

Water-Data Report 2006

01407253 WILLOW BROOK NEAR HOLMDEL, NJ

SHREWSBURY RIVER BASIN

LOCATION.--Lat 40°19'47", long 74°10'25" referenced to North American Datum of 1983, Monmouth County, NJ, Hydrologic Unit 02030104, at bridge on Willow Brook Road, 0.7 misouthwest Long Bridge Road, 0.9 mi east of State Highway 34, and 1.2 mi southeast of Holmdel.

DRAINAGE AREA.--7.56 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975-83, 2005 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: Statewide Status, New Jersey Department of Environmental Protection (NJDEP) Watershed Management Area 12.

COOPERATION.--Physical measurements and samples for laboratory analyses 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	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, mg/L (00300)	pH, percent of sat- uration (00301)	Specif. water, unfltrd field, std units	Conduc- tance, wat unf uS/cm (00095)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO ₃ (00900)	Calcium water, fltrd, mg/L (00915)
Nov 15...	0930	3.7	.065	.051	769	9.5	84	7.3	369	16.8	10.6	110	34.0	
Feb 07...	0930	5.7	.038	.029	759	13.0	96	7.2	329	1.4	2.6	81	25.1	
May 04...	0930	4.5	.054	.042	759	11.7	112	7.4	331	18.0	13.4	95	30.6	
Aug 10...	1000	5.9	.073	.054	760	8.9	96	7.6	384	23.5	18.8	110	37.4	

01407253 WILLOW BROOK NEAR HOLMDEL, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 2 of 5

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

Date	ANC, wat unf						Residue water,		Residue on		Residue total		Ammonia	
	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	CaCO ₃ mg/L as (90410)	Chlor- ide, end pt water, fltrd, mg/L (00940)	Fluor- ide, lab water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	consti- tuents mg/L (70301)	180degC wat flt mg/L (70300)	sus- pended, mg/L (00530)	at 105 deg. C, mg/L (00623)	org-N, water, fltrd, mg/L (00608)	Ammonia water, fltrd, mg/L (00608)
Nov 15...	5.07	4.17	24.5	41	57.6	.25	13.2	36.0	201	215	1	.18	.047	
Feb 07...	4.49	2.60	24.5	28	51.3	.21	10.9	33.0	175	187	4	.28	.076	
May 04...	4.43	2.82	23.6	36	53.1	.24	10.8	32.1	182	198	4	.46	.039	
Aug 10...	4.58	3.87	23.5	56	56.5	.31	13.5	32.7	208	229	4	.25	.030	

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 3 of 5

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

Date	Nitrite + nitrate 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- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, susnd sediment mg/L (00694)	Inor- ganic carbon, susnd sediment mg/L (00688)	Organic carbon, susnd sediment mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Arsenic water, fltrd, ug/L (01000)
	.35	.04	.52	.57	E.002	.005	.047	.3	<.1	.3	3.1	<1.0	--
Nov 15...	.35	.04	.52	.57	E.002	.005	.047	.3	<.1	.3	3.1	<1.0	--
Feb 07...	1.24	.04	1.5	1.6	E.006	.005	.046	.4	<.1	.4	1.4	<1.1	.31
May 04...	.62	.06	1.1	1.1	.011	.013	.053	.3	<.1	.3	1.6	<1.1	--
Aug 10...	.42	.04	.67	.71	.015	.028	.122	.3	<.1	.3	2.4	<1.0	.65

01407253 WILLOW BROOK NEAR HOLMDEL, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 4 of 5

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

Date	Beryll-			Chrom-			Mangan-			Mercury	Nickel
	Arsenic water unfltrd ug/L (01002)	Barium, water, unfltrd ug/L (01007)	ium, water, unfltrd ug/L (01012)	Boron, water, unfltrd ug/L (01020)	Boron, water, unfltrd ug/L (01022)	Cadmium water, unfltrd ug/L (01027)	ium, water, unfltrd ug/L (01034)	Copper, water, unfltrd ug/L (01042)	Iron, water, unfltrd ug/L (01045)	Lead, water, unfltrd ug/L (01051)	
Nov 15...	--	--	--	36	--	--	--	--	--	--	--
Feb 07...	.72	25.6	<.06	26	25	.04	.66	.7	875	.24	139
May 04...	--	--	--	32	--	--	--	--	--	--	--
Aug 10...	1.5	27.5	<.06	32	29	E.03	.35	1.5	1,180	.34	35.0

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO
SEPTEMBER 2006

Part 5 of 5

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

Date	Silver, Zinc,		
	Selen- ium, water, unfltrd ug/L (01147)	water, unfltrd ug/L (01077)	water, unfltrd ug/L (01092)
Nov 15...	--	--	--
Feb 07...	.09	<.16	7
May 04...	--	--	--
Aug 10...	.09	<.16	3

01407253 WILLOW BROOK NEAR HOLMDEL, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 1 of 4

[Remark codes: <, 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 (00668)	Inor- ganic carbon, bed sedimnt total, g/kg (00693)	Arsenic bed sedimnt total, ug/g (64847)	Cadmium bed sedimnt total, 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 10...	1000	6.82	130	4,200	1.4	<.2	10.0	.100	20	3.2	<2	24,000	6.5		

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

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- 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 10...	170	<.007	7.3	.1	42	<53	<53	<53	<53	<53	<53	<53	<53	

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 3 of 4

[Remark codes: <, 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 <2 mm, 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)	Benzo- [l]- anthene, bed sed field, wsv nat ug/kg (49450)	Chry- sene, bed sed field, wsv nat ug/kg (49461)	Dibenzo- [a,h]- anthra- cene, bed sed field, wsv nat ug/kg (49461)
Aug 10...	<53	E6	<53	E6	<53	E8	E26	E16	E17	E16	E11	E1	<53	

01407253 WILLOW BROOK NEAR HOLMDEL, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 4 of 4

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

Date	Fluor-anthene <2 mm wsv nat field, ug/kg (49466)	Indeno-[1,2,- 3-cd]- bed sed pyrene, wsv nat bed sed <2 mm field, ug/kg (49390)	Iso-phorone bed sed wsv nat wsv nat ug/kg (49400)	Naphth-alene, bed sed <2 mm wsv nat wsv nat ug/kg (49402)	p-Cresol, PCBs, bed sed bed sed wsv nat sedimnt ug/kg (39519)	Phenan-threne, <2 mm, wsv nat field, ug/kg (49451)	Phenan-threne, <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 (80164)
Aug 10...	E25	E22	<53	<53	<5.00	<53	E6	<53	E23 .1

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 1 of 5

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Time	2,4-D methyl ester, water, fltrd, ug/L (50470)	2,4-DB 2,4-D water, water, fltrd, ug/L (39732)	CIAT, water, fltrd, 0.7u GF ug/L (38746)	CEAT, water, fltrd, ug/L (04040)	OIET, water, fltrd, ug/L (04038)	furan, wat flt 0.7u GF ug/L (50355)	water, fltrd, 0.7u GF ug/L (49308)	3-Hydroxy carbo- furan, wat flt 0.7u GF ug/L (49313)	Aldi-carb sulfone, wat flt 0.7u GF ug/L (49314)	Aldi-carb sulfide, wat flt 0.7u GF ug/L (49312)	Aldi-carb, water, fltrd, ug/L (39632)	Atrazine, water, fltrd, ug/L (50299)	Bendio-carb, water, fltrd, ug/L
May 04...	0930	<.016	<.04	<.02	<.03	<.08	E.025	<.008	<.02	<.022	<.04	<.010	<.02	

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 2 of 5

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Benomyl	Bensulfuron-methyl, water, fltrd, ug/L (50300)	Ben-tazon, water, fltrd, 0.7u GF ug/L (61693)	Bromo-cil, water, fltrd, ug/L (38711)	Bromoxynil, water, fltrd, 0.7u GF ug/L (04029)	Caf-feine, water, fltrd, ug/L (49311)	Car-baryl, water, fltrd, 0.7u GF ug/L (50305)	Carbo-furan, water, fltrd, 0.7u GF ug/L (49310)	Chlor-amben, methyl ester, water, fltrd, ug/L (49309)	Chlori-muron, water, fltrd, ug/L (61188)	Chloro-di-amino-s-triazine, water, fltrd, ug/L (50306)	Clopyralid, water, fltrd, ug/L (04039)	Cyclo-ate, water, fltrd, ug/L (49305)
May 04...		<.027	<.02	<.01	<.02	<.03	.023	<.02	<.016	<.02	<.032	<.04	<.02

01407253 WILLOW BROOK NEAR HOLMDEL, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 3 of 5

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Dacthal mono-	Di- chlor-		Fluo-								Linuron water, fltrd 0.7u GF (38478)	MCPA, water, fltrd 0.7u GF (38482)	
	acid, water, fltrd 0.7u GF ug/L (49304)	Dicamba water, fltrd 0.7u GF ug/L (38442)	prop, water, fltrd 0.7u GF ug/L (49302)	Diphen- amid, water, fltrd, 0.7u GF ug/L (04033)	Diuron, water, fltrd 0.7u GF ug/L (49300)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Flumet- sulam, water, fltrd, 0.7u GF ug/L (61694)	meturon water, fltrd 0.7u GF ug/L (38811)	Imaza- quin, water, fltrd, 0.7u GF ug/L (50356)	Imaze- thapyr, water, fltrd, 0.7u GF ug/L (50407)	Imida- cloprid water, fltrd 0.7u GF ug/L (61695)			
May 04...	<.03	<.04	<.03	<.01	<.02	<.02	<.04	<.04	<.02	<.04	<.04	<.020	<.01	<.03

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 4 of 5

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	MCPB, water, fltrd 0.7u GF ug/L (38487)	Meta- laxyl, water, fltrd 0.7u GF ug/L (50359)	Methio- carb, water, fltrd 0.7u GF ug/L (38501)	Meth- omyl, water, fltrd 0.7u GF ug/L (49296)	Metsul- furon, water, fltrd, 0.7u GF ug/L (61697)	Netsul- phenyl)- N'- methyl- urea, water, fltrd, 0.7u GF ug/L (61692)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico- sul- furon, water, fltrd 0.7u GF ug/L (50364)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)	Ory- zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	Pic- loram, water, fltrd 0.7u GF ug/L (49291)	Propham water, fltrd 0.7u GF ug/L (49236)	
May 04...	<.01	<.01	<.010	<.020	<.07	<.04	<.01	<.04	<.02	<.02	<.01	<.03	<.03	<.030

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 5 of 5

[Remark codes: <, less than; E, estimated; M, presence verified but not quantified.]

Date	Propi- conazole, water, fltrd 0.7u GF ug/L (50471)	Pro- poxur, water, fltrd 0.7u GF ug/L (38538)	Sulfo- meturon water, fltrd 0.7u GF ug/L (38548)	Tebu- thiuron water, fltrd 0.7u GF ug/L (50337)	Terba- cil, water, fltrd 0.7u GF ug/L (82670)	Tri- clopypur, water, fltrd 0.7u GF ug/L (04032)	
May 04...	<.01	<.008	M	<.091	<.026	<.016	<.03

01407253 WILLOW BROOK NEAR HOLMDEL, NJ—Continued

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

Date	Time	Temper- ature, water, deg C (00010)	Enter- coccii, m-E	E coli, MF, water,	Fecal coli- form, ECbroth
			100 mL (31649)	100 mL (31633)	100 mL (31615)
Jun					
15...	0945	16.5	710	270	900
22...	0955	15.9	460	360	700
Jul					
13...	1000	19.8	9,800	300	>16,000
20...	0955	19.1	1,550	1,000	3,000
27...	0955	19.1	690	690	900