake Heights.

DRAINAGE AREA.--3.13 mi<sup>2</sup>.

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 2001-02, 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 12.

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: &lt;, less than; E, estimated.]

Date	Time	Turbidity white light, det ang 90+/-30 corrctd	UV absorb- ance, 254 nm, wat flt units	UV absorb- ance, 280 nm, wat flt units	Baro- metric pres- sure, mm Hg	Dis- solved oxygen, mg/L (00025)	Dis- solved oxygen, percent of sat- uration (00300)	pH, water, unfltrd field, std units	Specif- ic conduc- tance, μS/cm (00400)	Temper- ature, wat unf wat air, deg C (00095)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO <sub>3</sub> (00900)	Calcium water, fltrd, mg/L (00915)
Nov 15...	0900	7.7	.260	.202	763	7.9	76	6.7	187	16.0	13.8	37	9.28	
Feb 06...	1000	3.2	.059	.046	771	10.9	77	6.3	263	-11.0	1.2	40	9.49	
May 24...	0900	2.5	.121	.095	775	8.8	85	6.5	224	22.0	14.7	37	8.82	
Aug 01...	0830	2.7	.147	.116	762	7.4	81	6.6	193	27.0	19.5	34	8.06	

## 01407806 HANNABRAND BROOK AT OLD MILL ROAD, NEAR SPRING LAKE HEIGHTS, NJ—Continued

**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)	CaCO <sub>3</sub> (90410)	ANC, wat unf fixed end pt, lab, mg/L as (00940)	Chlor- ide, water, fltrd, mg/L (00950)	Fluor- ide, water, fltrd, mg/L (00955)	Silica, water, fltrd, mg/L (00945)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue on evap. 180degC wat flt mg/L (70300)	Residue total at 180degC non- filter- able, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)
Nov 15...	3.47	3.98	17.0	21	27.9	<.10	6.4	13.1	98	114	5	.43	.054	
Feb 06...	3.98	2.70	29.1	13	49.2	<.10	6.8	17.9	136	138	2	.40	.098	
May 24...	3.55	2.47	24.4	14	40.4	<.10	5.7	15.9	116	125	2	.56	.063	
Aug 01...	3.36	2.55	19.5	14	32.6	<.10	6.8	15.0	101	119	4	.38	.065	

**WATER-QUALITY DATA**  
**WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**  
 Part 3 of 5  
 [Remark codes: <, 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, unfltrd 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 as P (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, suspnd water, unfltrd mg/L (00694)	Inor- ganic carbon, suspnd water, unfltrd mg/L (00688)	Organic carbon, suspnd water, unfltrd mg/L (00689)	Organic carbon, sedimnt water, fltrd, mg/L (00681)	Arsenic water, fltrd, mg/L as P (01000)	Arsenic water, unfltrd mg/L (01002)
Nov 15...	.85	.10	1.3	1.4	<.010	.012	.031	1.0	<.1	1.0	6.2	--	--
Feb 06...	1.85	.06	2.2	2.3	<.010	<.008	.017	.8	<.1	.8	1.9	E.08	.25
May 24...	1.32	.04	1.9	1.9	<.010	.011	.019	.6	<.1	.6	2.4	--	--
Aug 01...	1.08	.07	1.5	1.5	E.004	.016	.028	.9	<.1	.9	3.3	.34	.38

## 01407806 HANNABRAND BROOK AT OLD MILL ROAD, NEAR SPRING LAKE HEIGHTS, NJ—Continued

**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...	--	--	25	--	--	--	--	--	--	--	--	--	
Feb 06...	46.9	.10	19	19	.22	<.60	E.9	404	.58	55.8	.034	1.53	
May 24...	--	--	23	--	--	--	--	--	--	--	--	--	
Aug 01...	42.6	.07	23	22	.12	<.60	2.8	782	.86	34.8	.025	1.2	

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

Part 5 of 5

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

Date	Silver, water, unfltrd recover -able, µg/L (01077)	Zinc, water, unfltrd recover -able, µg/L (01092)
Nov 15...	--	--
Feb 06...	.08	17
May 24...	--	--
Aug 01...	<.02	9.5

## 01407806 HANNABRAND BROOK AT OLD MILL ROAD, NEAR SPRING LAKE HEIGHTS, 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, 0.7u GF	2,6-Di-ethyl-aniline, water, 0.7u GF	2Chloro- -2',6'-diethyl acetanilide, water, fltrd	CIAT, water, 0.7u GF	2-Ethyl- -6-methyl-chloro-aniline, water, fltrd,	3,4-Di-chloro-aniline, water, fltrd,	3,5-Di-chloro-aniline, water, fltrd,	4-Chloro- 2methyl-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 24...	<.09	<.006	<.006	E.006	<.010	<.004	<.012	<.005	<.006	<.005	<.011	.011	<.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, 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, 0.7u GF	Chlor-pyrifos, water, 0.7u GF	Per-methrin, water, 0.7u GF	Propi-conazole, water, 0.7u GF	Cyana-zine, water, 0.7u GF	Cyflu-thrin, water, 0.7u GF	Lambda-Cyhalothrin, water, 0.7u GF	Cyper-methrin, water, 0.7u GF	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 24...	<.080	<.010	E.007	<.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,	Diazi- non, water, fltrd,	Dicro- tophos, water, fltrd,	Diel- drin, water, fltrd,	Dimeth- oate, water, 0.7u GF	Disulf- oton, sulfone, 0.7u GF	Disul- foton, water, 0.7u GF	Endo- sulfan, sulfate, 0.7u GF	EPTC, water, 0.7u GF	Ethion, monoxon, 0.7u GF	Ethion, water, 0.7u GF	Etho- prop, water, 0.7u GF	Fenami- phos sulfone water, fltrd,
	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)
May 24...	<.012	<.005	<.08	<.009	<.006	<.01	<.02	<.022	<.002	<.02	<.016	<.012	<.053

## 01407806 HANNABRAND BROOK AT OLD MILL ROAD, NEAR SPRING LAKE HEIGHTS, 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)
May 24...	<.04	<.03	<.029	<.013	E.002	E.005	<.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)	Prome-ton, water, fltrd, µg/L (04037)	Prome-tryn, water, fltrd, µg/L (04036)
May 24...	<.009	<.02	<.008	.011	<.012	<.023	<.033	<.017	<.020	<.03	<.020	.01	<.006

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

Part 6 of 7

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

Date	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, 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 water, fltrd, 0.7u GF µg/L (61674)	Terbu-fos, water, fltrd, 0.7u GF µg/L (82675)	Ter-buthyl-fos, 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)	Tri-bu-phos, water, fltrd, µg/L (61610)	Tri-flu-alin, water, fltrd, µg/L (82661)
May 24...	<.004	<.011	<.02	.011	<.02	<.003	<.04	<.01	<.01	<.010	<.03	<.035	<.009

## 01407806 HANNABRAND BROOK AT OLD MILL ROAD, NEAR SPRING LAKE HEIGHTS, NJ—Continued

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

Part 7 of 7

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

Date	Di-chlor- vos, water, filtrd,  µg/L (38775)
May 24...	<.01

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

Part 1 of 4

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

Date	Time	Ammonia			Inor-ganic			Chrom-					
		pH bed sedimnt	+ org-N, bed total, std units (70310)	Phos-phorus, bed sedimnt	Total carbon, bed sedimnt	Inorg-anic carbon, bed sedimnt	Arsenic bed recover	Cadmium bed sediment	ium, bed sediment	Cobalt bed sediment	Copper, bed sediment	Iron, bed sediment	Lead, bed sediment
Aug 01...	0830	6.78	120	600	3.0	<.2	.5	.140	4.9	1.2	6	3,400	9.1

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

Part 2 of 4

[Remark codes: <, 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-naphth-ene, <2 mm, ug/kg (49398)	1-Methyl-phenan-threne, <2 mm, ug/kg (49410)	1-Methyl-pyrene, <2 mm, ws v nat (49388)	236Tri-methyl-naphth-ene, <2 mm, ug/kg (49405)	2,6-Di-methyl-naphth-ene, <2 mm, ug/kg (49406)	2-Ethylnaphth-alene, <2 mm, ug/kg (49948)
Aug 01...	32	.012	2.4	<.1	16	<50	<50	E10	E38	E32	<50	E8	<50

## 01407806 HANNABRAND BROOK AT OLD MILL ROAD, NEAR SPRING LAKE HEIGHTS, NJ—Continued

**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, bs ug/kg (49435)	4H-Cyclo-lopenta-fluor-anthra-cene, phenan-threne, <2 mm, bs ug/kg (49411)	9H-Fluor-ene, bed sed ug/kg (49399)	Ace-naphth-ylene, bed sed ug/kg (49429)	Ace-naphth-ylene, bed sed ug/kg (49428)	Anthra-cene, bed sed <2 mm, wsv nat ug/kg (49434)	Benzene, [a]-anthra-cene, bed sed <2 mm, field, wsv nat ug/kg (49436)	Benzene, [a]-pyrene, bed sed <2 mm, wsv nat ug/kg (49389)	Benzene, [b]-fluor-anthene, bed sed <2 mm, bed sed ug/kg (49458)	Benzene, [b]-peryl-anthene, bed sed <2 mm, bed sed ug/kg (49408)	Benzene, [g,h]-anthene, bed sed <2 mm, bed sed ug/kg (49397)	Benzene, [k]-fluor-anthene, bed sed <2 mm, field, wsv nat ug/kg (49450)	Chrysene, bed sed ug/kg (49461)	Dibenzo-[a,h]-anthra-cene, bed sed ug/kg (49461)
Aug 01...	<50	66	E33	E25	<50	51	290	330	590	E130	220	400	<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, bed sed <2 mm, wsv nat ug/kg (49466)	Indeno[1,2,3-cd]pyrene, bed sed ug/kg (49390)	Iso-phorone, bed sed ug/kg (49400)	Naphth-alene, bed sed ug/kg (49402)	p-PCBs, bed sed <2 mm, bed wsv nat ug/kg (49402)	Phenanthrene, bed sed <2 mm, wsv nat ug/kg (39519)	Phenanthrene, bed sed <2 mm, wsv nat ug/kg (49451)	Pyrene, bed sed <2 mm, wsv nat ug/kg (49409)	Pyrene, bed sed <2 mm, wsv nat ug/kg (49393)	Sediment, bed sed percent <.063mm (80164)	Bed sediment, dry svd sve dia
Aug 01...	1,000	<140	<50	E3	<5.00	<50	560	<50	760	.0	