

Water-Data Report 2009

01407280 BIG BROOK AT ROUTE 79 AT MARLBORO, NJ

HUDSON RIVER BASIN

LOCATION.--Lat 40°19'26", long 74°14'40" referenced to North American Datum of 1983, Marlboro Township, Monmouth County, NJ, Hydrologic Unit 02030104, at bridge on North Main Street (State Route 79) 0.6 mi north of Marlboro, 2.0 mi east of Claytons Corner, and 4.7 mi upstream from Swimming River Reservoir.

DRAINAGE AREA.--2.58 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 2008 to August 2009

REMARKS.--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, and suspended residue were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Part 1 of 5

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

Date	Time	Baro-metric pressure, air, mm Hg (00025)	Temper-ature, air, deg C (00020)	UV absorb-ance, 254 nm, wat flt /cm (50624)	UV absorb-ance, 280 nm, wat flt /cm (61726)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif-ic conduc-tance, µS/cm @ 25 degC (00095)	Turbdty white light, det ang 90+/-30 µS/cm @ 25 degC (00010)	Dis-solved solids, dried @ 180degC NTRU (63676)	Dis-solved solids, sum of constituents, wat flt mg/L (70300)	Dis-solved solids, mg/L (70301)
Nov 13...	0800	767	7.7	.057	.045	9.7	82	7.5	343	7.9	4.3	222	E194
Feb 23...	0900	762	-2.0	.045	.037	11.8	90	7.6	369	.8	2.3	224	E204
May 20...	0900	772	15.0	.050	.039	9.2	86	7.5	320	11.9	5.6	217	187
Aug 11...	0930	757	24.5	.060	.045	8.0	91	7.7	344	21.4	7.5	216	197

01407280 BIG BROOK AT ROUTE 79 AT MARLBORO, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 2 of 5

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

Date	ANC, wat unf						Total			Inor- ganic			
	Hard- ness, water, mg/L as CaCO ₃ (00900)	Sus- pended solids, water, unfltrd mg/L (00530)	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)	fixed end pt, mg/L as CaCO ₃ (90410)	suspnd lab, mg/L as CaCO ₃ (00694)	carbon, sedimnt total, mg/L (00940)	Chlor- ide, water, fltrd, mg/L (00950)	Fluor- ide, water, fltrd, mg/L (00688)	carbnd, sedimnt total, mg/L (00955)	Silica, water, fltrd, mg/L (00945)
Nov 13...	120	1	41.8	3.91	3.89	14.0	54	.3	32.1	.29	<.04	16.0	47.9
Feb 23...	110	3	37.2	3.97	2.81	23.2	41	.2	43.0	.26	<.04	13.7	50.9
May 20...	110	3	38.2	3.89	3.07	16.4	45	.4	34.2	.28	<.04	14.4	46.1
Aug 11...	110	4	39.5	3.61	3.64	15.4	55	1.0	35.6	.30	<.04	16.7	46.9

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 3 of 5

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

Date	Ammonia + org-N, water, fltrd, mg/L as N (00623)		Nitrate + Ammonia water, fltrd, mg/L as N (00608)	Ortho- phosphate, water, fltrd, mg/L as N (00631)	Partic- ulate nitro- gen, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L as P (49570)	Phos- phorus, water, fltrd, mg/L as P (00666)	Total nitro- gen, water, fltrd, mg/L (00602)	Total nitro- gen, water, unfltrd recover -able, mg/L (00600)	Barium, water, unfltrd recover -able, μg/L (01007)	Beryll- ium, water, unfltrd recover -able, μg/L (01012)	Chrom- ium, water, unfltrd recover -able, μg/L (01027)	
Nov 13...	.19	.020	.36	E.005	.04	.010	.050	.55	.59	--	--	--	--
Feb 23...	.95	.099	.86	E.004	.04	.009	.030	1.8	1.8	22.2	E.02	E.03	<.40
May 20...	.38	.050	.70	<.010	.04	.016	.054	1.1	1.1	--	--	--	--
Aug 11...	.20	.030	.56	.022	.09	.025	.073	.76	.85	21.4	E.01	<.06	<.40

01407280 BIG BROOK AT ROUTE 79 AT MARLBORO, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 4 of 5

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

Date	Mangan-												Organic carbon, susnd sedimnt total, mg/L (00689)
	Copper, water, unfltrd recover -able, μg/L (01042)	Iron, water, unfltrd recover -able, μg/L (01045)	Lead, water, unfltrd recover -able, μg/L (01051)	ese, water, unfltrd recover -able, μg/L (01055)	Mercury water, unfltrd recover -able, μg/L (71900)	Nickel, water, unfltrd recover -able, μg/L (01067)	Silver, water, unfltrd recover -able, μg/L (01077)	Zinc, water, unfltrd recover -able, μg/L (01092)	Arsenic water, filtrd, unfltrd μg/L (01000)	Arsenic water, unfltrd μg/L (01002)	Boron, water, unfltrd recover -able, μg/L (01022)	Selen- ium, water, unfltrd μg/L (01147)	
Nov 13...	--	--	--	--	--	--	--	--	--	--	--	--	.34
Feb 23...	<4.0	688	<.10	172	<.010	4.6	<.06	6.5	.38	.40	21	E.08	.23
May 20...	--	--	--	--	--	--	--	--	--	--	--	--	.42
Aug 11...	<4.0	1,250	.21	68.0	<.010	2.1	<.06	2.2	.76	1.4	38	E.09	1.02

**WATER-QUALITY
DATA
WATER YEAR
OCTOBER 2008 TO
SEPTEMBER 2009**

Part 5 of 5

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

Date	Organic carbon, water, filtrd, mg/L (00681)
Nov 13...	2.0
Feb 23...	1.3
May 20...	1.9
Aug 11...	2.0

01407280 BIG BROOK AT ROUTE 79 AT MARLBORO, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 1 of 7

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

Date	1-Naph-thol, water, 0.7µ GF	ethyl-aniline, water, 0.7µ GF	2,6-Di-ethyl-aniline, water, 0.7µ GF	2-Chloro-diethyl-acetanilide, water, 0.7µ GF	CIAT, water, 0.7µ GF	2-Ethyl-6-methyl-chloro-aniline, water, 0.7µ GF	3,4-Di-chloro-aniline, water, 0.7µ GF	3,5-Di-chloro-aniline, water, 0.7µ GF	4-Chloro-phenol, water, 0.7µ GF	Aceto-chlor, water, 0.7µ GF	Ala-chlor, water, 0.7µ GF	alpha-chlor, water, 0.7µ GF	Endo-sulfan, water, 0.7µ GF	Atra-zine, water, 0.7µ GF	Azin-phos-methyl oxon, water, 0.7µ GF
	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 20...	<.04	<.006	<.010	E.005	<.010	<.004	<.004	<.005	<.010	<.008	<.006	E.006	<.04		

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 2 of 7

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

Date	Azin-phos-methyl, water, 0.7µ GF	Ben-flur-alin, water, 0.7µ GF	Car-baryl, water, 0.7µ GF	Carbo-furan, water, 0.7µ GF	Chlor-pyrifos, water, 0.7µ GF	Chlor-pyrifos, water, 0.7µ GF	Chlor-pyrifos, water, 0.7µ GF	cis-Per-methrin, water, 0.7µ GF	cis-Propi-conazole, water, 0.7µ GF	Cyana-zine, water, 0.7µ GF	Cyflu-thrin, water, 0.7µ GF	Cyper-methrin, water, 0.7µ GF	DCPA, water, 0.7µ GF	Desulf-inyl-fipro-nil, water, 0.7µ 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 (61586)	µg/L (82682)	µg/L (62169)		
May 20...	<.120	<.014	<.200	<.060	<.05	<.010	<.014	<.006	<.040	<.016	<.020	<.006	<.029		

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 3 of 7

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

Date	Desulf-inyl-fipro-nil, water, 0.7µ GF	Diazi-non, water, 0.7µ GF	Di-chlor-vos, water, 0.7µ GF	Dicro-tophos, water, 0.7µ GF	Diel-drin, water, 0.7µ GF	Dimeth-oate, water, 0.7µ GF	Disulf-oton, water, 0.7µ GF	Disul-foton, water, 0.7µ GF	Endo-sulfan, water, 0.7µ GF	EPTC, water, 0.7µ GF	Ethion-monoxon, water, 0.7µ GF	Ethion, water, 0.7µ GF	Etho-prop, water, 0.7µ GF		
	µg/L (62170)	µg/L (39572)	µg/L (38775)	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)		
May 20...	E.004	<.005	<.02	<.08	<.009	<.006	<.01	<.04	<.022	<.002	<.02	<.012	<.016		

01407280 BIG BROOK AT ROUTE 79 AT MARLBORO, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 4 of 7

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

Date	Fenami-												
	Fenami-phos	sulfone	Fenami-phos	water, filtd,	Fipro-nil	Fipro-nil	Fipro-sulfone	Fonofos	Hexazinone	Iprodione	Isofen-	lambda-	
µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	(04095)	water, filtd,	water, filtd,	water, filtd,	Cyhalothrin,	
(61645)	(61646)	(61591)	(61591)	(62167)	(62168)	(62166)	(04025)	(04025)	filtd,	filtd,	filtd,	Mala-	
May 20...	<.053	<.08	<.03	<.013	<.024	E.003	<.010	<.008	<.014	<.006	<.010	<.080	<.020

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 5 of 7

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

Date	Methyl												
	Meta-laxyl,	Methid-	Methyl	para-	Metola-	Metri-	Moli-	Oxy-	Pendi-	meth-	Phorate	Phorate	Phosmet
water, filtd,	water, filtd,	water, filtd,	thion,	water, filtd,	chlor,	buzin,	rate,	fluor-	alin,	oxon,	water,	oxon,	
µg/L	µg/L	µg/L	µg/L	0.7µ GF	µg/L	µg/L	0.7µ GF	µg/L	µg/L	µg/L	µg/L	µg/L	
(61596)	(61598)	(61664)	(82667)	(39415)	(82630)	(82671)	(82671)	(61599)	(61600)	(82683)	(61666)	(82664)	(61668)
May 20...	<.008	<.006	<.01	<.008	E.010	<.016	<.002	<.010	<.006	E.009	<.03	<.020	<.05

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 6 of 7

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

Date	Ter-												
	Phosmet	Prome-ton,	Prome-tryn,	Propanil,	Propar-gite,	Propy-zamide,	Tebu-	Terbufos	Terbu-	Ter-	Thio-		
water, filtd,	water, filtd,	water, filtd,	water, filtd	water, filtd	water, filtd	water, filtd	Simazine,	thiuron	sulfone	fos,	buthyl-	bencarb	
µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	water,	water,	
(61601)	(04037)	(04036)	(82679)	(82685)	(82676)	(04035)	(04035)	(82670)	(61606)	(61674)	(82675)	(04022)	(82681)
May 20...	<.200	E.01	<.006	<.014	<.02	<.004	E.004	<.02	<.010	<.04	<.02	<.01	<.016

01407280 BIG BROOK AT ROUTE 79 AT MARLBORO, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO
SEPTEMBER 2009

Part 7 of 7

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

Date	trans- Propri- con- azole, water, filtrd, µg/L (79847)	Tri- flur- alin, water, filtrd, filtrd, µg/L (61610)	0.7µ GF µg/L (82661)
May 20...	<.02	<.035	<.012

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 1 of 4

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

Mois- ture, bed sed	Total carbon, bed	Inor- ganic carbon, bed	Phos- phorus, bed	Cadmium sedimnt	Chrom- ium, bed	Cobalt bed	Copper, bed	Iron, bed	Lead, bed	Mangan- ese, bed	Mercury bed
Date	pH percent (49282)	pH units (70310)	Total carbon, bed	Total carbon, bed	Cadmium sedimnt	Cadmium total,	Cadmium recover	Cadmium recover	Cadmium recover	Cadmium total	Cadmium recover
Aug 11...	25	7.22	3.0	.2	M	.110	28	4.7	<6	31,000	6.3
											220
											<.007

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 2 of 4

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

Nickel, bed	Zinc, bed	Arsenic bed	Sele- nium, bed	p- Cresol, bed sed	1,2-Di- methyl- naphth-	1,6-Di- methyl- naphth-	1Methyl- -9H- fluor- ene,	1- Methyl- phenan- threne,	1- Methyl- pyrene,	236Tri- methyl- naphth-	2,6-Di- methyl- naphth-
Date	µg/g (01068)	µg/g (01093)	µg/g (64847)	µg/g (64848)	µg/kg (49451)	PCBs, bed	PCBs, bed sed	PCBs, bed sed	PCBs, bed sed	PCBs, bed sed	PCBs, bed sed
Aug 11...	11.1	46	16.2	.3	<55	<5.00	<55	<55	<55	E3	<55
											<55
											<55

01407280 BIG BROOK AT ROUTE 79 AT MARLBORO, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 3 of 4

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

Date	2-Ethyl naphth- alene <2 mm wsv nat	2-Methyl- anthra- cene, bed sed <2 mm bed sed bs <2mm	4H-Cyc- lopenta - [def]- phenan- bed sed threne, <2 mm,	9H- Fluor- ene, bed sed wsv nat	Ace- naphth- ene, bed sed wsv nat	Ace- naphth- ylene, bed sed wsv nat	Anthra- bed sed <2 mm, wsv nat	Benzo- [a]- cene, bed sed field,	Benzo- [a]- anthra- pyrene, bed sed <2 mm, wsv nat	Benzo- [b]- fluor- ene, bed sed <2 mm, bed sed	Benzo- [ghi]- peryl- ene, bed sed <2 mm, bed sed	Benzo- [k]- fluor- anthene, bed sed <2 mm, wsv nat	Chry- sene, bed sed <2 mm, field, wsv nat
	μg/kg (49948)	μg/kg (49435)	μg/kg (49411)	μg/kg (49399)	μg/kg (49429)	μg/kg (49428)	μg/kg (49434)	μg/kg (49436)	μg/kg (49389)	μg/kg (49458)	μg/kg (49408)	μg/kg (49397)	μg/kg (49450)

Aug 11...	<55	<55	E11	E5	E3	E2	E11	E47	E54	90	E29	E38	56
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WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 4 of 4

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

Date	Dibenzo -[a,h]- anthene anthra- bed sed cene, <2 mm bed sed <2 mm, field,	Fluor- anthene bed sed wsv nat	Indeno- [1,2,- 3-cd]- pyrene, bed sed bed sed	Iso- phorone Naphth- alene, bed sed	Phenan- threne, bed sed threne, bed sed	Phenan- threne, bed sed	Pyrene, bed sed	Bed sediment dry svd sve dia percent <0.0625 mm
	μg/kg (49461)	μg/kg (49466)	μg/kg (49390)	μg/kg (49400)	μg/kg (49402)	μg/kg (49409)	μg/kg (49393)	μg/kg (49387) (80164)

Aug 11...	E11	180	E32	<55	E1	70	E1	140	2.0
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