



Water-Data Report 2011

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ

DELAWARE RIVER BASIN

LOCATION.--Lat 39°44'26", long 75°15'33" referenced to North American Datum of 1983, Harrison Township, Gloucester County, NJ, Hydrologic Unit 02040202, on right bank 25 ft downstream from bridge on County Route 607 (Tomlin Station Road), 1.8 mi west of Mullica Hill, and 2.8 mi east of Swedesboro.

DRAINAGE AREA.--26.9 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--Miscellaneous measurements, May 1965 to April 1966. Continuous-record gaging station, May 1966 to current year.

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage and air temperature recorder and crest-stage gage. Datum of gage is 0.00 ft NGVD of 1929. Prior to Jul 28, 1969, at datum 7.96 ft higher. Jul 28, 1969 to Sep 30, 1969, at datum 5.96 ft higher.

REMARKS.--Records fair, except for estimated daily discharges, which are poor. Occasional regulation from irrigation and operation of gates at ponds upstream of gage. Several measurements of water temperature were made during the year. Satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 1	0915	1,050	14.28
Mar 11	1215	366	12.15
Apr 17	0615	680	13.34
Jul 9	0645	493	12.72
Aug 14	1945	2,050	15.96
Aug 16	0400	683	13.35
Aug 28	0430	*5,510	*18.68
Sep 8	1345	563	12.90

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011
DAILY MEAN VALUES
[e, estimated]

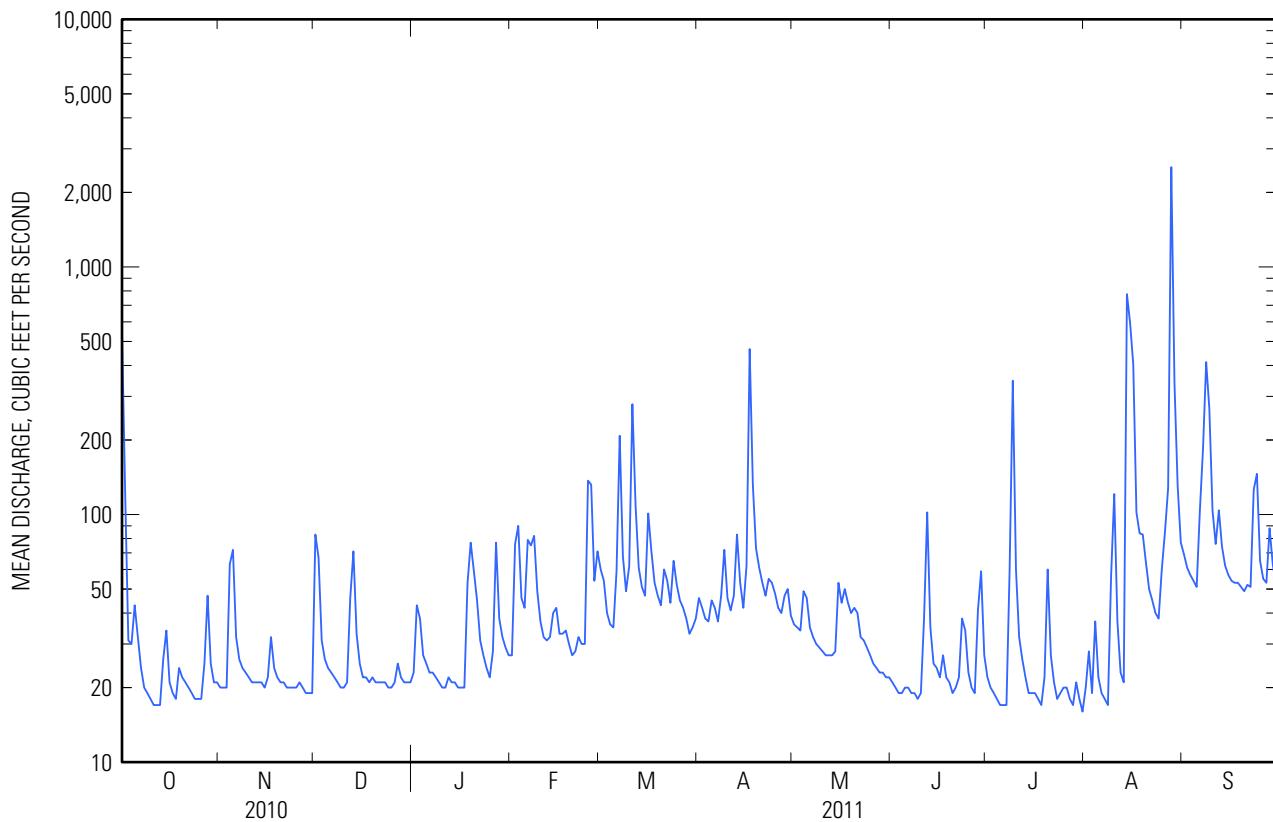
Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	550	20	83	23	27	60	46	36	21	22	20	69
2	122	20	67	43	76	54	42	35	20	20	28	61
3	31	20	31	38	90	40	38	34	19	19	19	57
4	30	63	26	27	46	36	37	49	19	18	37	54
5	43	72	24	25	42	35	45	46	20	17	22	51
6	32	32	23	23	79	59	42	35	20	17	19	103
7	24	26	22	23	75	208	37	32	19	17	18	184
8	20	24	21	22	82	68	47	30	19	60	17	413
9	19	23	20	21	49	49	72	29	18	347	56	267
10	18	22	20	20	37	62	46	28	19	60	121	104
11	17	21	21	20	32	279	41	27	38	32	37	76
12	17	21	46	22	31	109	47	27	102	26	23	104
13	17	21	71	21	32	61	83	27	35	22	21	74
14	26	21	33	e21	40	51	53	28	25	19	777	62
15	34	20	25	e20	42	47	42	53	24	19	594	57
16	21	22	22	20	33	101	62	44	22	19	404	54
17	19	32	22	20	33	71	466	50	27	18	102	53
18	18	24	21	53	34	53	132	44	22	17	84	53
19	24	22	22	77	30	47	73	40	21	22	83	51
20	22	21	21	59	27	43	61	42	19	60	64	49
21	21	21	21	45	28	60	53	40	20	27	50	52
22	20	20	21	31	32	54	47	32	22	21	45	51
23	19	20	21	27	30	44	55	31	38	18	40	126
24	18	20	20	24	30	65	53	29	34	19	38	146
25	18	20	20	22	137	52	48	27	23	20	60	65
26	18	21	21	28	132	45	42	25	20	20	85	55
27	25	20	25	77	54	42	40	24	19	18	128	53
28	47	19	22	38	71	38	47	23	41	17	2,530	88
29	25	19	21	32	---	33	50	23	59	21	339	63
30	21	19	21	29	---	35	39	22	27	18	131	52
31	21	---	21	27	---	38	---	22	---	16	77	---
Total	1,357	746	875	978	1,451	2,039	1,986	1,034	832	1,066	6,069	2,747
Mean	43.8	24.9	28.2	31.5	51.8	65.8	66.2	33.4	27.7	34.4	196	91.6
Max	550	72	83	77	137	279	466	53	102	347	2,530	413
Min	17	19	20	20	27	33	37	22	18	16	17	49
Cfsm	1.63	0.92	1.05	1.17	1.93	2.45	2.46	1.24	1.03	1.28	7.28	3.40
In.	1.88	1.03	1.21	1.35	2.01	2.82	2.75	1.43	1.15	1.47	8.39	3.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2011, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	29.3	34.8	47.0	48.7	49.5	56.9	53.1	39.9	34.3	30.8	31.2	26.9
Max	65.2	93.9	144	123	115	132	134	72.6	95.5	112	196	91.6
(WY)	(1990)	(1973)	(1997)	(1978)	(1979)	(1994)	(1983)	(1989)	(2003)	(1975)	(2011)	(2011)
Min	13.0	15.3	16.3	20.2	16.5	22.7	21.3	15.9	10.7	6.01	5.89	8.98
(WY)	(1993)	(1999)	(1999)	(2002)	(2002)	(1981)	(1985)	(1977)	(1966)	(1966)	(1966)	(2002)

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	Calendar Year 2010	Water Year 2011		Water Years 1966 - 2011	
Annual total	16,480	21,180			
Annual mean	45.2	58.0		40.4	
Highest annual mean				64.7	1973
Lowest annual mean				16.5	2002
Highest daily mean	550	Oct 1	2,530	Aug 28	2,530 Aug 28, 2011
Lowest daily mean	11	Sep 1	16	Jul 31	2.9 Jul 14, 1966
Annual seven-day minimum	11	Sep 1	19	Jul 1	3.3 Aug 25, 1966
Maximum peak flow			5,510	Aug 28	5,510 Aug 28, 2011
Maximum peak stage			18.68	Aug 28	18.68 Aug 28, 2011
Instantaneous low flow			15	Jul 31, Aug 1	2.9 Jul 14, 1966
Annual runoff (cfsm)	1.68		2.16		1.50
Annual runoff (inches)	22.79		29.29		20.41
10 percent exceeds	79		82		66
50 percent exceeds	29		32		29
90 percent exceeds	16		19		14



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PERIOD OF RECORD.--Water years 1965 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: June 1966 to September 1969.

WATER TEMPERATURE: May 1966 to September 1973, daily maximum-minimum; October 1998 to October 2001, recorded hourly.

REMARKS.--Cooperative Network Site Descriptor: Watershed Integrator, NJ Department of Environmental Protection Watershed Management Area 18.

COOPERATION.--Physical measurements and samples for laboratory analyses were provided by personnel of the NJ Department of Environmental Protection. Determination of concentrations of ammonia in filtered water was performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory (DHSS-ECL) except during the period May 12 through August 25, 2011 when the determination was performed by the National Water-Quality Laboratory. Determination of concentrations of suspended solids in unfiltered water was performed by the DHSS-ECL except during the period June 17 through August 25, 2011 when samples could not be accepted.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011**

Part 1 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than]

Date	Sample start time	Barometric pressure, mm Hg (00025)	Tempera-ture, air, °C (00020)	Absorbance, constituents,		Discharge, instantaneous, ft ³ /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	pH, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)
				Absorbance, UV, 254 nm, 1 cm path length, water, filtered, units (50624)	Absorbance, UV, 280 nm, 1 cm path length, water, filtered, units (61726)				
12-02-2010	0930	767	4.5	.219	.176	64	10.1	84	7.0
02-18-2011	0930	759	12.0	.104	.084	34	11.1	93	7.1
06-29-2011	0900	760	24.5	.281	.220	66	7.0	81	7.0
08-22-2011	1000	759	21.5	.314	.249	46	7.0	81	7.2

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 2 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than]

Date	Sample start time	Turbidity, water, unfiltered, broad band light source				Dissolved				Suspended	
		Specific conductance, water, unfiltered, µS/cm at 25 °C (00095)	Temperature, water, °C (00010)	Including 90 +/- 30 degrees, ratiometric correction, NTRU (63676)	Dissolved solids at multiple angles (400-680 nm), detectors at 180 °C, water, dried at filtered, mg/L (70300)	Solids, water, filtered, sum of constituents, mg/L (70301)	Hardness, water, mg/L as CaCO ₃ (00900)	Solids, water, unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)		
12-02-2010	0930	207	7.2	19	136	114	61.0	7	18.5		
02-18-2011	0930	262	7.0	10	161	141	68.0	8	20.3		
06-29-2011	0900	173	22.6	17	110	95	49.5	--	14.4		
08-22-2011	1000	212	21.9	11	146	118	60.1	--	17.1		

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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Date	Sample start time	ANC, water, unfiltered, fixed endpoint (inorganic)				Carbon				Inorganic carbon, suspended sediment, total, mg/L (00688)	Silica, water, filtered, mg/L as SiO ₂ (00955)
		Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	Laboratory titration, mg/L as CaCO ₃ (90410)	plus organic, suspended sediment, total, mg/L (00694)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)			
12-02-2010	0930	3.61	4.72	10.5	23.7	.59	21.7	.12	<.03	7.97	
02-18-2011	0930	4.19	3.61	17.2	29.6	.49	33.4	.17	<.03	8.95	
06-29-2011	0900	3.27	3.93	8.98	23.1	1.37	20.1	.15	<.03	5.82	
08-22-2011	1000	4.22	4.11	12.7	31.0	.40	24.0	.13	<.03	9.85	

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than]

Date	Sample start time	Ammonia plus organic nitrogen, water, filtered.		Nitrate plus nitrite, water, filtered.		Particulate nitrogen, suspended in water, filtered.	Phosphorus, water, filtered.	Phosphorus, water, unfiltered.	Total nitrogen, water, filtered.	Total nitrogen, water, unfiltered.
		Sulfate, water, filtered,	mg/L as N (00945)	Ammonia, water, filtered,	mg/L as N (00623)	mg/L as N (00608)	mg/L as N (00631)	mg/L (49570)	mg/L as P (00666)	mg/L as P (00665)
12-02-2010	0930	27.0	.45	.042	1.18	.050	.035	.170	1.6	1.7
02-18-2011	0930	27.6	.33	.103	1.71	.097	.016	.080	2.0	2.1
06-29-2011	0900	19.8	.50	.050	1.02	.148	.051	.161	1.5	1.7
08-22-2011	1000	21.2	.46	.059	1.36	.029	.060	.140	1.8	1.9

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER
2011

Part 5 of 5

[%, percent; ANC, acid neutralizing capacity; CaCO₃, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO₂, silicon dioxide; cm, centimeter; ft³/s, cubic feet per second; mg/L, milligrams per liter; mm Hg, millimeters of mercury; nm, nanometers; °C, degrees Celsius; µS/cm, microsiemens per centimeter; <, less than]

Date	Sample start time	Organic carbon, suspended sediment, total, mg/L	
		(00689)	mg/L (00681)
12-02-2010	0930	.59	5.05
02-18-2011	0930	.49	2.34
06-29-2011	0900	1.35	6.32
08-22-2011	1000	.40	6.99