

Water-Data Report 2007

01378500 HACKENSACK RIVER AT NEW MILFORD, NJ

HACKENSACK RIVER BASIN

LOCATION.--Lat 40°56'54", long 74°01'36" referenced to North American Datum of 1983, Oradell Borough, Bergen County, NJ, Hydrologic Unit 02030103, on right bank upstream from two masonry dams and two lift gates at former pumping plant of United Water New Jersey (formerly known as Hackensack Water Co.), in New Milford, 300 feet upstream of the Elm Street bridge, 0.6 mi downstream from Oradell Reservoir Dam, and 4.0 mi downstream from the mouth of Pascack Brook.

DRAINAGE AREA.--113 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for October 1921, published in WSP 1302.

REVISED RECORDS.--WSP 601: Drainage area. WSP 711: 1927-28(M). WDR NJ-1970: 1969. WDR NJ-1977: 1975(M). WDR NJ-1984: 1983. WDR NJ-1991: 1990

GAGE.--Water-stage recorder, crest-stage gage above south dam. Datum of gage is 6.25 ft above NGVD of 1929. October 1921 to November 23, 1923, nonrecording gage and Nov. 23, 1923, to Sept. 25, 1934, water-stage recorder at same site at datum 0.05 ft lower.

REMARKS.--Records fair, except those below 1 ft³/s and estimated discharges, which are poor. Flow regulated by DeForest Lake (see 01376700), Lake Tappan (see 01376950), Woodcliff Lake (see 01377450) 9.0 mi upstream from station, and Oradell Reservoir (see 01378480) 0.6 mi upstream from station. Water pumped into basin above gage from Sparkill Creek (see 01376272), Saddle River (see 01390520), Wanaque Reservoir, and Pompton and Ramapo Rivers (see 01388981) by United Water New Jersey for municipal supply. Water diverted from Oradell Reservoir at Haworth Plant (see 01378478), DeForest Lake, NY (see 01376699), and West Nyack, NY (see 01376810) for municipal supply. Diversion at gage was discontinued on May 30, 1990. Satellite gage-height telemetry at station.

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	20	21	64	576	21	14	20	147	18	17	18	17
2	15	22	271	643	25	117	19	124	15	17	18	16
3	15	20	69	228	20	1,010	16	61	16	17	22	16
4	15	18	24	121	17	513	103	40	18	16	20	15
5	18	19	23	97	11	217	220	29	17	16	19	14
6	18	14	24	49	14	40	125	23	17	15	24	14
7	18	15	26	49	14	17	79	22	17	14	21	16
8	16	386	21	628	13	16	48	20	17	14	24	17
9	16	1,210	14	444	14	15	32	16	16	16	15	16
10	18	885	12	190	15	20	16	12	15	18	16	14
11	17	254	11	119	14	18	17	13	17	20	14	17
12	15	514	11	74	13	14	341	12	17	16	14	16
13	18	96	15	62	13	14	590	12	17	14	13	15
14	19	18	17	70	14	16	573	12	16	14	13	14
15	19	19	16	74	16	16	1,900	14	15	14	15	14
16	17	153	15	66	14	61	e10,500	14	20	14	15	14
17	21	173	14	41	14	216	e4,190	12	16	14	15	17
18	18	148	14	28	14	132	e1,190	15	15	22	15	22
19	19	171	16	23	14	62	523	15	15	18	16	15
20	21	66	21	22	17	38	162	13	15	18	16	16
21	24	38	19	16	16	123	110	15	16	18	17	14
22	20	45	15	17	13	145	132	15	16	18	14	14
23	21	97	16	30	16	405	116	16	18	21	15	13
24	20	462	19	29	15	432	103	14	17	19	14	17
25	23	339	20	21	12	339	140	14	15	18	14	16
26	21	48	20	19	14	237	395	14	17	20	14	12
27	24	17	37	17	14	168	1,000	14	17	20	15	13
28	217	18	41	17	14	119	716	13	16	20	16	13
29	255	19	30	15	---	75	129	14	17	19	14	12
30	33	19	21	16	---	44	110	14	17	17	15	15
31	26	---	19	15	---	30	---	17	---	18	17	---
Total	1,037	5,324	955	3,816	421	4,683	23,615	786	495	532	508	454
Mean	33.5	177	30.8	123	15.0	151	787	25.4	16.5	17.2	16.4	15.1
Max	255	1,210	271	643	25	1,010	10,500	147	20	22	24	22
Min	15	14	11	15	11	14	16	12	15	14	13	12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2007, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	35.9	60.9	86.5	101	115	196	194	112	61.3	43.3	37.6	47.1
Max	480	356	339	359	396	651	787	528	612	543	373	450
(WY)	(1956)	(1928)	(1997)	(1937)	(1939)	(1936)	(2007)	(1989)	(1972)	(1945)	(1927)	(2004)
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00
(WY)	(1922)	(1924)	(1932)	(1971)	(1977)	(1981)	(1981)	(1985)	(1977)	(1954)	(1924)	(1923)

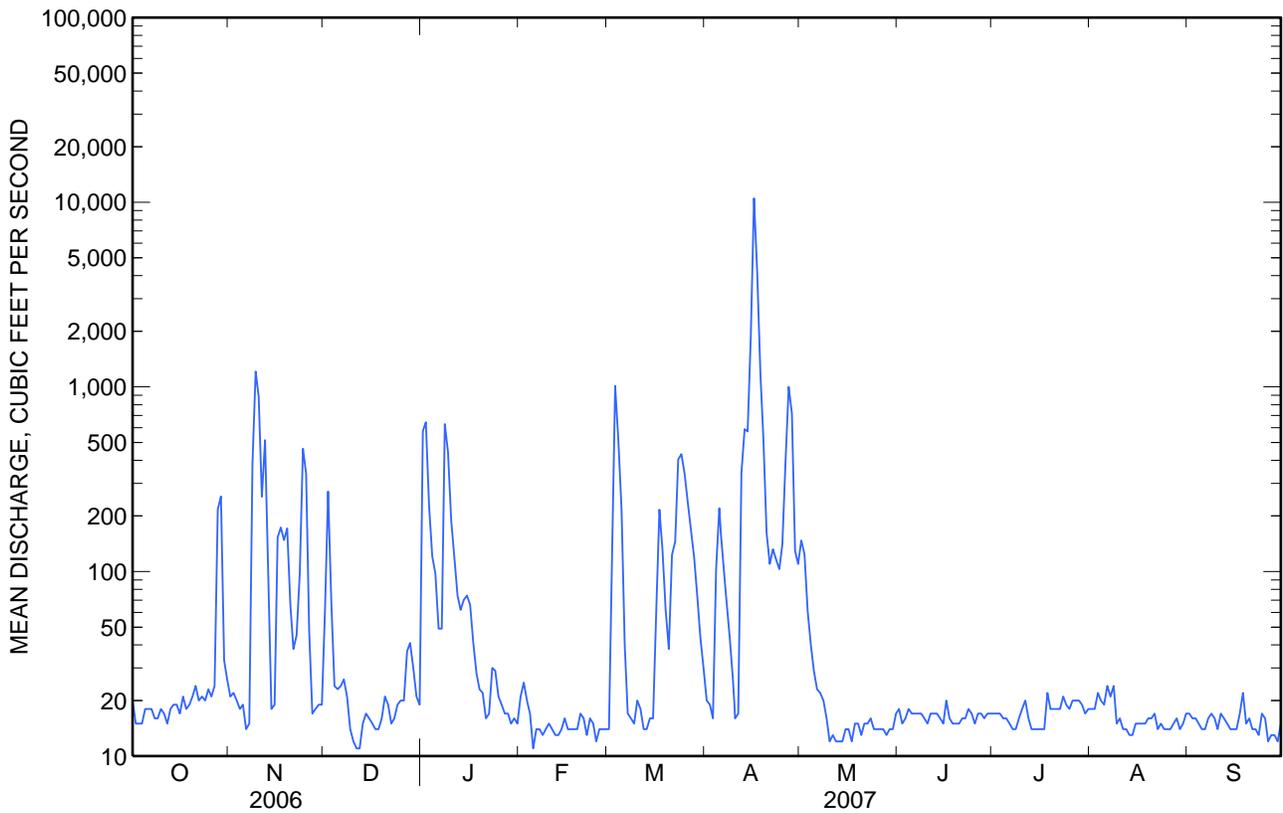
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SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1922 - 2007	
Annual total	25,760.4		42,626			
Annual mean	70.6		117		90.7	
Highest annual mean					263	1928
Lowest annual mean					0.40	1981
Highest daily mean	1,210	Nov 9	^a 10,500	Apr 16	^a 10,500	Apr 16, 2007
Lowest daily mean	2.2	Sep 9	11	Many days	0.00	Oct 1, 1921
Annual seven-day minimum	4.7	Sep 5	13	May 10	0.00	Oct 1, 1921
Maximum peak flow			11,600	Apr 16	11,600	Apr 16, 2007
Maximum peak stage			^b 12.36	Apr 16	^b 12.36	Apr 16, 2007
Instantaneous low flow			1.2	Aug 8		
10 percent exceeds	196		180		263	
50 percent exceeds	17		17		15	
90 percent exceeds	12		14		0.00	

^a Estimated.

^b From high-water mark in gage house.



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WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water Years 1970-79, 2000-02, and July 2007.

PERIOD OF DAILY RECORD.--July, August, and September 2007.

REMARKS.--Cooperative Network Site Description: Watershed Reconnaissance and Perchlorate Assessment special study site, NJ Department of Environmental Protection Watershed Management Area 5. 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 5% 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 - Dissolved Oxygen, July 31 to August 06, 2007 [correction from August 6 to 9, 2007 exceeded maximum allowable threshold], and September 05 to 09 [1300 hours], 2007 [correction from September 9 (1300 hours) to 13, 2007 exceeded the maximum allowable threshold].

COOPERATION.--Physical measurements and samples for laboratory analyses on July 25 were provided by personnel of the NJ Department of Environmental Protection. Determination of perchlorate was performed by TestAmerica Laboratories, Inc.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Date	Time	Turbidity white light, det ang 90+/-30 corrctd NTRU (63676)	Baro- metric pres- sure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specific conductance, water unf µS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Perchlorate, water, unfltrd µg/L (61209)
Jul 25...	1030	5.1	768	6.7	80	7.8	391	25.0	24.2	.1100

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WATERSHED RECONNAISSANCE STUDY
HOURLY WATER-QUALITY-MONITOR VALUES
JULY 31, 2007 TO AUGUST 09, 2007

