



Water-Data Report 2009

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 due to patterns of sewage effluent entering river upstream. Diversion upstream from station at Paramus by United Water New Jersey, for municipal supply (see 01390520). The flow past this station is affected by pumpage from wells by United Water New Jersey and others. Several measurements of water temperature were made during the year. Satellite gage-height 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 (ft ³ /s)	Gage height (ft)
Dec 12	0900	*1,900	*6.36
No other peak greater than base discharge			

01391500 SADDLE RIVER AT LODI, NJ—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009
DAILY MEAN VALUES
[*e*, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	e80	62	170	110	81	67	72	68	51	177	243	86
2	68	58	94	105	83	70	119	86	50	330	432	79
3	62	55	76	105	94	65	149	102	76	159	304	74
4	59	52	70	100	86	64	150	98	188	107	155	71
5	82	54	68	102	75	64	88	104	148	91	126	68
6	74	70	64	97	71	66	125	203	147	85	111	63
7	60	59	62	281	71	69	124	574	80	80	100	62
8	57	59	58	211	100	69	87	184	69	214	92	63
9	57	57	57	134	117	96	77	185	293	98	87	61
10	53	52	97	113	92	93	72	118	132	82	193	59
11	51	48	238	122	94	77	94	96	164	76	108	107
12	49	47	1,200	107	121	70	85	88	295	110	113	188
13	49	69	230	99	102	65	71	81	127	75	117	111
14	49	141	151	96	86	65	69	79	108	67	98	75
15	47	231	130	91	80	64	97	86	315	64	84	67
16	45	267	121	84	75	63	70	79	247	63	76	64
17	44	114	162	81	73	61	67	162	115	63	73	66
18	42	84	131	86	80	61	65	93	536	180	68	68
19	41	74	117	89	123	67	60	76	368	83	65	60
20	43	69	116	85	92	68	78	71	196	65	64	56
21	44	65	117	80	76	61	307	68	291	368	80	55
22	40	61	108	77	74	59	193	65	187	213	343	54
23	39	59	96	77	73	59	130	62	136	107	201	54
24	39	60	137	78	68	56	87	59	126	94	123	52
25	63	116	277	73	66	56	89	60	113	164	85	48
26	224	87	164	71	66	64	84	57	120	95	74	46
27	76	70	138	70	67	99	78	57	120	125	69	160
28	304	64	175	134	73	56	72	56	95	100	86	89
29	176	62	170	170	---	94	68	87	87	360	446	69
30	87	98	135	99	---	107	66	71	156	241	168	61
31	69	---	124	85	---	68	---	56	---	297	103	---
Total	2,273	2,464	5,053	3,312	2,359	2,163	2,993	3,331	5,136	4,433	4,487	2,236
Mean	73.3	82.1	163	107	84.2	69.8	99.8	107	171	143	145	74.5
Max	304	267	1,200	281	123	107	307	574	536	368	446	188
Min	39	47	57	70	66	56	60	56	50	63	64	46

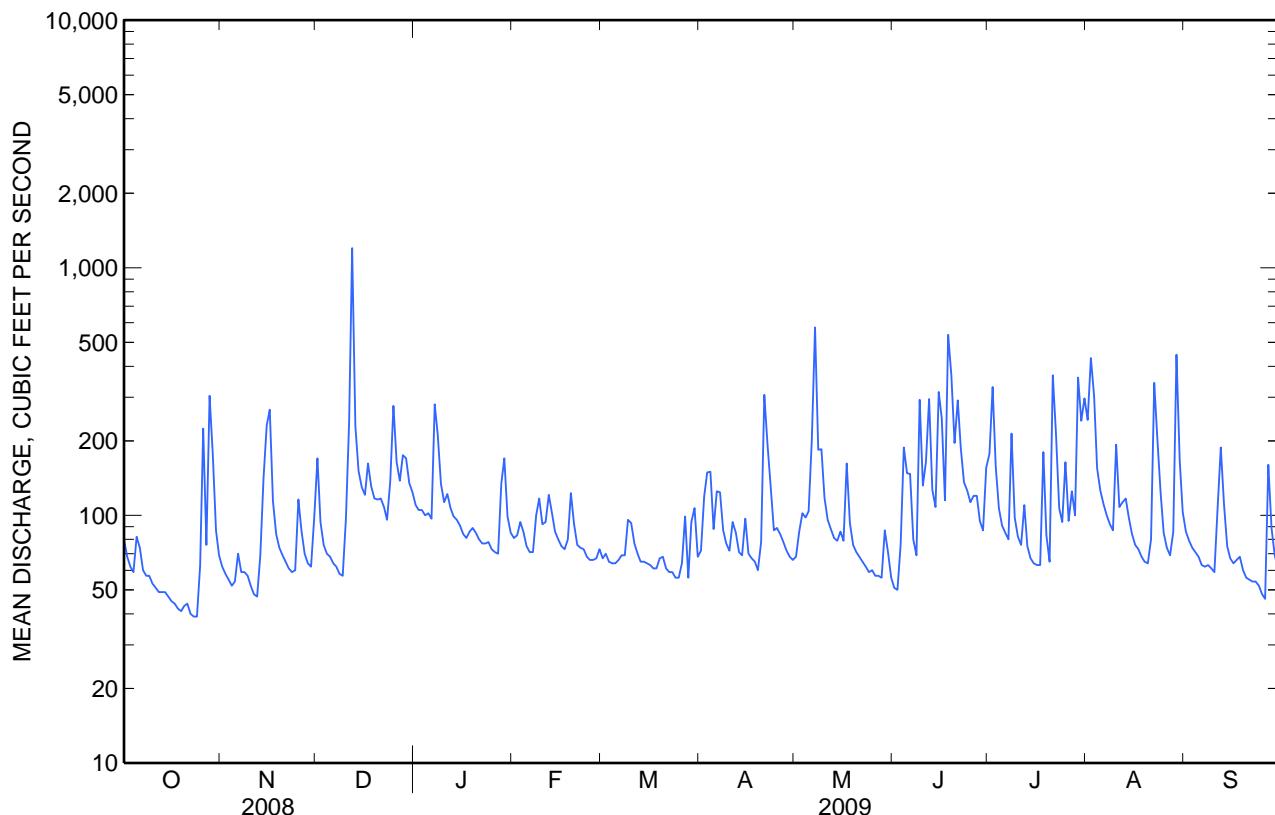
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2009, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	70.8	90.3	103	108	118	153	155	116	89.8	74.0	69.9	72.0
Max	352	284	301	331	258	333	457	315	336	371	225	256
(WY)	(2006)	(1978)	(1984)	(1979)	(1973)	(1953)	(1983)	(1984)	(1972)	(1945)	(1955)	(1971)
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 2008	Water Year 2009		Water Years 1924 - 2009	
Annual total	44,378	40,240			
Annual mean	121	110		102	
Highest annual mean				187	1984
Lowest annual mean				45.2	1981
Highest daily mean	1,200	Dec 12	1,200	Dec 12	3,790 Apr 16, 2007
Lowest daily mean	28	Aug 28	39	Oct 23	4.9 Sep 15, 1995
Annual seven-day minimum	33	Aug 23	41	Oct 18	7.1 Sep 10, 1995
Maximum peak flow			1,900	Dec 12	5,330 Sep 17, 1999
Maximum peak stage			6.36	Dec 12	^a 13.94 Sep 17, 1999
Instantaneous low flow			34	Oct 23	1.0 May 25, 1935
10 percent exceeds	208		190		192
50 percent exceeds	92		83		71
90 percent exceeds	40		57		27

^a 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, PERCENT OF 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 and Statewide Status, NJ Department of Environmental Protection Watershed Management Area 4. The accuracy of continuous water-quality data is routinely verified through inspections for fouling and calibration drift. The New Jersey Water Science Center requires that either constant or prorated adjustments be made to the continuous water-quality record when the difference between a sensor's response and a known value exceeds the following criteria: Water Temperature, 0.2 degrees Celsius (+ or -); Specific Conductance, the greater of 5 microsiemens/cm (+ or -) or 3% of the measured value; Dissolved Oxygen, the greater of 0.3 mg/L (+ or -) or 5% of the measured value; pH, 0.3 units (+ or -). If the difference between a sensor's response and a known value is within specified criteria, the data are considered to be reliable and are not adjusted. Data from the following period(s) were adjusted - SPECIFIC CONDUCTANCE: Aug 18-21, 2009; DISSOLVED OXYGEN: Aug 18-21, and Sep 2-8, 2009.

COOPERATION.--Physical measurements and samples for laboratory analyses on Dec 10, Feb 19, May 07, and Sep 02 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 2008 TO SEPTEMBER 2009**

Part 1 of 5

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

Date	Time			UV		UV		Dis-	pH,	Specif-	Turbdty	Dis-
		Baro-	absorb-	absorb-	Instan-	Dis-	solved			ic		
		metric	Temper-	254 nm,	280 nm,	taneous	Dis-	oxygen,	water,	conduc-	white	solved
			pres-	wat flt	wat flt	dis-	solved	percent	unfltrd	conductance,	light,	solids
			sure,	/cm	/cm	charge,	oxygen,	of sat-	field,	wat unf	dried @	
				(50624)	(61726)	(00061)	(00300)	uration	std	μS/cm @	90+/-30	
									(00400)	25 degC	corrctd	
									(00095)	(00010)	NTRU	
											(63676)	(70300)
Dec												
10...	1030	760	16.5	.092	.071	71	10.0	87	7.6	884	9.1	5.9
Feb												
19...	1020	746	11.6	.103	.077	125	11.2	91	7.7	1,180	6.3	7.2
May												
07...	1030	758	19.3	.136	.110	1,050	9.1	87	8.3	297	13.0	52
Sep												
02...	1030	770	19.2	.100	.075	72	8.6	90	7.9	843	17.5	1.9

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01391500 SADDLE RIVER AT LODI, NJ—Continued

**WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009**

Part 2 of 5

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

	Dissolved solids, sum of constitu- ents, mg/L (70301)	Hard- ness, water, mg/L as CaCO3	Sus- pended solids, water, unfltrd mg/L (00900)	Calci- um 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, suspn'd sediment total, mg/L (00694)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Inor- ganic carbon, suspn'd sediment total, mg/L SiO2 (00688)	Silica, water, fltrd, mg/L as (00955)
Date													
Dec													
10...	469	230	2	63.3	17.4	5.08	81.3	135	.6	155	.10	<.04	11.9
Feb													
19...	E616	200	10	55.6	14.6	4.07	157	114	1.3	261	E.10	<.04	8.4
May													
07...	150	66	190	19.4	4.27	1.94	29.4	50	.7	49.6	<.08	<.04	4.4
Sep													
02...	E448	220	2	61.9	15.4	4.51	75.9	131	.4	153	E.07	<.04	12.9

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 3 of 5

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

	Ammonia		Nitrate	Ortho-phosphate	Particulate	Phosphorus	Phosphorus	Total	Total	Barium,	Beryllium,	
	+ org-N,	Ammonia	+ nitrite	water, fltrd,	water, fltrd,	water, fltrd,	water, susp,	water, fltrd,	water, unfltrd	water, recover	water, unfltrd	
Date	Sulfate water, fltrd, mg/L (00945)	mg/L as N (00623)	mg/L as N (00608)	mg/L as N (00631)	mg/L as P (00671)	mg/L as P (49570)	mg/L as P (00666)	mg/L as P (00665)	mg/L (00602)	mg/L (01007)	µg/L (01012)	Cadmium µg/L (01027)
Dec 10...	24.9	.81	.257	6.00	.736	.08	.83	.84	6.8	6.9	--	--
Feb 19...	24.4	.58	.109	4.54	.508	.14	.50	.57	5.1	5.3	93.5	<.02 E.05
May 07...	7.05	.60	.135	.80	.094	.10	.10	.68	1.4	1.5	--	--
Sep 02...	23.1	.45	.033	4.73	.617	.04	.62	.67	5.2	5.2	--	--

01391500 SADDLE RIVER AT LODI, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 4 of 5

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

Date	Chrom-	Copper,	Iron,	Lead,	Manganese,	Mercury	Nickel,	Silver,	Zinc,	Arsenic	Arsenic	Boron,	Selen-
	ium, water, unfiltrd recover -able, μg/L (01034)	Copper, water, unfiltrd recover -able, μg/L (01042)	Iron, water, unfiltrd recover -able, μg/L (01045)	Lead, water, unfiltrd recover -able, μg/L (01051)	Manganese, water, unfiltrd recover -able, μg/L (01055)	Mercury, water, unfiltrd recover -able, μg/L (71900)	Nickel, water, unfiltrd recover -able, μg/L (01067)	Silver, water, unfiltrd recover -able, μg/L (01077)	Zinc, water, unfiltrd recover -able, μg/L (01092)			Boron, water, unfiltrd recover -able, μg/L (01022)	
Dec													
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
Feb													
19...	1.0	6.8	386	1.63	110	<.010	.96	E.04	22.2	.77	.76	64	.25
May													
07...	--	--	--	--	--	--	--	--	--	--	--	--	--
Sep													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008
TO SEPTEMBER 2009

Part 5 of 5

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

Date	Organic carbon, susnd sedimnt	Organic carbon, water, total, filtrd,
	mg/L (00689)	mg/L (00681)
Dec		
10...	.61	3.4
Feb		
19...	1.34	3.8
May		
07...	.69	3.1
Sep		
02...	.43	3.1

01391500 SADDLE RIVER AT LODI, NJ—Continued

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, 0.7µ GF	ethyl-aniline water, filtrd 0.7µ GF	2,6-Di-ethyl-aniline water, filtrd 0.7µ GF	2'6'-diethyl acetanilide water, fltrd	2-Chloro- CIAT, water, 0.7µ GF	2-Ethyl- 6-methyl- water, fltrd	3,4-Di-chloro- aniline water, fltrd	3,5-Di-chloro- aniline water, fltrd	4-Chloro- phenol, water, fltrd	Aceto-chlor, water, fltrd	Ala-chlor, water, fltrd	alpha-Endo-sulfan, water, fltrd	Atra-zine, water, fltrd	Azin-phos-methyl oxon, water, fltrd, µg/L
	µg/L (49295)	µg/L (82660)	µg/L (61618)	µg/L (04040)	µg/L (61620)	µg/L (61625)	µg/L (61627)	µg/L (61633)	µg/L (49260)	µg/L (46342)	µg/L (34362)	µg/L (39632)	µg/L (61635)	
May 07...	<.04	<.006	<.010	E.018	<.010	<.005	<.004	<.005	E.005	.029	<.006	.037	<.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, 0.7µ GF	Ben-flur-alin, water, filtrd 0.7µ GF	Car-baryl, water, filtrd 0.7µ GF	Carbo-furan, water, filtrd 0.7µ GF	Chlor-pyrifos oxon, water, filtrd 0.7µ GF	Chlor-pyrifos water, filtrd 0.7µ GF	Chlor-pyrifos water, filtrd 0.7µ GF	cis-Per-methrin	cis-Propi-conazole, water, filtrd 0.7µ GF	Cyana-zine, water, filtrd 0.7µ GF	Cyflu-thrin, water, filtrd 0.7µ GF	Cyper-methrin, water, filtrd 0.7µ GF	DCPA, water, filtrd 0.7µ GF	Desulf-inyl-fipro-nil, water, filtrd 0.7µ GF
	µg/L (82686)	µg/L (82673)	µg/L (82680)	µg/L (82674)	µg/L (61636)	µg/L (38933)	µg/L (82687)	µg/L (79846)	µg/L (04041)	µg/L (61585)	µg/L (61586)	µg/L (82682)	µg/L (62169)	
May 07...	<.120	E.007	E.022	<.060	<.05	<.010	<.014	E.015	<.040	<.016	<.020	E.002	E.005	

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, filtrd 0.7µ GF	Diazi-non, water, filtrd 0.7µ GF	Di-chlor-vos, water, filtrd 0.7µ GF	Dicro-tophos, water, filtrd 0.7µ GF	Diel-drin, water, filtrd 0.7µ GF	Dimeth-oate, water, filtrd 0.7µ GF	Disulf-oton, water, filtrd 0.7µ GF	Disul-foton, water, filtrd 0.7µ GF	Endo-sulfan, water, filtrd 0.7µ GF	EPTC, water, filtrd 0.7µ GF	Ethion-monoxon water, filtrd 0.7µ GF	Ethion, water, filtrd 0.7µ GF	Etho-prop, water, filtrd 0.7µ GF	
	µg/L (62170)	µg/L (39572)	µg/L (38775)	µg/L (38454)	µg/L (39381)	µg/L (82662)	µg/L (61640)	µg/L (82677)	µg/L (61590)	µg/L (82668)	µg/L (61644)	µg/L (82346)	µg/L (82672)	
May 07...	E.005	.008	<.02	<.08	<.009	<.006	<.01	<.04	<.022	<.002	<.02	<.012	<.016	

01391500 SADDLE RIVER AT LODI, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 4 of 7

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

Date	Fenami-												
	Fenami-phos	sulfone	Fenami-phos	water, filtd,	Fipro-nil	Fipro-nil	Fipro-nil	Fonofos	Hexazinone,	Ipro-dione,	Isofen-	lambda-	
µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	(04095)	water, filtd,	water, filtd,	water, filtd,	Cyhalothrin,	
(61645)	(61646)	(61591)	(62167)	(62168)	(62166)	(62166)	(04025)	(04025)	filtd,	filtd,	filtd,	Mala-	
May 07...	<.053	<.08	<.03	E.005	E.008	E.020	<.010	.015	E.052	<.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	Methyl												
	Meta-laxyl,	Methid-athion,	Methyl para-oxon,	Methyl para-thion,	Metola-chlor,	Metri-buzin,	Moli-nate,	Myclo-butanol	Oxy-fluor-fen,	Pendi-meth-alin,	Phorate	Phorate	Phosmet
µg/L	µg/L	µg/L	µg/L	water, filtd,	water, filtd,	water, filtd,	water, filtd,	water, filtd,	water, filtd,	water, filtd,	water, filtd,	water, filtd,	
(61596)	(61598)	(61664)	(82667)	(39415)	(82630)	(82671)	(82671)	(61599)	(61600)	(82683)	(61666)	(82664)	(61668)
May 07...	<.010	<.006	<.01	<.008	.023	<.016	<.002	<.011	<.006	.027	<.03	<.020	<.05

WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 6 of 7

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

Date	Ter-												
	Phosmet	Prome-ton,	Prome-tryn,	Propanil,	Propar-gite,	Propy-zamide,	Tebu-simazine,	Terbufos	Terbu-	Ter-	Thio-		
µg/L	water, filtd,	thiuron	oxon sulfone	tos, water,	buthyl-	bencarb							
(61601)	(04037)	(04036)	(82679)	(82685)	(82676)	(82676)	(04035)	(82670)	(61606)	(61674)	(82675)	(04022)	(82681)
May 07...	<.200	.03	<.006	<.014	<.02	<.004	.014	<.02	<.010	<.04	<.02	<.01	<.016

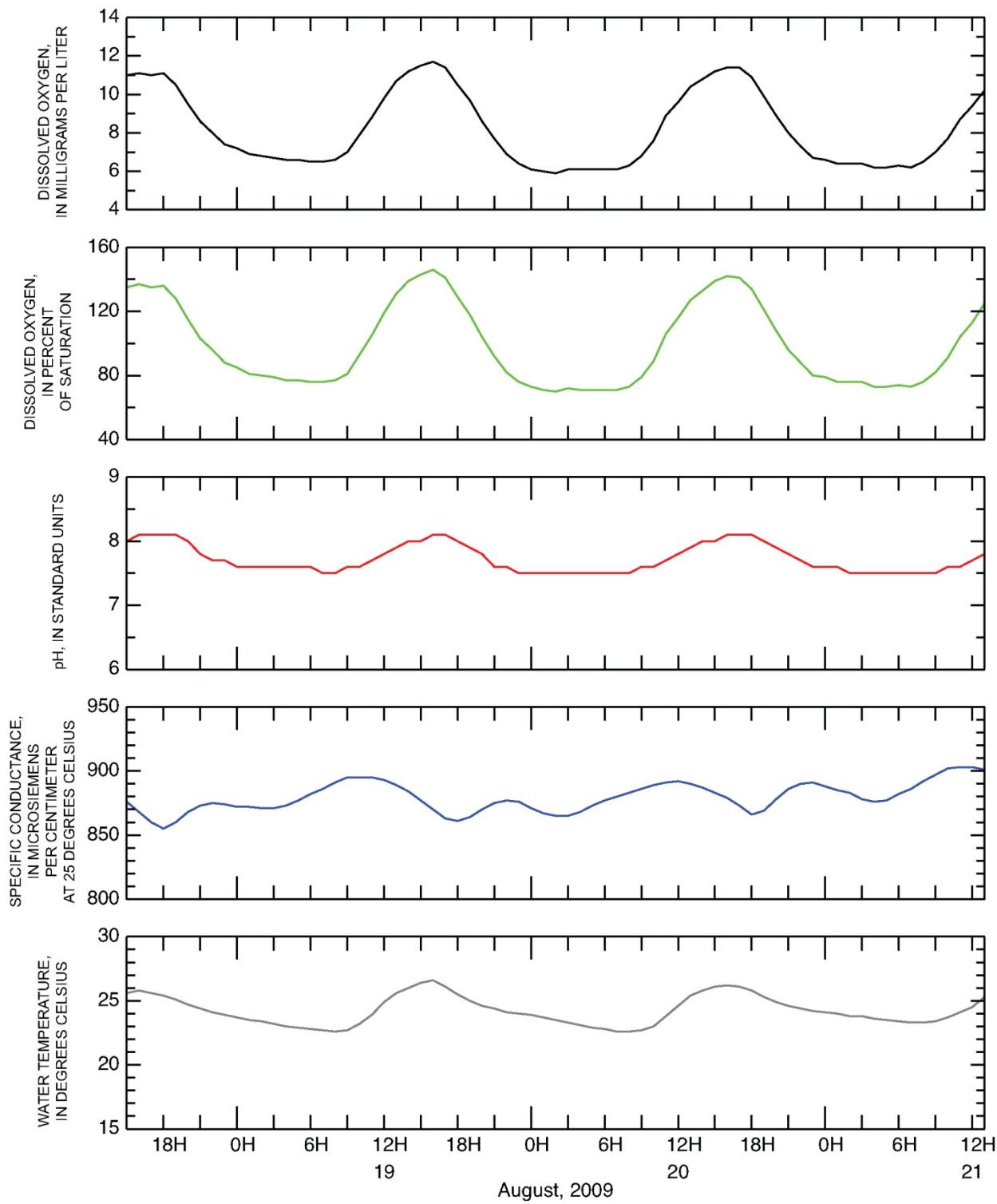
01391500 SADDLE RIVER AT LODI, NJ—Continued**WATER-QUALITY DATA
WATER YEAR OCTOBER 2008 TO
SEPTEMBER 2009**

Part 7 of 7

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

Date	trans- Propi- con-a- zole, water, filtrd, μg/L (79847)	Tribu- phos, water, filtrd, μg/L (61610)	Tri- flur- alin, water, filtrd 0.7μ GF μg/L (82661)
May 07...	E.02	<.040	.022

01391500 SADDLE RIVER AT LODI, NJ—Continued

HOURLY WATER-QUALITY-MONITOR VALUES
AUGUST 18, 2009 TO AUGUST 21, 2009

01391500 SADDLE RIVER AT LODI, NJ—Continued**HOURLY WATER-QUALITY-MONITOR VALUES
SEPTEMBER 2, 2009 TO SEPTEMBER 8, 2009**