

Water-Data Report 2007

01400808 BEAR BROOK AT CRANBURY ROAD, AT PRINCETON JUNCTION, NJ

RARITAN RIVER BASIN

LOCATION.--Lat 40°19'05", long 74°36'44" referenced to North American Datum of 1983, West Windsor Township, Mercer County, NJ, Hydrologic Unit 02030105, at bridge on Cranbury Road, 165 ft west from Stobbe Lane, 0.3 mi downstream from Grovers Mill Pond, and 0.4 mi east from Princeton Junction.

DRAINAGE AREA.--12.0 mi².

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 2003-04, 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, New Jersey Department of Environmental Protection (NJDEP) Watershed Management Area 10.

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	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 ₃ (00900)	Calcium water, fltrd, mg/L (00915)
Nov 20...	1100	16	.386	.304	764	9.1	80	7.0	174	6.0	9.7	39	9.31	
Feb 06...	0930	7.3	.056	.043	768	13.3	92	6.8	542	-10.0	.5	66	14.5	
May 07...	1130	15	.134	.103	772	9.6	99	7.0	239	17.0	16.9	48	11.2	
Aug 02...	0930	5.2	.192	.151	762	2.4	30	6.5	176	24.0	25.7	36	7.14	

01400808 BEAR BROOK AT CRANBURY ROAD, AT PRINCETON JUNCTION, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
 Part 2 of 5
 [Remark codes: <, less than; E, estimated.]

Date	Magnes-	Potas-	ANC,			Chlor-	Fluor-	Silica	Sulfate	Residue	Residue	Residue	Ammonia
	ium, water, fltrd, mg/L (00925)	sium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	wat unf fixed	end pt, lab, CaCO ₃					water, fltrd, sum of consti- tuents	on evap.	total non- filter- able,	org-N, water, fltrd, mg/L as N (00623)
Nov 20...	3.85	3.40	13.5	20	25.1	<.10	8.7	10.8	93	109	15	.75	.239
Feb 06...	7.27	3.79	70.8	16	130	E.05	9.3	19.3	283	287	2	.48	.198
May 07...	4.95	2.90	23.6	19	43.1	E.06	6.0	14.7	128	129	18	.43	.015
Aug 02...	4.31	2.93	15.1	16	29.6	<.10	1.0	10.4	86	103	5	.63	.161

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, fltrd, 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, unfltrd 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, suspnd water, fltrd, mg/L (00681)	Arsenic water, fltrd, mg/L μg/L (01000)	Arsenic water, unfltrd mg/L μg/L (01002)
	mg/L (00631)	mg/L (49570)	mg/L (00602)	mg/L (00600)	mg/L as P (00671)	mg/L as P (00666)	mg/L (00665)	mg/L (00694)	mg/L (00688)	mg/L (00689)	mg/L (00681)	mg/L μg/L (01000)	mg/L μg/L (01002)
Nov 20...	1.30	.15	2.0	2.2	.019	.049	.148	1.5	<.1	1.5	7.4	--	--
Feb 06...	4.09	.12	4.6	4.7	<.010	E.006	.044	.9	<.1	.9	1.7	.31	.74
May 07...	2.33	.37	2.8	3.1	<.010	.011	.085	2.6	<.1	2.6	3.3	--	--
Aug 02...	1.15	.11	1.8	1.9	.022	.036	.080	.8	<.1	.8	4.3	2.3	2.8

01400808 BEAR BROOK AT CRANBURY ROAD, AT PRINCETON JUNCTION, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 5

[Remark codes: <, 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)
	µg/L (01007)	µg/L (01012)	µg/L (01020)	µg/L (01022)	µg/L (01027)	µg/L (01034)	µg/L (01042)	µg/L (01045)	µg/L (01051)	µg/L (01055)	µg/L (71900)	µg/L (01067)	µg/L (01147)
Nov 20...	--	--	23	--	--	--	--	--	--	--	--	--	--
Feb 06...	197	.13	17	16	.09	E.34	1.5	484	1.67	159	<.010	1.81	.48
May 07...	--	--	21	--	--	--	--	--	--	--	--	--	--
Aug 02...	121	E.05	22	22	.02	E.30	1.5	958	3.39	132	<.010	.90	.33

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)
	µg/L (01077)	µg/L (01092)
Nov 20...	--	--
Feb 06...	<.02	20
May 07...	--	--
Aug 02...	.19	4.5

01400808 BEAR BROOK AT CRANBURY ROAD, AT PRINCETON JUNCTION, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 1 of 7

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

Date	2,6-Di-	2Chloro	2-Ethyl	3,4-Di-	3,5-Di-	4-Chloro-	Aceto-	Ala-	alpha-	Atra-	Azin-		
	1-Naph-	ethyl-	-2',6'-diethyl	-6-methyl-	chloro-	chloro-	phenol,	chlor,	chlor,	Endo-	phos-		
	thol,	aniline	CIAT,	aniline	aniline	2methyl	Acetochlor,	chlar,	sulfan,	zine,	methyl		
0.7u GF	0.7u GF	wat flt	water,										
Date	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 07...	<.09	<.006	<.006	E.014	<.010	E.008	<.012	E.010	<.006	.009	<.011	.022	<.04

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 7

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

Date	Azin-	Ben-	Car-	Carbo-	Chlor-	cis-	cis-	Propri-	lambda-	Cyper-	DCPA,		
	phos-	flur-	baryl,	furan,	pyrifos	Chlor-	Per-	conazole,	Cyana-	Cyflu-	Cyhalo-	methrin	
	methyl,	alin,	water,	water,	oxon,	pyrifos	methrin	water,	zine,	thrin,	thrin,	water,	
0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	
Date	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 07...	<.080	<.010	E.011	<.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: <, less than; E, estimated.]

Date	Desulf-	Diazi-	Dicro-	Diel-	Dimeth-	Disulf-	Disul-	Endo-	EPTC,	Ethion	Etho-	Fenami-	
	inyl-	non,	tophos,	drin,	oate,	oton	foton,	sulfan	water,	monoxon	prop,	phos	
	fipro-	nil,	water,	water,	water,	sulfone	water,	sulfate	water,	water,	water,	sulfone	
0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	0.7u GF	
Date	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 07...	E.006	<.005	<.08	<.009	<.006	<.01	<.02	<.022	<.002	<.02	<.016	<.012	<.053

01400808 BEAR BROOK AT CRANBURY ROAD, AT PRINCETON JUNCTION, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 7

[Remark codes: <, 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 water, fltrd, μg/L (62167)	Fipro-nil sulfone water, fltrd, 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 07...	<.04	<.03	E.006	E.009	E.006	E.008	<.006	<.026	<.026	<.011	<.039	<.016	.010

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 5 of 7

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

Date	Methi-althion water, fltrd, μg/L (61598)	Methyl para-thion, water, fltrd, μg/L (61664)	Methyl para-thion, water, fltrd, μg/L (82667)	Metola-chlor, water, fltrd, μg/L (39415)	Metri-buzin, water, fltrd, μg/L (82630)	Moli-nate, water, fltrd, μg/L (82671)	Myclo-butanol water, fltrd, μg/L (61599)	Oxy-fluor-fen, water, fltrd, μg/L (61600)	Pendi-meth-alin, water, fltrd, μg/L (82683)	Phorate oxon, water, fltrd, μg/L (61666)	Phorate oxon, water, fltrd, μg/L (82664)	Phosmet oxon, water, fltrd, μg/L (61668)	Phosmet water, fltrd, μg/L (61601)
May 07...	<.009	<.02	<.008	.027	<.012	<.003	<.033	<.017	<.020	<.03	<.020	<.05	<.008

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 6 of 7

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

Date	Promo-ton, water, fltrd, μg/L (04037)	Promo-tryn, water, fltrd, μg/L (04036)	Propy-zamide, water, fltrd, μg/L (82676)	Propy-panil, water, fltrd, μg/L (82679)	Propar-gite, water, fltrd, μg/L (82685)	Tebu-simazine, water, fltrd, μg/L (04035)	Tebu-thiuron, water, fltrd, μg/L (82670)	Ter-bufos Teflu-thrin, water, fltrd, μg/L (61606)	Terbu-fos, water, fltrd, μg/L (61674)	Terbutyl-azine, water, fltrd, μg/L (82675)	Ter-benzene, water, fltrd, μg/L (04022)	Thio-bencarb, water, fltrd, μg/L (82681)	trans-Propi-conazole, water, fltrd, μg/L (79847)
May 07...	E.01	<.006	<.004	<.011	<.02	.010	<.02	<.003	<.04	<.01	<.01	<.010	<.03

01400808 BEAR BROOK AT CRANBURY ROAD, AT PRINCETON JUNCTION, NJ—Continued

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

Part 7 of 7

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

Date	Tri-	flur-	Di-
	Tribu-	alin,	chlor-
	phos,	water,	vos,
	water,	filtrd	water,
	filtrd,	0.7u GF	filtrd,
	µg/L	µg/L	µg/L
	(61610)	(82661)	(38775)
May 07...	<.035	<.009	<.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-		Chrom-						Lead, bed sediment	
		pH	+ org-N, bed sed	Phos- phorus, bed	Total carbon, bed	Inorganic carbon, bed	Arsenic bed	Cadmium bed	Ium, bed	Cobalt bed	Copper, bed	Iron, bed	
		total, std (70310)	as N (00626)	total, (00668)	total, (00693)	total, (00686)	recover -able, (64847)	recover -able, (01028)	recover -able, (01029)	recover -able, (01038)	recover -able, (01043)	total, (01170)	recover -able, (01052)
Aug 02...	0930	6.74	180	80	8.7	.3	1.8	.100	14	3.7	10	7,000	17

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

Part 2 of 4

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

Date	Mangan- ese,	Mercury	Nickel, bed	Sele- nium,	Zinc,	1,2-Di- methyl-	1,6-Di- methyl-	1Methyl -9H- naphth-	1- Methyl- phenan-	1- Methyl- pyrene,	236Tri- methyl-	2,6-Di- methyl-	2-Ethy- naphth-
	bed sediment	bed recover	bed recover	bed recover	bed recover	naphth- alene,	naphth- alene,	fluor- ene,	threne,	bed sed	naphth- alene,	naphth- alene,	napht- alene
	recover -able, (01053)	-able, (71921)	-able, (01068)	-able, (64848)	-able, (01093)	<2 mm, (49403)	<2 mm, (49404)	<2 mm, (49398)	<2 mm, (49410)	<2 mm, (49388)	<2 mm, (49405)	<2 mm, (49406)	<2 mm, (49948)
Aug 02...	110	<.007	5.6	.1	50	E9	<51	E16	E51	E48	<51	E13	<51

01400808 BEAR BROOK AT CRANBURY ROAD, AT PRINCETON JUNCTION, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 4

[Remark codes: <, 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, 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]-anthene, bed sed <2 mm, bed sed ug/kg (49408)	Benzene, [g,h]-peryl-anthene, bed sed <2 mm, bed sed ug/kg (49397)	Benzene, [k]-fluor-anthene, bed sed <2 mm, field, ug/kg (49450)	Chry-sene, bed sed field, <2 mm, ug/kg (49461)	Dibenzo-[a,h]-anthra-cene, bed sed field, <2 mm, ug/kg
Aug 02...	<51	E70	E37	E24	E34	87	280	310	510	E110	190	340	<51	

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 4

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

Date	Fluor-anthene, bed sed <2 mm, wsv nat field, ug/kg (49466)	Indeno-[1,2,-3-cd]-pyrene, bed sed bed sed ug/kg (49390)	Iso-phorone, bed sed wsv nat ug/kg (49400)	Naphth-alene, bed sed wsv nat ug/kg (49402)	p-PCBs, bed sediment ug/kg (39519)	Phenanthrene, bed sed wsv nat ug/kg (49451)	Phenanthrene, bed sed wsv nat ug/kg (49409)	Pyrene, bed sed wsv nat ug/kg (49393)	Bed sediment, dry svd sve dia percent ug/kg (49387)	Bed sediment, dst wat percent ug/kg (80164)	Bed sediment, fallidia percent ug/kg (80157)
Aug 02...	720	<120	<51	E10	<5.00	<51	400	<51	600	3	1