



Water-Data Report 2010

01412800 COHANSEY RIVER AT SEELEY, NJ

COHANSEY RIVER BASIN

LOCATION.--Lat 39°28'21", long 75°15'20" referenced to North American Datum of 1983, Stow Creek Township, Cumberland County, NJ, Hydrologic Unit 02040206, on right bank just downstream from bridge on Silver Lake Road (County Route 704), 0.6 mi south of Seeley, 2.6 mi east of Shiloh, 4.1 mi north of Bridgeton, and 22.5 mi upstream from mouth.

DRAINAGE AREA.--28.0 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1977 to September 1988. Operated as crest-stage partial-record station, water years 1989-95. August 2003 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 26.9 ft above NGVD of 1929.

REMARKS.--Records fair. Occasional regulation from lake gate operations, irrigation, or other activities upstream. 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 250 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec 9	1600	*438	*5.52
Dec 26	2045	391	5.42
Mar 13	2230	387	5.41
Jul 15	0000	302	5.20

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	27	41	36	65	43	65	103	51	35	29	27	26
2	27	38	35	59	43	68	78	50	35	27	25	26
3	27	36	162	48	46	68	70	50	33	26	25	26
4	27	33	98	45	45	65	68	48	33	23	25	24
5	25	33	68	47	44	59	65	46	32	21	26	20
6	26	33	105	47	56	56	66	45	31	21	24	20
7	25	32	57	47	50	55	64	43	30	20	23	22
8	24	33	45	47	47	54	61	44	29	20	22	22
9	25	32	267	46	47	54	89	41	33	21	23	22
10	26	32	198	43	63	53	74	40	41	36	22	22
11	25	34	62	42	62	53	60	42	32	39	22	23
12	24	70	45	43	54	65	58	56	32	29	26	25
13	25	77	71	43	51	216	58	50	33	33	29	26
14	24	45	120	43	49	266	59	54	32	144	26	25
15	31	37	64	44	48	135	57	131	29	190	28	24
16	34	34	47	46	53	98	58	53	31	55	35	28
17	35	33	43	61	50	75	70	44	31	41	28	43
18	79	32	42	77	49	68	59	128	29	37	36	28
19	45	32	47	55	52	65	54	141	27	35	33	26
20	32	36	53	48	55	62	54	61	27	33	28	25
21	29	35	48	44	52	60	55	47	25	39	26	23
22	28	33	47	44	53	79	63	44	26	32	33	25
23	28	32	46	42	111	121	55	47	40	30	129	35
24	32	42	44	43	167	82	51	45	31	29	43	27
25	54	40	47	79	130	63	61	43	32	48	32	26
26	40	35	256	116	94	71	150	41	30	67	31	24
27	46	33	254	61	72	65	125	39	28	34	29	28
28	142	31	96	48	67	60	72	38	32	31	28	35
29	115	29	59	44	---	149	55	39	54	31	26	31
30	44	32	51	42	---	156	52	38	33	30	25	46
31	38	---	54	44	---	170	---	35	---	29	26	---
Total	1,209	1,115	2,667	1,603	1,753	2,776	2,064	1,674	966	1,280	961	803
Mean	39.0	37.2	86.0	51.7	62.6	89.5	68.8	54.0	32.2	41.3	31.0	26.8
Max	142	77	267	116	167	266	150	141	54	190	129	46
Min	24	29	35	42	43	53	51	35	25	20	22	20
Cfsm	1.39	1.33	3.07	1.85	2.24	3.20	2.46	1.93	1.15	1.47	1.11	0.96
In.	1.61	1.48	3.54	2.13	2.33	3.69	2.74	2.22	1.28	1.70	1.28	1.07

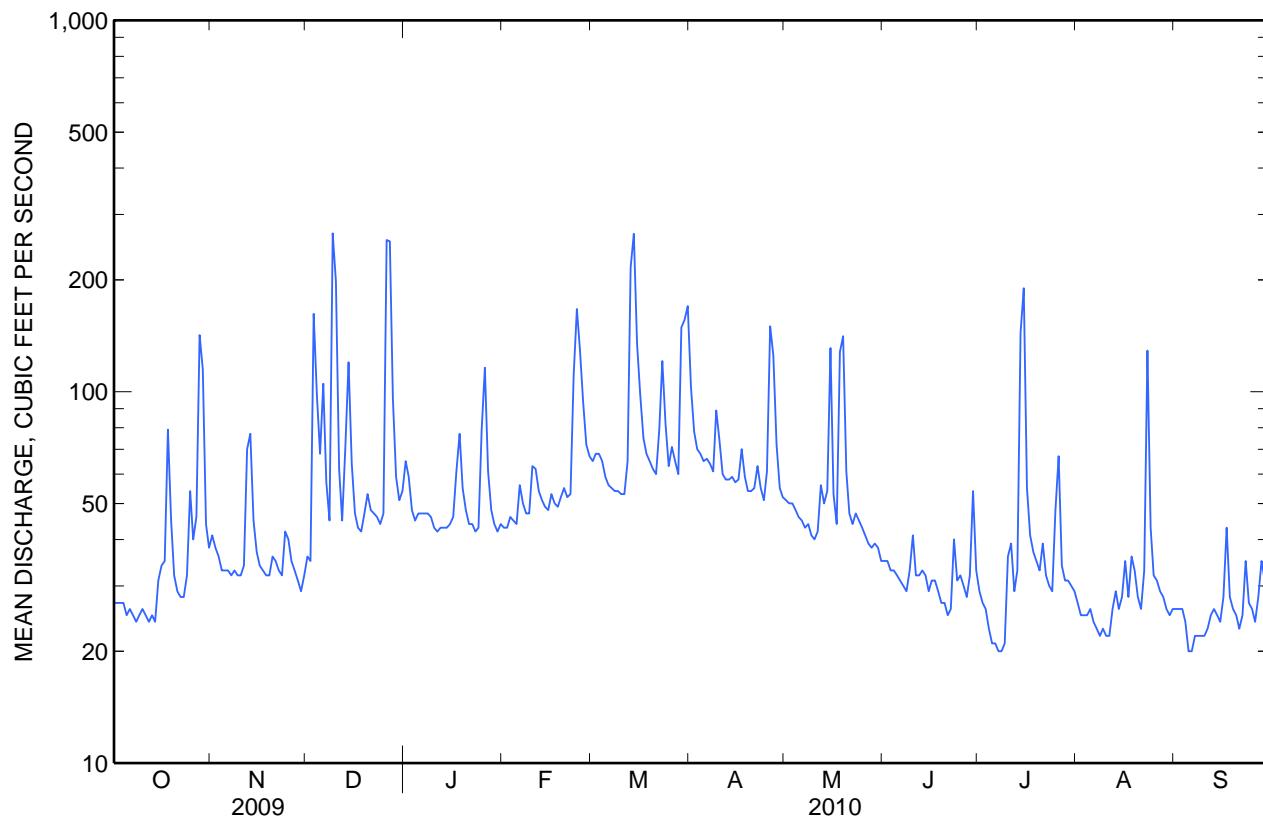
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	30.3	33.4	40.2	40.6	42.9	41.0	46.2	40.4	39.8	30.8	27.4	27.5
Max	58.4	48.1	86.0	84.7	105	89.5	77.7	57.3	121	50.0	46.9	43.5
(WY)	(1980)	(1984)	(2010)	(1978)	(1979)	(2010)	(2007)	(1983)	(1983)	(1984)	(2009)	(1979)
Min	20.5	20.5	25.1	20.8	24.5	19.3	22.2	27.9	15.3	14.9	13.1	17.8
(WY)	(1987)	(1982)	(1981)	(1981)	(1983)	(1981)	(1985)	(1986)	(1988)	(1988)	(2008)	(1988)

01412800 COHANSEY RIVER AT SEELEY, NJ—Continued**SUMMARY STATISTICS**

	Calendar Year 2009	Water Year 2010		Water Years 1978 - 2010	
Annual total	13,697	18,871			
Annual mean	37.5	51.7		36.6	
Highest annual mean				51.7	2010
Lowest annual mean				24.4	1988
Highest daily mean	267	Dec 9	267	Dec 9	2,150 Jun 21, 1983
Lowest daily mean	13	Jul 28	20	Many days	5.3 Jul 9, 1988
Annual seven-day minimum	15	Jul 14	22	Sep 5	5.8 Jul 5, 1988
Maximum peak flow		438	Dec 9	^a 10,000	Jun 21, 1983
Maximum peak stage		5.52	Dec 9	8.50	Jun 21, 1983
Instantaneous low flow		18	Jul 7, 8	4.7	Jul 9, 1988
Annual runoff (cfsm)	1.34	1.85		1.31	
Annual runoff (inches)	18.20	25.07		17.76	
10 percent exceeds	52	79		55	
50 percent exceeds	28	43		29	
90 percent exceeds	21	25		19	

^a Discharge partially the result of dam break at Seeley Lake, 3.1 mi upstream, from rating curve extended above 600 ft³/s based on step-backwater computation of peak flow.



01412800 COHANSEY RIVER AT SEELEY, NJ—Continued**WATER-QUALITY RECORDS**

PERIOD OF RECORD.—Water years 1975 to current year.

REMARKS.—Cooperative Network Site Descriptor: Agricultural Land Use Indicator, New Jersey Department of Environmental Protection Watershed Management Area 17.

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, and suspended residue were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory.

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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; E, estimated]

Date	Sample start time	Barometric pressure, mm Hg (00025)	Tempera-ture, air, °C (00020)	Absorbance, UV, 254 nm, 1 cm path length, water, filtered, units per centimeter (50624)	Absorbance, UV, organic constituents, 280 nm, 1 cm path length, water, filtered, units per centimeter (61726)	Discharge, instantane-ous, ft ³ /s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)
12-16-2009	1030	770	3.7	.228	.181	48	8.8	71	6.6
02-18-2010	1045	752	6.0	.094	.074	48	11.5	90	6.8
05-19-2010	1045	760	17.3	.455	.361	147	7.2	71	6.7
08-26-2010	1030	760	23.7	.180	.141	31	6.3	70	6.8

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

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; E, estimated]

Date	Specific conduc-tance, water, unfiltered, µS/cm at 25 °C (00095)	Tempera-ture, water, °C (00010)	Turbidity, water, unfiltered, broad band light source (400-680 nm), detectors at multiple angles including 90 °C ± 30 degrees, ratiometric correction, NTRU (63676)	Dissolved solids, dried at 180 °C, water, filtered, mg/L (70300)	Dissolved solids, dried at 180 °C, water, filtered, milligrams per liter (70301)	Hardness, water, mg/L as CaCO ₃ (00900)	Suspended solids, water, unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)	Magne-sium, water, filtered, mg/L (00925)
12-16-2009	199	6.3	30	110	E 109	51.3	13	10.7	5.94
02-18-2010	247	4.2	6.2	131	E 134	66.0	4	14.0	7.53
05-19-2010	163	13.7	21	101	91	46.9	12	10.1	5.28
08-26-2010	--	19.7	8.3	132	119	59.7	6	11.8	7.34

01412800 COHANSEY RIVER AT SEELEY, NJ—Continued
**WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 3 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; E, estimated]

Date	ANC, water, unfiltered,		Carbon endpoint (inorganic (pH 4.5))		Inorganic carbon, water, suspended sediment, mg/L as SiO ₂		Silica, water, filtered, mg/L as SiO ₂		Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	
	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	titration, laboratory, mg/L as CaCO ₃	suspended sediment, total, mg/L (00694)	Chloride, water, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Inorganic carbon, water, suspended sediment, mg/L (00688)	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	
12-16-2009	7.07	7.78	16	1.03	18.5	E .04	< .06	7.6	22.2	.52
02-18-2010	6.20	11.2	15	.51	27.2	< .08	< .06	7.4	25.8	.30
05-19-2010	6.24	7.52	19	1.30	17.6	.09	< .06	4.9	16.8	.65
08-26-2010	7.66	9.44	20	.55	24.3	.08	< .06	7.7	22.4	.45

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010**

Part 4 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; E, estimated]

Date	Nitrate plus nitrite, water, filtered, mg/L as N (00608)		Orthophos- phate, water, filtered, mg/L as P (00631)	Particulate nitrogen, suspended sediment, mg/L (00671)		Phosphorus, water, filtered, mg/L as P (49570)		Phosphorus, water, unfiltered, mg/L as P (00666)		Total nitrogen, water, unfiltered, mg/L (00602)	Total nitrogen, water, unfiltered, mg/L (00600)	Organic carbon, suspended sediment, total, mg/L (00689)
	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)		mg/L as P (00671)	mg/L (49570)	mg/L as P (00666)	mg/L as P (00665)	mg/L (00602)	mg/L (00600)			
12-16-2009	.111	4.27	.013	.08	.014	.130	4.8	4.9	1.02			
02-18-2010	.103	5.85	E .006	.06	E .006	.036	6.1	6.2	.51			
05-19-2010	.068	2.56	--	.16	.034	.127	3.2	3.4	1.28			
08-26-2010	.092	3.64	--	.07	.027	.070	4.1	4.2	.45			

01412800 COHANSEY RIVER AT SEELEY, NJ—Continued

**WATER-QUALITY DATA
WATER YEAR OCTOBER
2009 TO SEPTEMBER
2010**

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; E,
estimated]

Date	Organic carbon, water, filtered, mg/L (00681)
12-16-2009	4.4
02-18-2010	2.3
05-19-2010	8.5
08-26-2010	4.3