



Water-Data Report 2006

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 mouth, 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.--Crest-stage gage. Datum of gage is 45.54 ft above NGVD of 1929.

REMARKS.--Radio stage telemetry at station. Flow regulated by Spruce Run (see 01396790) and Round Valley (see 01397050) Reservoirs.

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

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 13.18 ft, Oct 12 at 1145.

DISCHARGE MEASUREMENTS
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Date	Discharge, in ft³/s
Dec 8, 2005	306
Feb 9, 2006	502
May 31, 2006	166
Jun 6, 2006	422
Sep 5, 2006	268

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.--Total nitrogen (00600) equals the sum of filtered ammonia plus organic nitrogen (00623), filtered nitrite plus nitrate nitrogen (00631), and total particulate nitrogen (49570). Bacteria samples were collected synoptically over a 30-day period during the summer.

COOPERATIVE NETWORK SITE DESCRIPTOR: Watershed Integrator, New Jersey Department of Environmental Protection (NJDEP) Watershed Management Area 8.

COOPERATION.—Samples were collected in cooperation with the NJDEP. Bacteria samples were provided by the local county health department under the direction of the NJDEP through the County Environmental Health Act. Determinations of filtered ammonia, filtered orthophosphorus, BOD, total suspended residue, fecal coliform, E. coli, and enterococcus bacteria were performed by the NJ Department of Health and Senior Services. Analysis of the split and concurrent replicate samples was performed by the Laboratory Branch of the U.S. EPA, Region II, Division of Environmental Science and Assessment.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006**

Part 1 of 4

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

Date	Time	Sample type	Instan- taneous dis- charge, cfs (00061)	Turbdty 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, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf 25 degC uS/cm (00095)	Temper- ature, air, deg C (00020)
Dec 08...	1150	Environmental	306	2.7	.052	.039	774	15.0	103	6.8	334	-1.5
Feb 09...	1300	Environmental	502	2.1	.060	.044	763	15.8	119	8.3	266	2.5
May 31...	1300	Environmental	166	6.2	.076	.057	763	8.9	109	8.1	313	27.5
Sep 05...	1020	Environmental	268	3.5	.171	.131	766	8.3	89	7.4	233	19.0
05...	1020	<i>Split Replicate</i>	--	3.5	--	--	--	--	--	--	--	--
05...	1021	<i>Concurrent Replicate</i>	--	3.2	--	--	--	--	--	--	--	--

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

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 2 of 4

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

Date	Temperature, water, deg C (00010)	Hard- ness, water, mg/L as CaCO3 (00900)	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)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, sum of consti- tuents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)
Dec 08...	.6	94	22.6	9.00	1.88	24.6	59	46.1	.14	12.3	19.4	182	183
Feb 09...	3.5	82	19.6	7.96	1.59	18.1	51	33.5	E.08	9.4	16.7	145	147
May 31...	25.9	94	22.3	9.43	1.96	19.2	67	39.9	E.10	2.8	17.3	157	175
Sep 05...	18.8	73	18.1	6.70	2.35	15.8	54	26.8	E.06	10.6	15.2	134	144
05...	--	74	18.0	7.10	2.70	16.0	51	28.0	.06	--	15.0	123	140
05...	--	77	19.0	7.20	2.80	16.0	51	29.0	.06	--	15.0	125	140

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 3 of 4

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

Date	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Ammonia water, unfltrd mg/L as N (00610)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (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- phos- phate, water, fltrd, mg/L as P (00671)	Ortho- phos- phate, water, unfltrd mg/L as P (70507)	Phos- phorus, water, fltrd, mg/L (00666)
Dec 08...	1	.23	--	.015	--	2.30	--	.02	2.5	2.5	.022	--	.027
Feb 09...	1	.17	--	.042	--	1.64	--	.06	1.8	1.9	.015	--	.015
May 31...	6	.48	--	.048	--	.86	--	.05	1.3	1.4	.038	--	.054
Sep 05...	4	.37	--	.031	--	1.21	--	.04	1.6	1.6	.056	--	.052
05...	<10	E.37	E.76	<.050	<.050	1.20	<.050	--	--	--	.045	.05	.054
05...	<10	E.78	E.40	<.050	<.050	1.20	<.050	--	--	--	.046	.05	.053

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

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

Part 4 of 4

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

Date	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	Boron, water, fltrd, ug/L (01020)
Dec							
08...	.036	.2	<.1	.2	1.8	<1.0	23
Feb							
09...	.022	.3	<.1	.3	1.7	<1.0	18
May							
31...	.068	.3	<.1	.2	2.9	E1.3	29
Sep							
05...	.081	.3	<.1	.2	4.4	<1.0	29
05...	.062	--	--	--	9.1	--	30
05...	.060	--	--	--	8.3	--	30

WATER-QUALITY DATA
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006

[Remark codes: <, less than.]

Date	Time	Temper- ature, water, deg C (00010)	Entero- cocci, m-E MF, water, col/ 100 mL (31649)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli- form, EChroth water, MPN/ 100 mL (31615)
May					
24...	1040	15.1	50	<10	40
31...	1055	24.1	20	10	20
Jun					
07...	1045	18.4	220	10	500
14...	1045	20.5	70	70	80
21...	1045	23.4	20	80	170