



Water-Data Report 2007

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ

RARITAN RIVER BASIN

LOCATION.--Lat 40°40'41", long 74°55'05" referenced to North American Datum of 1983, Union Township, Hunterdon County, NJ, Hydrologic Unit 02030105, 800 ft downstream from Rocky Run, 0.3 mi upstream from bridge on Van Syckel Road, and 1.6 mi southeast of Glen Gardner.

DRAINAGE AREA.--15.3 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Miscellaneous measurements, water years 1979, 1981-83, 1985-93, 1995-97, 1999, and 2003 to current year.

GAGE.--None.

**DISCHARGE MEASUREMENTS
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007**

Date	Discharge, in ft ³ /s
Nov 8, 2006	101
Feb 6, 2007	15.9
May 7, 2007	29.0
Aug 2, 2007	5.36

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.--Water years 1979-97, 2003 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).

COOPERATION.--Samples were collected in cooperation with the NJ Water Supply Authority. Determinations of 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 6

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

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Turbidity white light, det ang 90+/-30	UV absorbance, 254 nm, wat flt	UV absorbance, 280 nm, wat flt	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfiltrd field, std units (00400)	Specif-ic conductance, wat unf µS/cm 25 degC (00095)	Temper-ature, air, deg C (00020)
			NTRU (63676)	/cm (50624)	/cm (61726)							
Nov 08...	1015	Environmental	101	33	.150	.121	742	11.0	101	7.5	143	14.0
Feb 06...	1129	Field Blank	--	--	--	--	--	--	--	--	--	--
06...	1240	Environmental	16	1.3	.021	.016	757	16.1	111	7.7	--	-4.0
May 07...	1140	Environmental	29	.6	.040	.031	765	12.0	111	8.4	197	17.5
Aug 02...	1040	Environmental	5.4	3.7	.050	.037	755	9.7	111	7.9	245	30.0

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

Part 2 of 6

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

Date	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)	Calcium water, mg/L (00915)	Magnesium water, mg/L (00925)	Potassium water, mg/L (00935)	Sodium water, mg/L (00930)	ANC, wat unf fixed	Chloride, lab, mg/L as CaCO3 (90410)	Fluoride, water, mg/L (00940)	Silica, water, mg/L (00955)	Sulfate, water, mg/L (00945)	Residue water, sum of constituents, mg/L (70301)	Residue on filtrd, evap. at 180degC mg/L (70300)
Nov 08...	10.7	46	11.2	4.38	1.91	8.07	34	14.1	E.09	12.6	10.5	87	89
Feb 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	.0	73	17.9	7.00	1.48	14.0	38	27.4	.14	18.2	21.2	140	140
May 07...	12.0	55	13.3	5.39	1.17	12.8	34	25.2	E.09	13.2	15.5	111	124
Aug 02...	22.2	71	17.3	6.78	1.57	14.2	47	26.9	.13	15.3	17.5	133	153

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 6

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

Date	Residue total non- filter- able, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L (00623)	Ammonia water, fltrd, mg/L (00608)	Nitrate + nitrite water, fltrd, mg/L (00631)	Nitrate water, fltrd, mg/L (00618)	Nitrite water, fltrd, mg/L (00613)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Total nitro- gen, water, fltrd, mg/L (00602)	Total nitro- gen, water, unfltrd mg/L (00600)	Ortho- phosphate, water, fltrd, mg/L (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, susnd sedimt total, mg/L (00694)
Nov 08...	--	.22	.051	.72	.72	.003	.28	.94	1.2	.017	.030	.137	3.2
Feb 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
06...	--	.10	--	2.12	--	--	.04	2.2	2.3	--	E.005	E.008	.2
May 07...	--	.12	<.040	.94	--	E.002	.02	1.1	1.1	E.006	<.008	E.005	.2
Aug 02...	<1	.12	<.040	1.20	--	E.001	.03	1.3	1.4	.013	.014	.018	.2

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 6

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

Date	Inor- ganic carbon, susnd sedimt total, mg/L (00688)	Organic carbon, susnd sedimt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Arsenic water, fltrd, µg/L (01000)	Arsenic water, unfltrd µg/L (01002)	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, fltrd, µg/L (01040)	Copper, water, unfltrd recover -able, µg/L (01042)
Nov 08...	<.1	3.2	4.4	--	--	--	--	9.4	--	--	--	--	--
Feb 06...	--	--	--	<.12	--	--	--	--	--	--	<.40	--	--
06...	<.1	.2	.8	<.12	.20	24.8	<.06	8.1	8	E.01	<.60	--	E.9
May 07...	<.1	.1	1.4	--	--	--	--	8.2	--	--	--	--	--
Aug 02...	<.1	.2	1.6	.14	E.18	26.1	<.06	14	15	E.01	<.60	--	E.83

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 5 of 6

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

Date	Mangan-										Sus- pended sediment concen- tration (80154)
	Iron, water, unfiltrd recover -able, µg/L (01045)	Lead, water, unfiltrd recover -able, µg/L (01049)	Lead, water, unfiltrd recover -able, µg/L (01051)	ese, water, unfiltrd recover -able, µg/L (01055)	Mercury water, unfiltrd recover -able, µg/L (71890)	Mercury water, unfiltrd recover -able, µg/L (71900)	Nickel, water, unfiltrd recover -able, µg/L (01065)	Nickel, water, unfiltrd recover -able, µg/L (01067)	Selen- ium, water, unfiltrd recover -able, µg/L (01147)	Silver, water, unfiltrd recover -able, µg/L (01077)	
Nov 08...	--	--	--	--	--	--	--	--	--	--	--
Feb 06...	--	<.12	--	--	<.010	--	<.06	--	--	--	<.60
06...	78	--	.08	8.3	--	<.010	--	.51	.25	<.02	--
May 07...	--	--	--	--	--	--	--	--	--	--	<.5
Aug 02...	85	--	.08	12.3	--	<.010	--	.27	.15	<.02	--
											E1.4
											--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006
TO SEPTEMBER 2007

Part 6 of 6

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

Date	Sus- pended sediment dis- charge, tons/d (80155)
Nov 08...	14
Feb 06...	--
06...	.04
May 07...	--
Aug 02...	--

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 1 of 7

[Remark codes: <, 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 08...	<.09	<.006	<.006	E.018	<.010	<.004	<.012	<.005	<.006	E.007	<.011	.011	<.04

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 7

[Remark codes: <, 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 08...	<.080	<.010	<.060	<.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-inyl-fipro-nil, water, fltrd,	Diazi-non, water, fltrd,	Dicro-tophos, water, fltrd,	Diel-drin, water, fltrd,	Dimeth-oate, water, 0.7u GF	Disulf-ton, sulfone, water, 0.7u GF	Disul-foton, sulfone, water, 0.7u GF	Endo-sulfan, water, 0.7u GF	EPTC, sulfate, water, 0.7u GF	Ethion, monoxon, water, 0.7u GF	Ethion, water, 0.7u GF	Etho-prop, water, 0.7u GF	Fenami-phos sulfone, water, 0.7u GF
	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 08...	<.012	<.005	<.08	<.009	<.006	<.01	<.02	<.022	<.002	<.02	<.016	<.012	<.053

01396588 SPRUCE RUN NEAR GLEN GARDNER, 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 08...	<.04	<.03	<.029	<.013	<.024	<.016	<.006	<.026	<.026	<.011	<.039	<.016	<.007

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)	Metribuzin, 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-methalin, 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 oxon, water, fltrd, µg/L (61601)
May 08...	<.009	<.02	<.008	E.007	<.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	Prome-ton, water, fltrd, µg/L (04037)	Prome-tryn, water, fltrd, µg/L (04036)	Propy-zamide, water, fltrd, µg/L (82676)	Propy-panal, water, fltrd, µg/L (82679)	Propar-gite, water, fltrd, µg/L (82685)	Simazine, water, fltrd, µg/L (04035)	Tebu-thiuron water, fltrd, µg/L (82670)	Teflu-thrin, water, fltrd, µg/L (61606)	Ter-bufos water, fltrd, µg/L (61674)	Terbu-fos, water, fltrd, µg/L (82675)	Ter-butyl-azine, water, fltrd, µg/L (04022)	Ter-benzyl-azine, water, fltrd, µg/L (04022)	Thio-bencarb, water, fltrd, µg/L (82681)	trans-Propi-conazole, water, fltrd, µg/L (79847)
May 08...	<.01	<.006	<.004	<.011	<.02	.027	<.02	<.003	<.04	<.01	<.01	<.010	<.03	

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO
SEPTEMBER 2007

Part 7 of 7

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

Date	Tri-	flu-	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 08...	<.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,		Mangan-			
		+ org-N, bed sed	Phos- phorus, bed sed	Total carbon, bed sed	ganic carbon, bed sed	Arsenic bed sedimnt	Cadmium bed sedimnt	ium, bed sedimnt	Cobalt bed sedimnt	Copper, bed sedimnt	ese, bed sedimnt		
mg/kg	mg/kg	total, sedimnt	total, sedimnt	total, sedimnt	recover -able,	recover -able,	recover -able,	recover -able,	total, sedimnt	recover -able,	bed sedimnt		
(00626)	(00668)	(00693)	(00686)	(64847)	(01028)	(01029)	(01038)	(01043)	(01170)	(01052)	(01053)		
Aug 02...	1040	160	1,500	4.0	.2	1.3	.090	19	4.6	13	18,000	9.2	190

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 4

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

Date	ug/g (71921)	Sele-		1,2-Di-	1,6-Di-	1Methyl	1-	1-	236Tri-	2,6-Di-	2-Ethyl	2-
		Mercury bed sedimnt	Nickel, bed sedimnt	Zinc, bed sedimnt	methyl- naphth-	methyl- naphth-	-9H- naphth-	Methyl- phenan-	Methyl- pyrene,	methyl- naphth-	methyl- naphth-	Methyl-
-able, ug/g (01068)	-able, ug/g (64848)	-able, ug/g (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)	<2 mm, (49435)	
Aug 02...	<.007	6.4	.2	31	<53	<53	<53	<53	<53	E12	<53	<53

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 4

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

Date	4H-Cyclo-	9H-Fluor-	Ace-naphth-	Ace-naphth-	Anthra-	Benzo-[a]-	Benzo-[a]-	Benzo-[b]-	Benzo-[ghi]-	Benzo-[k]-	Chry-sene,	Dibenzo-[a,h]-	Fluor-anthene
	-[def]-phenanthrene, bs <2mm	ene, bed sed	naphthene, bed sed	naphthene, bed sed	<2 mm, wsv nat field,	cene, bed sed	[a]-anthra-cene, bed sed	pyrene, bed sed	fluoranthene	perylene, bed sed	<2 mm, wsv nat field,	bed sed	anthracene, bed sed
	ug/kg (49411)	ug/kg (49399)	ug/kg (49429)	ug/kg (49428)	ug/kg (49434)	ug/kg (49436)	ug/kg (49389)	ug/kg (49458)	ug/kg (49408)	ug/kg (49397)	ug/kg (49450)	ug/kg (49461)	ug/kg (49466)
Aug 02...	<53	<53	<53	<53	80	90	130	E45	53	89	<53	160	

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 4

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

Date	Indeno-[1,2,-3-cd]-pyrene, bed sed <2 mm, bed sed	Iso-phorone, bed sed	Naphthalene, bed sed	p-Cresol, bed sed	Phenanthrene, bed sed	Phenanthrene, bed sed	Pyrene, bed sed	Bed sediment, dry svd	Bed sediment, sve dia	Bed percent	Bed percent	
	wsv nat	wsv nat	<2 mm	PCBs, bed	<2 mm, wsv nat	<2 mm, wsv nat	<2 mm, wsv nat	<2 mm, wsv nat	<2 mm, wsv nat	<.063mm	<.004mm	
	ug/kg (49390)	ug/kg (49400)	ug/kg (49402)	ug/kg (39519)	ug/kg (49451)	ug/kg (49409)	ug/kg (49393)	ug/kg (49387)	(80164)	(80157)		
Aug 02...	<53	<53	<53	E2.14	<53	E52	<53	150	3	1		