

01398102 SOUTH BRANCH RARITAN RIVER AT SOUTH BRANCH, NJ

RARITAN RIVER BASIN

LOCATION.--Lat 40°32'49", long 74°41'47" referenced to North American Datum of 1983, Branchburg Township, Somerset County, NJ, Hydrologic Unit 02030105, on left downstream wingwall of bridge on Studdiford Drive (South Branch Road) at village of South Branch, 0.8 mi upstream from confluence with North Branch Raritan River, and 2.7 mi southeast of Readington.

DRAINAGE AREA.--265 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Miscellaneous measurements, water years 1976-83, 1998 to current year. Annual maximum, water years 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 45.54 ft above NGVD of 1929.

REMARKS.--Flow regulated by Spruce Run (see 01396790) and Round Valley (see 01397050) Reservoirs. Peak stages at this gage maybe affected by backwater from the North Branch Raritan River. Satellite telemetry at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 20.29 ft, Sep 16, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, estimated at 12.5 ft, Dec 12.

DISCHARGE MEASUREMENTS
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Date	Discharge, in ft³/s
Dec 8, 2008	226
Feb 25, 2009	190
May 28, 2009	190
Aug 12, 2009	337

01398102 SOUTH BRANCH RARITAN RIVER AT SOUTH BRANCH, NJ—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976-83, 1998 to current year.

REMARKS.--Cooperative Network Site Descriptor: Watershed Integrator, NJ Department of Environmental Protection Watershed Management Area 8.

COOPERATION.--Physical measurements and samples for laboratory analysis on Dec 8, Feb 25, and May 28 were collected in cooperation with the NJ Department of Environmental Protection; those on Aug 12 were collected in cooperation with the NJ Water Supply Authority. 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 pres- sure, mm Hg (00025)	Temper- ature, air, deg C (00020)	UV absorb- ance, 254 nm, wat flt units /cm (50624)	UV absorb- ance, 280 nm, wat flt units /cm (61726)	Instan- taneous dis- charge, ft ³ /s (00061)	Dis- solved oxygen, 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, water, deg C (00010)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Dis- solved solids dried @ 180degC wat flt mg/L (70300)
Dec 08...	1100	767	-.3	.057	.044	226	15.0	104	7.9	326	.2	3.2	175
Feb 25...	1020	768	2.0	.046	.035	190	16.2	112	8.2	401	.6	2.1	222
May 28...	1000	757	20.5	.071	.055	190	10.4	109	7.6	347	17.3	7.1	198
Aug 12...	1250	760	--	.078	.060	337	9.5	116	8.0	335	25.3	2.7	188

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 2 of 5

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

Date	Dis- solved solids, sum of consti- tuents, mg/L (70301)	Hard- ness, water, mg/L as CaCO3 (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)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Total carbon, suspnd sedimnt total, mg/L (00694)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Silica, water, fltrd, mg/L as SiO2 (00955)
Dec 08...	E175	100	4	24.8	9.41	2.02	21.5	67	.6	39.4	E.07	<.04	8.8
Feb 25...	E205	100	1	24.1	9.62	1.96	34.9	63	.5	64.5	E.04	<.04	6.4
May 28...	E182	110	2	26.1	10.5	2.15	24.1	70	.6	47.3	E.05	<.04	5.5
Aug 12...	E179	100	3	25.6	9.59	2.15	20.6	78	E.2	39.3	E.04	<.04	10.4

01398102 SOUTH BRANCH RARITAN RIVER AT SOUTH BRANCH, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 3 of 5

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

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, fltrd, mg/L (00623)	Ammonia water, fltrd, mg/L (00608)	Nitrate + nitrite water, fltrd, mg/L (00631)	Ortho-phosphate, water, fltrd, mg/L (00671)	Particulate nitrogen, susp, water, mg/L (49570)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd, mg/L (00665)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd, mg/L (00600)	Barium, water, unfltrd recover-able, µg/L (01007)	Beryllium, water, unfltrd recover-able, µg/L (01012)	Cadmium water, unfltrd, µg/L (01027)
Dec 08...	20.8	.21	E.009	1.72	.015	.09	.018	.031	1.9	2.0	--	--	--
Feb 25...	19.8	.21	.014	1.38	E.008	.06	.010	.017	1.6	1.6	43.4	<.02	<.06
May 28...	19.2	.29	.040	1.14	.040	.07	.050	.066	1.4	1.5	--	--	--
Aug 12...	18.9	.19	.015	1.23	.032	<.02	.036	.044	1.4	--	43.7	<.02	<.06

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 4 of 5

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

Date	Chromium, 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)	Manganese, 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, fltrd, µg/L (01000)	Arsenic, water, unfltrd, µg/L (01002)	Boron, water, fltrd, µg/L (01020)	Boron, water, unfltrd recover-able, µg/L (01022)
Dec 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
Feb 25...	<.40	<4.0	99	.11	30.1	<.010	.45	<.06	E1.7	.31	.32	--	20
May 28...	--	--	--	--	--	--	--	--	--	--	--	31	--
Aug 12...	E.21	<4.0	124	.18	15.1	<.010	.49	<.06	E1.5	.83	1.2	--	33

01398102 SOUTH BRANCH RARITAN RIVER AT SOUTH BRANCH, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO
SEPTEMBER 2009

Part 5 of 5

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

Date	Organic		
	Selen- ium, water, unfltrd µg/L (01147)	carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)
Dec 08...	--	.55	2.1
Feb 25...	.12	.45	2.0
May 28...	--	.58	2.6
Aug 12...	.20	.17	2.3

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, fltrd 0.7µ GF µg/L (49295)	2,6-Di- ethyl- aniline water, fltrd 0.7µ 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 wat flt 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- 2- methyl- phenol, wat flt 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 28...	<.04	<.006	<.010	E.063	<.010	E.004	<.004	<.005	.011	E.007	<.006	.226	<.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, fltrd 0.7µ GF µg/L (82686)	Ben- flur- alin, water, fltrd 0.7µ GF µg/L (82673)	Car- baryl, water, fltrd 0.7µ GF µg/L (82680)	Carbo- furan, water, fltrd 0.7µ GF µg/L (82674)	Chlor- pyrifos oxon, water, fltrd, µg/L (61636)	Chlor- pyrifos water, fltrd, µg/L (38933)	cis- Per- methrin water fltrd 0.7µ 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)	Cyper- methrin water, fltrd, µg/L (61586)	DCPA, water, fltrd 0.7µ GF µg/L (82682)	Desulf- inyl- fipro- nil amide, wat flt µg/L (62169)
May 28...	<.120	<.014	E.007	<.060	<.05	<.010	<.014	<.006	<.040	<.016	<.020	<.006	<.029

01398102 SOUTH BRANCH RARITAN RIVER AT SOUTH BRANCH, NJ—Continued

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, fltrd, µg/L (62170)	Diazi- non, water, fltrd, µg/L (39572)	Di- chlor- vos, water, fltrd, µg/L (38775)	Dicro- tophos, water, fltrd, µg/L (38454)	Diel- drin, water, fltrd, µg/L (39381)	Dimeth- oate, water, fltrd 0.7µ GF µg/L (82662)	Disulf- oton sulfone water, fltrd, µg/L (61640)	Disul- foton, water, fltrd 0.7µ GF µg/L (82677)	Endo- sulfan sulfate water, fltrd, µg/L (61590)	EPTC, water, fltrd 0.7µ GF µg/L (82668)	Ethion monoxon water, fltrd, µg/L (61644)	Ethion, water, fltrd, µg/L (82346)	Etho- prop, water, fltrd 0.7µ GF µg/L (82672)
May 28...	E.005	<.005	<.02	<.08	<.009	<.006	<.01	<.04	<.022	<.002	<.02	<.012	<.016

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 4 of 7

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

Date	Fenami- phos sulfone water, fltrd, µg/L (61645)	Fenami- phos oxide, water, fltrd, µg/L (61646)	Fenami- phos, water, fltrd, µg/L (61591)	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)	lambda- Cyhalo- thrin, water, fltrd, µg/L (61595)	Mala- oxon, water, fltrd, µg/L (61652)	Mala- thion, water, fltrd, µg/L (39532)
May 28...	<.053	<.08	<.03	E.003	<.024	E.005	<.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	Meta- laxyl, water, fltrd, µg/L (61596)	Methid- athion, water, fltrd, µg/L (61598)	Methyl para- oxon, water, fltrd, µg/L (61664)	Methyl para- thion, water, fltrd 0.7µ GF µg/L (82667)	Metola- chlor, water, fltrd, µg/L (39415)	Metri- buzin, water, fltrd, µg/L (82630)	Moli- nate, water, fltrd 0.7µ GF µg/L (82671)	Myclo- butanil water, fltrd, µg/L (61599)	Oxy- fluor- fen, water, fltrd, µg/L (61600)	Pendi- meth- alin, water, fltrd 0.7µ GF µg/L (82683)	Phorate oxon, water, fltrd, µg/L (61666)	Phorate water, fltrd 0.7µ GF µg/L (82664)	Phosmet oxon, water, fltrd, µg/L (61668)
May 28...	<.007	<.006	<.01	<.008	.025	<.016	<.002	<.010	<.006	<.012	<.03	<.020	<.05

01398102 SOUTH BRANCH RARITAN RIVER AT SOUTH BRANCH, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 6 of 7

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

Date	Phosmet water, fltrd, µg/L (61601)	Prometon, water, fltrd, µg/L (04037)	Prometryn, water, fltrd, µg/L (04036)	Propanil, water, fltrd, 0.7µ GF µg/L (82679)	Propargite, water, fltrd, 0.7µ GF µg/L (82685)	Propyzamide, water, fltrd, 0.7µ GF µg/L (82676)	Simazine, water, fltrd, µg/L (04035)	Tebu-thiuron water, fltrd, 0.7µ GF µg/L (82670)	Tefluthrin, water, fltrd, µg/L (61606)	Terbufos sulfone water, fltrd, µg/L (61674)	Terbufos, water, fltrd, 0.7µ GF µg/L (82675)	Terbutylazine, water, fltrd, µg/L (04022)	Thiocarb water, fltrd, 0.7µ GF µg/L (82681)
May 28...	<.200	E.01	<.006	<.014	<.02	<.004	.013	<.02	<.010	<.04	<.02	<.01	<.016

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO
SEPTEMBER 2009

Part 7 of 7

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

Date	trans-Propiconazole, water, fltrd, µg/L (79847)	Tribu-phos, water, fltrd, µg/L (61610)	Tri-fluralin, water, fltrd, 0.7µ GF µg/L (82661)
May 28...	<.02	<.035	<.012

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 1 of 4

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

Date	Mois-ture, bed sed <2 mm, wsv nat fld dry percent (49282)	pH bed sedimnt std units (70310)	Total carbon, bed sedimnt total, g/kg (00693)	Inor-ganic carbon, bed sedimnt total, g/kg (00686)	Phos-phorus, bed sedimnt total, mg/kg as P (00668)	Cadmium bed sedimnt recover-able, µg/g (01028)	Chrom-ium, bed sedimnt recover-able, µg/g (01029)	Cobalt bed sedimnt recover-able, µg/g (01038)	Copper, bed sedimnt recover-able, µg/g (01043)	Iron, bed sedimnt total digest, µg/g (01170)	Lead, bed sedimnt recover-able, µg/g (01052)	Mangan-ese, bed sedimnt recover-able, µg/g (01053)	Mercury bed sedimnt recover-able, µg/g (71921)
Aug 12...	26	7.51	1.7	<.2	E80	.100	23	10.3	16	23,000	14	420	<.007

01398102 SOUTH BRANCH RARITAN RIVER AT SOUTH BRANCH, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 2 of 4

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

Date	Nickel, bed sediment recover-able, µg/g (01068)	Zinc, bed sediment recover-able, µg/g (01093)	Arsenic, bed sediment recover-able, µg/g (64847)	Selenium, bed sediment recover-able, µg/g (64848)	p-Cresol, bed sediment field, µg/kg (49451)	PCBs, bed sediment µg/kg (39519)	1,2-Dimethylnaphthalene, bed sediment µg/kg (49403)	1,6-Dimethylnaphthalene, bed sediment µg/kg (49404)	1Methyl-9H-fluorene, bed sediment µg/kg (49398)	1-Methylphenanthrene, bed sediment µg/kg (49410)	1-Methylpyrene, bed sediment µg/kg (49388)	236Tri-methylnaphthalene, bed sediment µg/kg (49405)	2,6-Dimethylnaphthalene, bed sediment µg/kg (49406)
Aug 12...	20.5	65	6.4	.2	<55	<5.00	<55	<55	<55	<55	<55	<55	<55

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 3 of 4

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

Date	2-Ethyl-naphthalene, bed sediment µg/kg (49948)	2-Methylanthracene, bed sediment µg/kg (49435)	4H-Cyclopenta-[def]-phenanthrene, bed sediment µg/kg (49411)	9H-Fluorene, bed sediment µg/kg (49399)	Ace-naphthene, bed sediment µg/kg (49429)	Ace-naphthylene, bed sediment µg/kg (49428)	Anthracene, bed sediment µg/kg (49434)	Benzo-[a]-anthracene, bed sediment µg/kg (49436)	Benzo-[a]-pyrene, bed sediment µg/kg (49389)	Benzo-[b]-fluoranthene, bed sediment µg/kg (49458)	Benzo-[ghi]-perylene, bed sediment µg/kg (49408)	Benzo-[k]-fluoranthene, bed sediment µg/kg (49397)	Chrysene, bed sediment µg/kg (49450)
Aug 12...	<55	<55	<55	<55	<55	<55	<55	E52	59	E73	E33	E30	E57

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 4 of 4

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

Date	Dibenzo-[a,h]-anthracene, bed sediment µg/kg (49461)	Fluoranthene, bed sediment µg/kg (49466)	Indeno-[1,2,3-cd]-pyrene, bed sediment µg/kg (49390)	Iso-phorone, bed sediment µg/kg (49400)	Naphthalene, bed sediment µg/kg (49402)	Phenanthrene, bed sediment µg/kg (49409)	Phenanthridine, bed sediment µg/kg (49393)	Pyrene, bed sediment µg/kg (49387)	Bed sediment dry svediment percent (80164)
Aug 12...	E12	120	E33	<55	<55	E39	<55	100	3.0