01391500 SADDLE RIVER AT LODI, NJ

PASSAIC RIVER BASIN

LOCATION.--Lat 40°53′25″, long 74°04′50″ referenced to North American Datum of 1983, Lodi Borough, Bergen County, NJ, Hydrologic Unit 02030103, on left bank 560 ft upstream from bridge on Outwater Lane in Lodi, 1.3 mi south of Rochelle Park, and 3.2 mi upstream from mouth.

DRAINAGE AREA.--54.6 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--September 1923 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1031: 1940(M). WSP 1552: 1929(M), 1936(M), 1938. WDR NJ-1969: 1967. WDR NJ-1970: 1968, 1969.

GAGE.--Water-stage recorder. Concrete control since Nov 2, 1938. Datum of gage is 25.00 ft above NGVD of 1929. Prior to Nov 2, 1938, at site 560 ft downstream at datum 2.54 ft lower.

REMARKS.--Records good, except for estimated daily discharges which are fair. Diurnal fluctuations at low flow probably due to patterns of sewage effluent entering river upstream. Diversion from river upstream at Paramus by United Water New Jersey, for municipal supply (see 01390520). The flow past this station may be affected by pumpage from wells by United Water New Jersey and others. The river was channelized upstream in Paramus around 1966. 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 1,200 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft³/s)	Gage height (ft)
Oct 1	1430	2,100	6.42
Mar 7	0800	2,870	8.13
Mar 11	1200	3,470	9.49
Apr 17	0945	3,550	9.66
May 19	0500	1,680	5.52
Jun 23	2245	2,300	6.87
Jul 9	0130	1,360	4.83
Aug 28	e1845	*5,320	*13.50
Sep 7	0345	2,310	6.89
Sep 8	1130	2,490	7.29

Suggested citation: U.S. Geological Survey, 2013, Water-resources data for the United States, Water Year 2011: U.S. Geological Survey Water-Data Report WDR-US-2011, site 01391500, accessed at http://wdr.water.usgs.gov/wy2011/pdfs/01391500.2011.pdf

01391500 SADDLE RIVER AT LODI, NJ—Continued

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	1,140	39	460	50	55	231	167	174	115	80	47	200
2	238	39	274	63	90	154	153	163	108	71	45	173
3	115	37	99	68	89	133	132	160	99	112	65	157
4	92	141	73	57	69	116	133	192	95	100	188	144
5	86	123	62	52	76	115	140	178	93	78	60	136
6	70	68	60	50	102	456	131	145	93	68	55	699
7	68	51	55	51	92	1,820	149	137	88	64	150	e1,250
8	62	47	51	50	129	343	130	131	84	172	133	e1,570
9	54	44	51	47	97	247	119	125	82	449	172	440
10	49	43	48	45	77	416	114	118	97	112	143	293
11	57	41	49	44	69	2,420	113	113	280	85	66	234
12	73	40	297	49	66	497	205	111	112	74	55	207
13	54	39	254	47	64	340	515	108	88	64	53	191
14	70	38	107	43	79	276	222	105	96	70	562	176
15	143	40	78	43	100	245	156	458	100	62	500	167
16	63	44	70	45	77	324	320	210	73	53	151	154
17	50	209	61	43	80	260	2,210	434	292	52	106	140
18	47	84	57	92	120	221	438	536	174	50	88	133
19	44	59	56	127	156	198	304	958	92	53	192	129
20	44	51	55	94	103	180	263	298	81	50	134	129
21	43	50	52	73	101	238	226	230	71	48	103	127
22	41	47	52	62	88	235	200	200	149	47	157	135
23	40	46	51	58	79	225	430	179	803	48	86	202
24	41	46	49	54	76	253	311	222	571	45	75	215
25	41	44	47	55	543	202	241	167	197	58	90	133
26	40	49	45	57	282	174	206	149	142	63	104	118
27	43	45	49	65	167	162	188	140	119	75	161	111
28	46	42	61	61	309	152	426	133	108	49	e3,910	120
29	42	42	51	57	---	144	336	127	101	94	e2,010	318
30	40	46	49	56	---	140	202	171	93	92	e375	227
31	42	---	48	54	---	140	---	131	---	52	241	---
Total	3,078	1,734	2,871	1,812	3,435	11,057	8,880	6,703	4,696	2,590	10,277	8,428
Mean	99.3	57.8	92.6	58.5	123	357	296	216	157	83.5	332	281
Max	1,140	209	460	127	543	2,420	2,210	958	803	449	3,910	1,570
Min	40	37	45	43	55	115	113	105	71	45	45	111

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2011, BY WATER YEAR (WY)

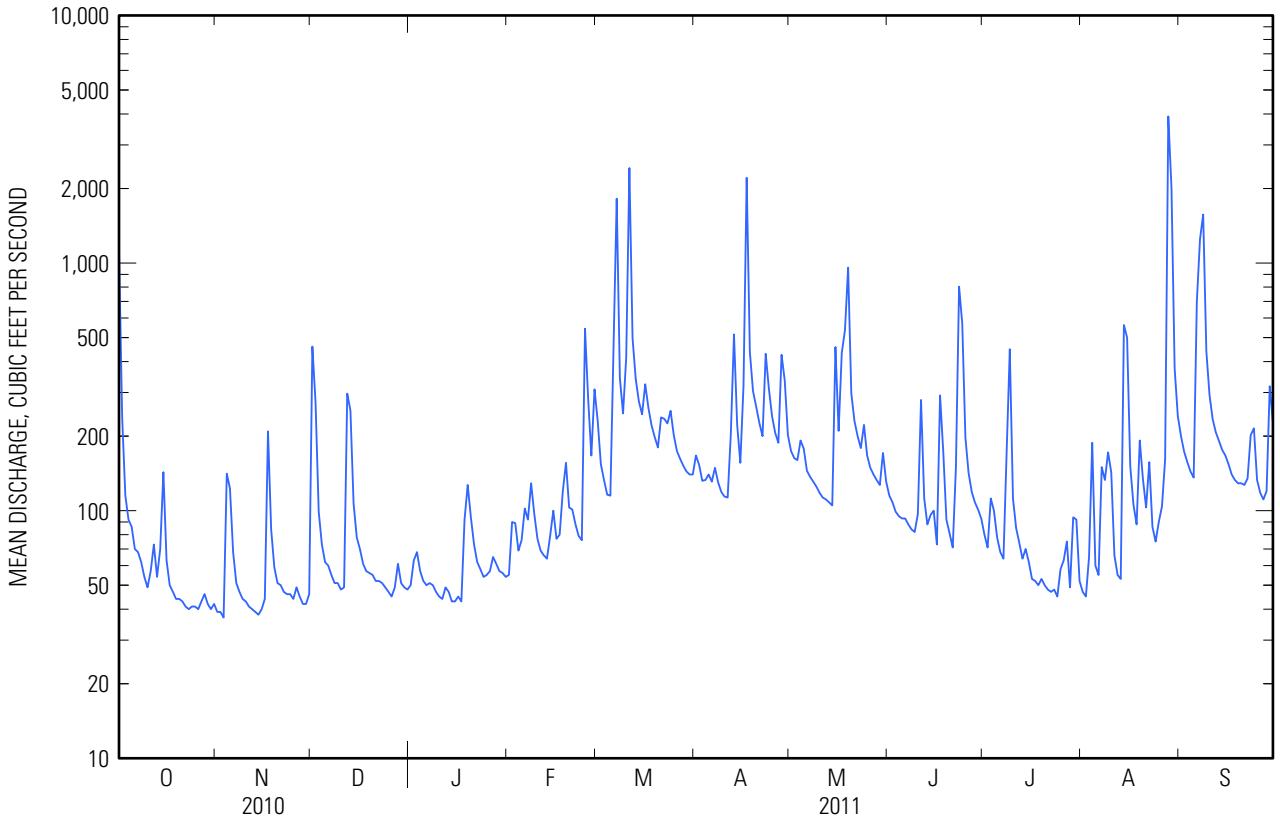
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	71.6	89.8	104	108	118	158	157	117	90.3	74.1	73.1	74.2
Max	352	284	301	331	258	397	457	315	336	371	332	281
(WY)	(2006)	(1978)	(1984)	(1979)	(1973)	(2010)	(1983)	(1984)	(1972)	(1945)	(2011)	(2011)
Min	16.5	25.5	17.0	12.1	26.0	40.1	32.9	44.9	25.5	12.9	15.1	11.4
(WY)	(1936)	(1982)	(1981)	(1981)	(2002)	(1981)	(1985)	(1941)	(1999)	(1999)	(1966)	(1932)

01391500 SADDLE RIVER AT LODI, NJ—Continued

SUMMARY STATISTICS

	Calendar Year 2010		Water Year 2011		Water Years 1924 - 2011	
Annual total	45,783		65,561			
Annual mean	125		180		103	
Highest annual mean					187	1984
Lowest annual mean					45.2	1981
Highest daily mean	1,670	Mar 14	[a]3,910	Aug 28	[a]3,910	Aug 28, 2011
Lowest daily mean	28	Aug 11	37	Nov 3	4.9	Sep 15, 1995
Annual seven-day minimum	31	Aug 5	41	Oct 28	7.1	Sep 10, 1995
Maximum peak flow			5,320	Aug 28	5,330	Sep 17, 1999
Maximum peak stage			[b]13.50	Aug 28	[b]13.94	Sep 17, 1999
Instantaneous low flow			22	Dec 27	1.0	May 25, 1935
10 percent exceeds	238		310		193	
50 percent exceeds	79		100		71	
90 percent exceeds	36		46		27	

[a] Estimated.
[b] From high-water mark in gage house.



01391500 SADDLE RIVER AT LODI, NJ—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

PERIOD OF DAILY RECORD.--

DISSOLVED OXYGEN: July-August 2008, August-September 2009.
DISSOLVED OXYGEN, OF PERCENT SATURATION: July-August 2008, August-September 2009.
pH: July-August 2008, August-September 2009.
SPECIFIC CONDUCTANCE: July-August 2008, August-September 2009.
WATER TEMPERATURE: July-August 2008, August-September 2009.

REMARKS.--Cooperative Network Site Descriptor: Watershed Integrator, NJ Department of Environmental Protection Watershed Management Area 4. Post-Hurricane Synoptic for bacteria concentrations included stations 01381900, 01388000, 01388500, 01389500, 01389880, and 01391500.

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. Determination of concentrations of E. coli and total coliform bacteria was performed by the NJ Department of Health and Senior Services, Sanitary Bacteriology Laboratory.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 1 of 5

[%, percent; ANC, acid neutralizing capacity; $CaCO_3$, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; cm, centimeter; ft^3/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)	Temperature, 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, instantaneous, ft^3/s (00061)	Dissolved oxygen, water, unfiltered, mg/L (00300)	Dissolved oxygen, water, unfiltered, % saturation (00301)	pH, water, unfiltered, field, standard units (00400)
11-30-2010	**1030**	770	14.8	.086	.067	40	10.2	85	7.8
03-08-2011	**1000**	774	9.9	.183	.141	337	10.7	89	7.5
05-12-2011	**1100**	750	20.4	.085	.065	106	8.4	88	7.8
08-10-2011	**1100**	750	23.6	.170	.130	118	6.6	78	7.8

01391500 SADDLE RIVER AT LODI, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 2 of 5

[%, percent; ANC, acid neutralizing capacity; $CaCO_3$, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; cm, centimeter; ft^3/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	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 +/- 30 degrees, ratiometric correction, NTRU (63676)	Dissolved solids dried at 180 °C, water, filtered, mg/L (70300)	Dissolved solids, water, filtered, sum of constit-uents, mg/L (70301)	Hardness, water, mg/L as $CaCO_3$ (00900)	Suspended solids, water, unfiltered, mg/L (00530)	Calcium, water, filtered, mg/L (00915)
11-30-2010	**1030**	938	7.2	1.5	514	509	248	3	67.4
03-08-2011	**1000**	623	6.0	9.6	347	340	127	19	37.4
05-12-2011	**1100**	899	16.4	1.9	553	485	225	1	63.9
08-10-2011	**1100**	467	23.0	6.5	276	242	108	--	29.8

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 3 of 5

[%, percent; ANC, acid neutralizing capacity; $CaCO_3$, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; cm, centimeter; ft^3/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	Magne-sium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium, water, filtered, mg/L (00930)	ANC, water, unfiltered, fixed endpoint (pH 4.5) titration, laboratory, mg/L as $CaCO_3$ (90410)	Carbon (inorganic plus organic), suspended sediment, total, mg/L (00694)	Chloride, water, filtered, mg/L (00940)	Fluoride, water, filtered, mg/L (00950)	Inorganic carbon, suspended sediment, total, mg/L (00688)	Silica, water, filtered, mg/L as SiO_2 (00955)
11-30-2010	**1030**	19.4	5.09	84.0	152	.41	179	.09	< .03	10.9
03-08-2011	**1000**	8.05	2.36	72.9	71.9	.78	143	.07	< .03	8.75
05-12-2011	**1100**	15.8	3.84	90.0	132	.46	184	.10	< .03	10.5
08-10-2011	**1100**	8.20	3.01	42.3	76.9	1.02	85.8	< .04	< .03	7.78

01391500 SADDLE RIVER AT LODI, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 4 of 5

[%, percent; ANC, acid neutralizing capacity; $CaCO_3$, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; cm, centimeter; ft^3/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	Sulfate, water, filtered, mg/L (00945)	Ammonia plus organic nitrogen, water, filtered, mg/L as N (00623)	Ammonia, water, filtered, mg/L as N (00608)	Nitrate plus nitrite, water, filtered, mg/L as N (00631)	Particulate nitrogen, suspended in water, mg/L (49570)	Phos-phorus, water, filtered, mg/L as P (00666)	Phosphorus, water, unfiltered, mg/L as P (00665)	Total nitrogen, water, filtered, mg/L (00602)	Total nitrogen, water, unfiltered, mg/L (00600)
11-30-2010	**1030**	26.3	.50	.021	5.83	.082	.86	.83	6.3	6.4
03-08-2011	**1000**	16.1	.84	.480	1.78	.102	.10	.18	2.6	2.7
05-12-2011	**1100**	23.3	.46	.074	3.23	.073	.29	.33	3.7	3.8
08-10-2011	**1100**	12.0	.46	.044	1.58	.116	.27	.31	2.0	2.2

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 5 of 5

[%, percent; ANC, acid neutralizing capacity; $CaCO_3$, calcium carbonate; N, nitrogen; NTRU, nephelometric turbidity ratio unit; P, phosphorus; SiO_2, silicon dioxide; cm, centimeter; ft^3/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)	Organic carbon, water, filtered, mg/L (00681)
11-30-2010	**1030**	.41	3.28
03-08-2011	**1000**	.78	4.52
05-12-2011	**1100**	.46	3.37
08-10-2011	**1100**	1.02	4.94

01391500 SADDLE RIVER AT LODI, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

[MF, membrane filter; col/100 mL, colonies per 100 milliliters]

Date	Sample start time	Escherichia coli, m-TEC MF method, water, col/100 mL (31633)	Total coliform, water, most probable number per 100 milliliters (31686)
08-31-2011	**1205**	4,000	17,000
09-01-2011	**1000**	1,800	35,000