



Water-Data Report 2007

**01401520 BEDEN BROOK NEAR HOPEWELL, NJ**

RARITAN RIVER BASIN

LOCATION.--Lat 40°23'02", long 74°44'27" referenced to North American Datum of 1983, Mercer County, NJ, Hydrologic Unit 02030105, at Aunt Molly Road, 250 ft downstream from Beden Brook tributary 2, 0.7 mi southeast from County Route 518, and 1.0 mi southeast from Hopewell.

DRAINAGE AREA.--6.67 mi<sup>2</sup>.

**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1967-68, 1970, 2005-07.

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 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 NTRU (63676)	UV absorb- ance, 254 nm, wat flt units /cm (50624)	UV absorb- ance, 280 nm, wat flt units /cm (61726)	Baro- metric pres- sure, mm Hg (00025)	Dis- solved oxygen, of sat- uration mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif- ic conduc- tance, wat unf µS/cm 25 degC (00095)	Temper- ature, air, deg C (00020)	Temper- ature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	Calcium water, mg/L fltrd, (00915)
<b>Nov</b> 29...	1200	2.0	.059	.046	767	10.8	97	7.8	198	16.5	11.2	65	16.0
<b>Feb</b> 15...	0900	1.1	.024	.018	756	13.7	94	7.5	587	-8.5	.1	120	29.2
<b>May</b> 21...	1130	2.1	.059	.043	761	10.3	107	7.8	251	19.0	17.1	83	20.1
<b>Aug</b> 07...	0900	1.6	.057	.043	755	8.6	100	7.8	324	28.5	22.9	110	27.2

## 01401520 BEDEN BROOK NEAR HOPEWELL, NJ—Continued

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

Part 2 of 5

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

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total non-filterable, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)
Nov 29...	6.04	1.82	11.0	49	14.8	E.07	14.7	19.0	116	122	<1	.20	<.010
Feb 15...	11.7	1.93	62.4	63	125	E.07	12.9	24.6	310	320	<1	.13	<.010
May 21...	7.88	2.03	15.7	59	27.1	E.07	12.0	19.9	143	143	2	.19	<.010
Aug 07...	10.4	2.86	19.3	82	33.6	E.08	13.0	22.6	182	197	4	.13	.025

**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)	Particulate nitrogen, susp, water, mg/L (49570)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd, mg/L (00600)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd, mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Arsenic water, fltrd, µg/L (01000)	Arsenic water, unfltrd, µg/L (01002)
Nov 29...	.76	<.02	.96	--	.024	.033	.038	<.1	<.1	<.1	2.0	--	--
Feb 15...	.96	<.02	1.1	--	.012	E.007	.010	.1	<.1	.1	1.0	.28	.43
May 21...	.70	.04	.89	.93	.029	.034	.041	.3	<.1	.3	2.4	--	--
Aug 07...	.69	.03	.82	.85	.046	.048	.051	.2	<.1	.2	1.8	.86	.81

## 01401520 BEDEN BROOK NEAR HOPEWELL, 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, fltrd, µg/L (01020)	Boron, water, unfltrd recover -able, µg/L (01022)	Cadmium water, unfltrd 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 µg/L (01147)
Nov 29...	--	--	30	--	--	--	--	--	--	--	--	--	--
Feb 15...	64.5	<.06	25	29	E.01	<.60	E1.0	57	.07	16.9	<.010	.71	.16
May 21...	--	--	32	--	--	--	--	--	--	--	--	--	--
Aug 07...	54.2	<.06	48	53	.04	<.60	1.3	76	.12	12.3	<.010	.31	.16

**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 29...	--	--
Feb 15...	<.02	E1
May 21...	--	--
Aug 07...	<.02	E1.5

## 01401520 BEDEN BROOK NEAR HOPEWELL, 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-Naphthol, water, fltrd 0.7u GF µg/L (49295)	2,6-Diethyl-aniline water, fltrd 0.7u GF µg/L (82660)	2Chloro-2',6'-diethyl acet-anilide wat flt µg/L (61618)	CIAT, water, fltrd, µg/L (04040)	2-Ethyl-6-methyl-aniline water, fltrd, µg/L (61620)	3,4-Di-chloro-aniline water, fltrd, µg/L (61625)	3,5-Di-chloro-aniline water, fltrd, µg/L (61627)	4-Chloro-2methyl phenol, water, fltrd, µg/L (61633)	Aceto-chlor, water, fltrd, µg/L (49260)	Ala-chlor, water, fltrd, µg/L (46342)	alpha-Endo-sulfan, water, fltrd, µg/L (34362)	Atra-zine, water, fltrd, µg/L (39632)	Azin-phos-methyl oxon, water, fltrd, µg/L (61635)
May 21...	<.09	<.006	<.006	E.015	<.010	<.004	<.012	<.005	.013	E.005	<.011	.031	<.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, fltrd 0.7u GF µg/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF µg/L (82673)	Car-baryl, water, fltrd 0.7u GF µg/L (82680)	Carbo-furan, water, fltrd 0.7u GF µg/L (82674)	Chlor-pyrifos oxon, water, fltrd, µg/L (61636)	Chlor-pyrifos water, fltrd, µg/L (38933)	cis-Per-methrin water fltrd 0.7u GF µg/L (82687)	cis-Propi-cona-zole, water, fltrd, µg/L (79846)	Cyana-zine, water, fltrd, µg/L (04041)	Cyflu-thrin, water, fltrd, µg/L (61585)	lambda-Cyhalo-thrin, water, fltrd, µg/L (61595)	Cyper-methrin water, fltrd, µg/L (61586)	DCPA, water, fltrd 0.7u GF µg/L (82682)
May 21...	<.080	<.010	E.008	<.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 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, fltrd 0.7u GF µg/L (82662)	Disulf-oton sulfone water, fltrd, µg/L (61640)	Disul-foton water, fltrd 0.7u GF µg/L (82677)	Endo-sulfan sulfate water, fltrd, µg/L (61590)	EPTC, water, fltrd 0.7u GF µg/L (82668)	Ethion monooxon water, fltrd, µg/L (61644)	Ethion water, fltrd, µg/L (82346)	Etho-prop, water, fltrd 0.7u GF µg/L (82672)	Fenami-phos sulfone water, fltrd, µg/L (61645)
May 21...	E.007	<.005	<.08	<.009	<.006	<.01	<.02	<.022	<.002	<.02	<.016	<.012	<.053

## 01401520 BEDEN BROOK NEAR HOPEWELL, 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-oxide, water, fltrd, µg/L (61646)	Fenami-phos, water, fltrd, µg/L (61591)	Desulf-inyl-fipro-nil 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 21...	<.04	<.03	<.029	E.008	E.004	E.007	<.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-oxon, water, fltrd, µg/L (61664)	Methyl para-thion, water, fltrd 0.7u GF µg/L (82667)	Metola-chlor, water, fltrd, µg/L (39415)	Metri-buzin, water, fltrd, µg/L (82630)	Moli-nate, water, fltrd 0.7u GF µg/L (82671)	Myclo-butanil, water, fltrd, µg/L (61599)	Oxy-fluor-fen, water, fltrd, µg/L (61600)	Pendi-meth-alin, water, fltrd 0.7u GF µg/L (82683)	Phorate oxon, water, fltrd, µg/L (61666)	Phorate water, fltrd 0.7u GF µg/L (82664)	Phosmet oxon, water, fltrd, µg/L (61668)	Phosmet, water, fltrd, µg/L (61601)
May 21...	<.009	<.02	<.008	.012	<.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: &lt;, less than; E, estimated.]

Date	Prome-ton, water, fltrd, µg/L (04037)	Prome-tryn, water, fltrd, µg/L (04036)	Propy-zamide, water, fltrd 0.7u GF µg/L (82676)	Pro-panil, 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, µg/L (61606)	Ter-bufos-oxon sulfone, water, fltrd, µg/L (61674)	Terbu-fos, water, fltrd 0.7u GF µg/L (82675)	Ter-buthyl-azine, water, fltrd, µg/L (04022)	Thio-bencarb water, fltrd 0.7u GF µg/L (82681)	trans-Propi-conazole, water, fltrd, µg/L (79847)
May 21...	E.01	<.006	<.004	<.011	<.02	<.006	<.02	<.003	<.04	<.01	<.01	<.010	<.03

## 01401520 BEDEN BROOK NEAR HOPEWELL, NJ—Continued

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

Part 7 of 7

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

Date	Tribu- phos, water, fltrd, µg/L (61610)	Tri- flur- alin, water, fltrd 0.7u GF µg/L (82661)	Di- chlor- vos, water, fltrd, µg/L (38775)
May 21...	<.035	<.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	pH bed sedimnt std units (70310)	Ammonia + org-N, bed sed total, mg/kg as N (00626)	Phos- phorus, bed sedimnt total, mg/kg (00668)	Total carbon, bed sedimnt total, g/kg (00693)	Inor- ganic carbon, bed sedimnt total, g/kg (00686)	Arsenic bed sedimnt recover -able, ug/g (64847)	Cadmium bed sedimnt recover -able, ug/g (01028)	Chrom- 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 07...	0900	6.67	560	6,900	5.6	<.2	10.6	.370	42	17.3	25	36,000	39

**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, bed sed <2 mm, ug/kg (49403)	1,6-Di- methyl- naphth- alene, bed sed <2 mm, ug/kg (49404)	1Methyl -9H- fluor- ene, bed sed <2 mm, ug/kg (49398)	1- Methyl- phenan- threne, bed sed <2 mm, ug/kg (49410)	1- Methyl- pyrene, bed sed <2 mm, wsv nat ug/kg (49388)	236Tri- methyl- naphth- alene, bed sed <2 mm, ug/kg (49405)	2,6-Di- methyl- naphth- alene, bed sed <2 mm, ug/kg (49406)	2-Ethyl naphth- alene bed sed <2 mm wsv nat ug/kg (49948)
Aug 07...	500	.017	30.3	.3	110	E3	E20	E12	71	62	E25	E22	<53

## 01401520 BEDEN BROOK NEAR HOPEWELL, 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-anthracene, bed sed <2 mm, ug/kg (49435)	4H-Cyclopenta-[def]-phenanthrene, bs <2mm ug/kg (49411)	9H-Fluorene, bed sed <2 mm, wsv nat ug/kg (49399)	Ace-naphthene, bed sed <2 mm, wsv nat ug/kg (49429)	Ace-naphthylene, bed sed <2 mm, wsv nat ug/kg (49428)	Anthracene, bed sed <2 mm, wsv nat field, ug/kg (49434)	Benzo-[a]-anthracene, bed sed <2 mm, wsv nat ug/kg (49436)	Benzo-[a]-pyrene, bed sed <2 mm, wsv nat ug/kg (49389)	Benzo-[b]-fluoranthene, bed sed <2 mm, wsv nat ug/kg (49458)	Benzo-[ghi]-perylene, bed sed <2 mm, wsv nat ug/kg (49408)	Benzo-[k]-fluoranthene, bed sed <2 mm, wsv nat ug/kg (49397)	Chrysene, bed sed <2 mm, wsv nat field, ug/kg (49450)	Dibenzo-[a,h]-anthracene, bed sed <2 mm, wsv nat field, ug/kg (49461)
Aug 07...	E44	77	E22	E25	E20	<79	260	260	310	E160	E130	280	<59

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

Part 4 of 4

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

Date	Fluoranthene, bed sed <2 mm wsv nat field, ug/kg (49466)	Indeno-[1,2,3-cd]-pyrene, bed sed <2 mm field, ug/kg (49390)	Iso-phorone, bed sed <2 mm field, ug/kg (49400)	Naphthalene, bed sed <2 mm wsv nat sedimnt, ug/kg (49402)	PCBs, bed sedimnt ug/kg (39519)	p-Cresol, bed sed <2 mm, wsv nat field, ug/kg (49451)	Phenanthrene, bed sed <2 mm, wsv nat field, ug/kg (49409)	Phenanthrene, thri-dine, bed sed <2 mm, wsv nat field, ug/kg (49393)	Pyrene, bed sed <2 mm, wsv nat field, ug/kg (49387)	Bed sediment, dry svd percent <.063mm (80164)	Bed sediment, fall dia dst wat percent <.004mm (80157)
Aug 07...	610	<150	<53	<53	<5.00	E17	290	<53	560	6	2