Water-Data Report 2008

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^2.

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, nonrecording 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 discharges over 2,000 ft^3/s and 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. Satellite gage-height telemetry at station. 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.

REVISIONS.--The annual peak discharge for water year 1963 has been revised to 1,860 ft^3/s, Nov. 11, 1962, gage height, 5.74 ft (at site and datum then in use) superseding the figure published previously.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	72	152	201	1,490	613	822	508	356	226	85	68	52
2	82	137	186	1,600	1,350	722	815	335	223	77	98	50
3	76	155	254	1,010	946	563	529	341	186	72	115	51
4	67	144	296	834	682	1,070	702	339	221	80	89	58
5	68	131	233	704	629	2,650	686	338	211	136	75	62
6	65	155	173	669	767	3,390	599	297	188	123	428	602
7	65	156	150	639	881	2,390	521	255	169	94	220	1,310
8	62	135	148	623	813	3,460	459	231	162	82	122	325
9	75	126	149	613	677	6,190	422	352	168	78	94	329
10	182	148	191	563	658	5,000	408	794	145	76	83	342
11	145	135	185	674	555	3,330	399	582	135	70	142	234
12	300	125	150	764	465	2,560	499	451	123	67	112	192
13	164	134	169	616	2,920	2,000	505	385	e111	64	97	236
14	114	144	188	640	5,050	1,690	432	339	112	86	88	177
15	94	192	155	601	3,140	1,490	364	323	251	81	98	151
16	85	204	163	520	2,140	1,360	323	459	151	69	123	126
17	78	140	167	452	1,550	1,190	299	1,060	140	64	89	114
18	76	138	135	549	2,670	924	286	860	121	61	80	104
19	84	140	147	583	3,370	1,330	259	666	119	58	73	89
20	391	137	147	499	2,410	2,410	239	534	111	56	66	92
21	202	138	145	404	1,750	1,950	225	580	139	55	63	89
22	139	130	143	363	1,480	1,510	215	512	123	59	61	85
23	117	122	662	347	1,280	1,300	206	447	151	91	61	82
24	106	121	3,930	328	1,030	946	202	374	124	386	60	81
25	102	119	2,570	298	964	873	194	315	104	196	58	88
26	99	210	1,480	273	932	731	188	271	94	116	57	383
27	e1,280	434	1,250	257	1,270	635	185	270	90	106	55	351
28	e790	418	1,100	244	1,020	609	269	438	87	110	54	274
29	e430	309	1,380	232	703	611	532	353	86	84	53	257
30	244	240	1,400	259	---	490	493	265	96	75	56	199
31	169	---	1,440	260	---	435	---	221	---	72	53	---
Total	6,023	5,169	19,087	17,908	42,715	54,631	11,963	13,343	4,367	2,929	2,991	6,585
Mean	194	172	616	578	1,473	1,762	399	430	146	94.5	96.5	220
Max	1,280	434	3,930	1,600	5,050	6,190	815	1,060	251	386	428	1,310
Min	62	119	135	232	465	435	185	221	86	55	53	50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	321	435	571	547	568	941	971	599	399	232	213	240
Max	2,369	1,495	2,464	1,994	1,654	2,477	2,995	2,778	2,177	1,530	1,520	1,067
(WY)	(1904)	(2007)	(2004)	(2006)	(1973)	(1983)	(1983)	(1989)	(1972)	(1945)	(1955)	(1999)
Min	40.2	52.3	34.8	39.2	43.1	79.9	62.7	104	62.8	34.2	36.3	46.7
(WY)	(1981)	(1981)	(1981)	(1981)	(2002)	(2002)	(1985)	(1965)	(1965)	(1965)	(1985)	(1980)

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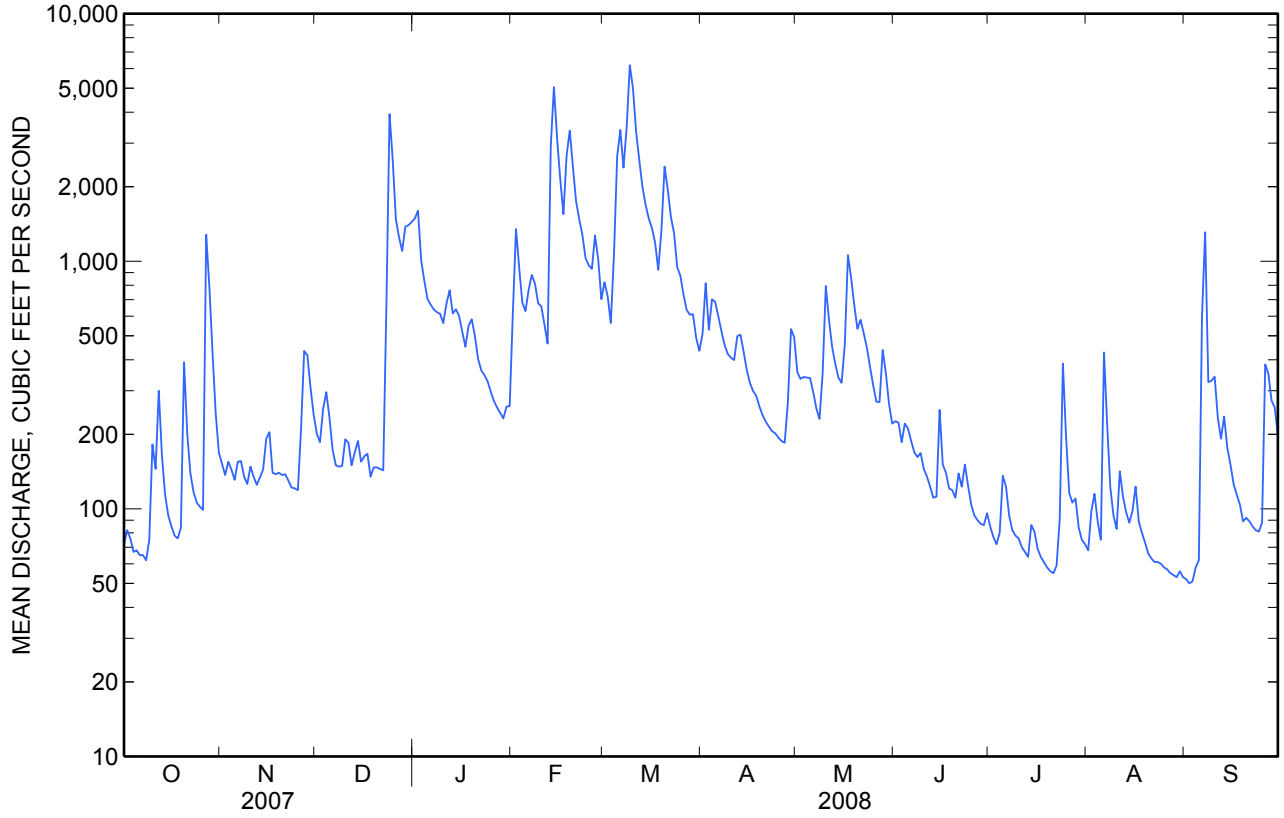
SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1903 - 2008	
Annual total	185,208		187,711			
Annual mean	507		513		501	
Highest annual mean					906	1952
Lowest annual mean					108	1965
Highest daily mean	16,200	Apr 16	6,190	Mar 9	28,300	Oct 10, 1903
Lowest daily mean	62	Jul 17	50	Sep 2	0.00	Aug 18, 1904
Annual seven-day minimum	67	Sep 15	53	Aug 28	1.7	Aug 14, 1904
Maximum peak flow			6,970	Mar 9	[a]28,300	Oct 10, 1903
Maximum peak stage			15.43	Mar 9	[b,c]14.30	Oct 10, 1903
Instantaneous low flow			7.3	Sep 2	0.00	Aug 18, 1904
10 percent exceeds	1,180		1,300		1,180	
50 percent exceeds	164		222		247	
90 percent exceeds	74		73		71	

[a] By computation of peak flow over dam, maximum observed.

[b] Site and datum then in use.

[c] Maximum stage at present site and datum was 24.47 ft, Apr 6, 1984.



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 2007 TO SEPTEMBER 2008

Part 1 of 3

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

Date	Time	Instantaneous discharge, ft3/s (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Hardness, water, mg/L as CaCO3 (00900)
Nov													
13...	1030	134	2.1	.096	.073	757	10.2	91	7.6	428	12.5	7.9	110
Feb													
28...	1000	1,600	3.1	.069	.051	758	14.4	105	7.5	428	-5.0	2.4	65
Jun													
05...	1000	211	2.6	.084	.063	758	6.3	70	7.7	385	21.0	20.8	81
Sep													
03...	0930	50	8.0	.074	.055	757	7.6	88	7.8	452	26.0	22.6	100

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008

Part 2 of 3

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

Date	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L as SiO2 (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total non-filterable, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
Nov													
13...	30.0	7.72	2.16	38.7	65	71.7	E.08	9.2	21.8	E227	245	3	.37
Feb													
28...	17.9	4.93	1.39	50.5	38	91.5	E.08	7.0	12.9	E212	224	3	.30
Jun													
05...	22.4	6.17	1.57	36.1	56	66.9	E.07	5.2	14.1	E190	214	6	1.0
Sep													
03...	27.1	8.15	2.33	47.6	64	85.4	E.07	4.8	20.2	E237	279	5	.87

01388500 POMPTON RIVER AT POMPTON PLAINS, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2007 TO SEPTEMBER 2008
Part 3 of 3
[Remark codes: <, less than; E, estimated.]

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrate + nitrite water fltrd, mg/L as N (00631)	Particulate nitrogen, susp, water, mg/L (49570)	Total nitrogen, water, fltrd, mg/L (00602)	Total nitrogen, water, unfltrd mg/L (00600)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L as P (00666)	Phosphorus, water, unfltrd mg/L as P (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Boron, water, fltrd, µg/L (01020)
Nov													
13...	.100	1.41	.07	1.8	1.8	.027	.037	.060	.4	<.04	.4	2.9	49
Feb													
28...	.054	.67	.05	.97	1.0	E.006	.016	.026	.3	<.04	.3	2.6	20
Jun													
05...	.064	.77	.12	1.8	1.9	.032	.044	.077	.7	<.04	.7	3.0	33
Sep													
03...	.020	.65	.24	1.5	1.8	E.004	.027	.067	1.4	<.04	1.4	3.1	51