

Water-Data Report 2009

## 01388500 POMPTON RIVER AT POMPTON PLAINS, NJ

PASSAIC RIVER BASIN

LOCATION.--Lat 40°58'11", long 74°16'55" referenced to North American Datum of 1983, Wayne Township, Passaic County, NJ, Hydrologic Unit 02030103, on left bank just upstream of the Passaic Valley Water Commission pumping station, 800 ft downstream of confluence of Pequannock and Ramapo Rivers, 140 ft upstream from bridge on Jackson Avenue (Pompton Plains Cross Road), and 0.7 mi east of Pompton Plains.

DRAINAGE AREA.--355 mi<sup>2</sup>.

### **SURFACE-WATER RECORDS**

PERIOD OF RECORD.--March 1903 to December 1904, May 1940 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WSP 1202: 1945(M). WDR-US-08: 1963(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 160.00 ft above NGVD of 1929. March 1903 to December 1904, non-recording gage on main spillway of dam 2,000 ft upstream at different datum. May 1940 to September 1964 two water-stage recorders, each above a concrete dam about 2,000 ft upstream at datum 14.46 ft higher.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Water diverted from reservoirs on Pequannock (see 01382370) and Wanaque (see 01386980) Rivers, from Pompton River to Point View Reservoir (see 01388490), and from Ramapo River to Wanaque Reservoir (see 01387990) and Oradell Reservoir (from February 1985, see 01388981) for municipal supply. Discharges for water years 1965-68 have been adjusted in USGS databases in water year 2004 to reflect only flow over weir only. Previously published discharges for water years 1965-68 included flow over the weir, plus pumpage to, or minus releases from Point View Reservoir through Passaic Valley Water Commission's Jackson Avenue Pumping Station. All published discharges, since water year 1969, have included only flow over the weir. Flow regulated by Canistear (see 01382100), Oak Ridge (see 01382200), Clinton (see 01382300), Charlotteburg (see 01382380), and Echo Lake (see 01382400) Reservoirs on Pequannock River and by Greenwood Lake (see 01383000), Monksville (see 01384002), and Wanaque (see 01386990) Reservoirs on Wanaque River. Several measurements of water temperature were made during the year. Beginning in 2007, stage and discharge fluctuations occur at the location during high flow probably due to the operation of automatic flood gates on the Ramapo River at Pompton Lakes Dam. Satellite telemetry at station.

## 01388500 POMPTON RIVER AT POMPTON PLAINS, 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	e172	348	463	819	252	297	351	218	151	518	600	197
2	e148	287	459	641	239	304	424	258	144	775	920	175
3	131	246	390	584	253	284	575	241	148	887	1,480	165
4	123	232	348	532	249	254	1,030	252	255	624	775	161
5	142	213	330	493	215	234	744	274	244	448	467	159
6	134	227	305	473	201	229	610	388	264	347	386	155
7	119	242	291	712	197	254	714	1,730	203	299	311	153
8	110	233	267	966	239	295	596	1,640	169	407	260	151
9	102	228	242	674	310	412	505	1,230	511	330	231	148
10	99	206	299	517	313	523	447	897	572	270	297	122
11	92	189	618	494	329	464	423	599	538	238	345	142
12	88	174	5,060	450	495	411	426	462	1,030	259	348	224
13	86	184	4,830	404	e625	358	372	394	767	230	317	249
14	85	314	2,530	376	e555	326	320	354	584	199	336	211
15	83	445	1,700	342	e470	305	340	385	1,140	196	291	183
16	85	875	1,380	288	e415	288	326	400	1,640	180	255	161
17	82	625	1,230	255	e370	273	301	854	968	185	213	151
18	85	494	1,080	281	346	257	278	736	1,520	476	192	148
19	81	401	929	291	422	253	253	497	2,460	282	178	141
20	79	346	872	280	439	266	245	393	1,850	207	172	134
21	81	309	743	255	359	245	452	329	1,930	295	183	131
22	89	281	650	237	335	228	515	274	1,930	365	335	133
23	85	250	528	228	324	217	507	243	1,570	264	363	129
24	81	230	571	224	295	204	426	221	1,050	213	277	100
25	104	307	1,430	200	269	187	357	204	737	187	252	83
26	330	344	1,540	197	254	184	316	183	594	217	208	87
27	313	307	1,160	192	252	236	288	179	600	240	179	146
28	641	275	1,240	249	286	227	260	178	550	247	173	181
29	1,110	249	1,560	408	---	252	241	204	432	314	218	156
30	710	265	1,320	340	---	502	222	198	428	303	280	137
31	437	---	1,040	287	---	447	---	172	---	488	241	---
<b>Total</b>	6,107	9,326	35,405	12,689	9,308	9,216	12,864	14,587	24,979	10,490	11,083	4,613
<b>Mean</b>	197	311	1,142	409	332	297	429	471	833	338	358	154
<b>Max</b>	1,110	875	5,060	966	625	523	1,030	1,730	2,460	887	1,480	249
<b>Min</b>	79	174	242	192	197	184	222	172	144	180	172	83

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2009, BY WATER YEAR (WY)**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
<b>Mean</b>	319	433	580	545	565	932	963	598	405	234	215	239
<b>Max</b>	2,369	1,495	2,464	1,994	1,654	2,477	2,995	2,778	2,177	1,530	1,520	1,067
<b>(WY)</b>	(1904)	(2007)	(2004)	(2006)	(1973)	(1983)	(1983)	(1989)	(1972)	(1945)	(1955)	(1999)
<b>Min</b>	40.2	52.3	34.8	39.2	43.1	79.9	62.7	104	62.8	34.2	36.3	46.7
<b>(WY)</b>	(1981)	(1981)	(1981)	(1981)	(2002)	(2002)	(1985)	(1965)	(1965)	(1965)	(1985)	(1980)

01388500 POMPTON RIVER AT POMPTON PLAINS, NJ—Continued

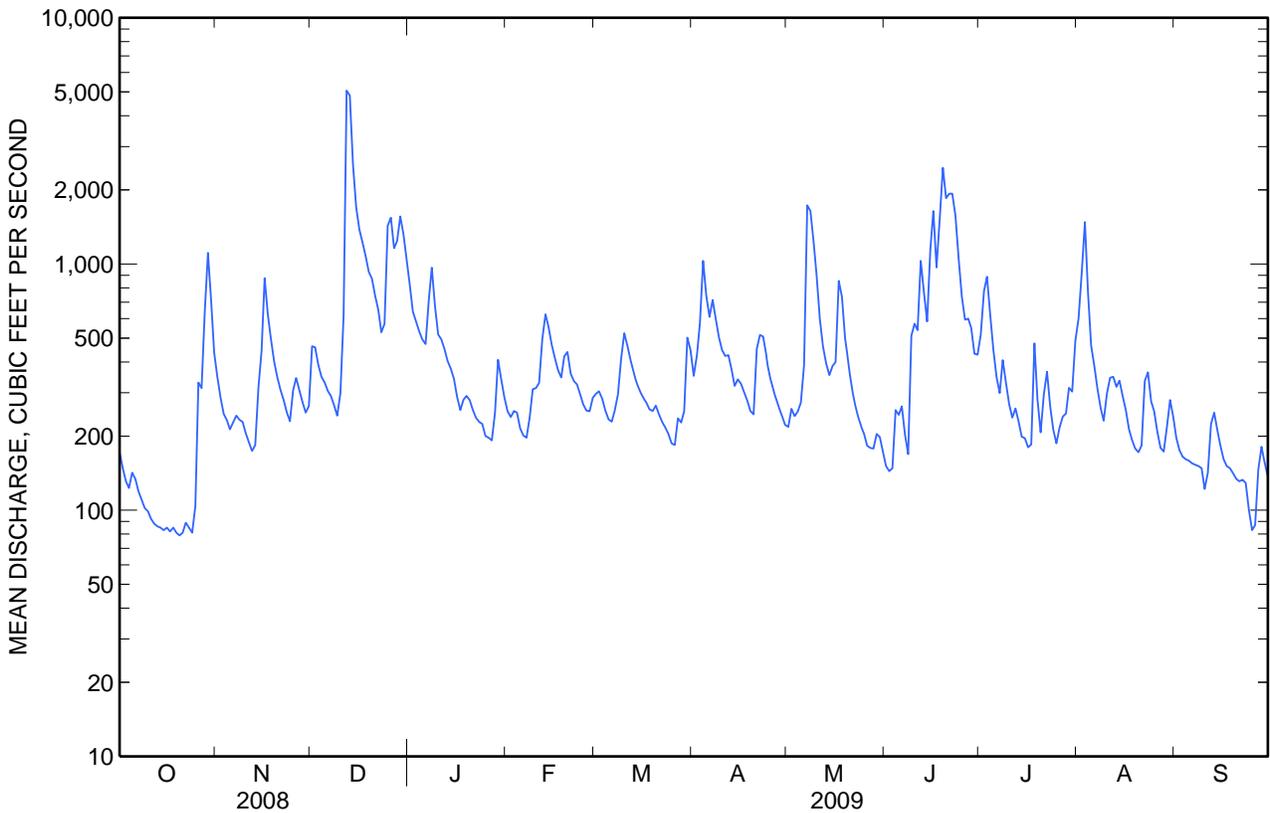
SUMMARY STATISTICS

	Calendar Year 2008		Water Year 2009		Water Years 1903 - 2009	
<b>Annual total</b>	208,270		160,667			
<b>Annual mean</b>	569		440		500	
<b>Highest annual mean</b>					906	1952
<b>Lowest annual mean</b>					108	1965
<b>Highest daily mean</b>	6,190	Mar 9	5,060	Dec 12	28,300	Oct 10, 1903
<b>Lowest daily mean</b>	50	Sep 2	79	Oct 20	0.00	Aug 18, 1904
<b>Annual seven-day minimum</b>	53	Aug 28	82	Oct 15	1.7	Aug 14, 1904
<b>Maximum peak flow</b>			5,980	Dec 12	<sup>a</sup> 28,300	Oct 10, 1903
<b>Maximum peak stage</b>			14.66	Dec 12	<sup>b,c</sup> 24.47	Apr 6, 1984
<b>Instantaneous low flow</b>			78	Oct 19-21	0.00	Aug 18, 1904
<b>10 percent exceeds</b>	1,340		880		1,170	
<b>50 percent exceeds</b>	298		291		249	
<b>90 percent exceeds</b>	79		147		72	

<sup>a</sup> By computation of peak flow over dam, maximum observed, Pompton Lakes Dam and other dams failed upstream.

<sup>b</sup> Site and datum then in use.

<sup>c</sup> Maximum stage at former site and datum was 14.3 ft, Oct 10, 1903.



## 01388500 POMPTON RIVER AT POMPTON PLAINS, NJ—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-69, 1971-75, 1979-80, 1992, 1994, 1998 to current year.

REMARKS.--Cooperative Network Site Descriptor: Watershed Integrator, NJ Department of Environmental Protection Watershed Management Area 3.

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 2008 TO SEPTEMBER 2009

Part 1 of 3

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

Date	Time	Baro- metric pres- sure, mm Hg (00025)	Temper- ature, air, deg C (00020)	UV absorb- ance, 254 nm, wat flt units /cm (50624)	UV absorb- ance, 280 nm, wat flt units /cm (61726)	Instan- taneous dis- charge, ft <sup>3</sup> /s (00061)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif- ic conduc- tance, wat unf μS/cm @ 25 degC (00095)	Temper- ature, water, deg C (00010)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	Dis- solved solids dried @ 180degC wat flt mg/L (70300)
Nov 20...	1000	754	3.5	.121	.093	351	11.6	94	7.5	305	6.0	1.9	166
Feb 09...	1000	768	4.5	.064	.049	304	14.7	107	7.8	767	2.1	1.6	392
Jun 02...	1000	757	20.0	.075	.057	147	8.3	88	7.5	471	18.0	2.4	317
Aug 24...	1000	760	24.5	.110	.083	281	7.5	91	7.6	422	24.5	1.7	247

## WATER-QUALITY DATA

## WATER YEAR OCTOBER 2008 TO SEPTEMBER 2009

Part 2 of 3

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

Date	Dis- solved solids, sum of consti- tuents, mg/L (70301)	Hard- ness, water, mg/L as CaCO3 (00900)	Sus- pended solids, water, unfltrd mg/L (00530)	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)	Total carbon, suspnd sedimnt total, mg/L (00694)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Silica, water, fltrd, mg/L as SiO2 (00955)
Nov 20...	E160	71	<1	19.8	5.29	1.50	28.9	48	.3	49.8	E.07	<.04	8.3
Feb 09...	E384	110	4	31.4	8.60	2.70	99.0	62	.2	173	E.07	<.04	7.1
Jun 02...	247	110	4	31.0	7.97	1.84	46.0	62	.5	90.3	.11	<.04	7.5
Aug 24...	E216	96	3	27.0	7.01	1.77	38.9	64	.6	78.5	E.08	<.04	7.9

## 01388500 POMPTON RIVER AT POMPTON PLAINS, NJ—Continued

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

Part 3 of 3

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

Date	Ammonia + org-N,		Nitrate + nitrite,		Ortho-phosphate,	Particulate nitrogen,	Phosphorus,	Phosphorus,	Total nitrogen,	Total nitrogen,	Organic carbon,	Organic carbon,
	Sulfate water, fltrd, mg/L (00945)	water, fltrd, mg/L as N (00623)	water, fltrd, mg/L as N (00608)	water, fltrd, mg/L as N (00631)								
<b>Nov</b> <b>20...</b>	13.9	.36	.044	.80	.033	.04	.043	.057	1.2	1.2	.25	3.5
<b>Feb</b> <b>09...</b>	18.2	.95	.013	1.36	.032	E.02	.033	.052	2.3	E2.3	.21	2.3
<b>Jun</b> <b>02...</b>	19.6	.55	.100	1.13	.030	.07	.047	.064	1.7	1.8	.48	2.6
<b>Aug</b> <b>24...</b>	12.6	.56	.062	.76	.041	.08	.050	.069	1.3	1.4	.58	3.6