

01381500 WHIPPANY RIVER AT MORRISTOWN, NJ

PASSAIC RIVER BASIN

LOCATION.--Lat 40°48'26", long 74°27'25" referenced to North American Datum of 1983, Hanover Township, Morris County, NJ, Hydrologic Unit 02030103, on left bank at Morristown sewage-treatment plant, 0.8 mi northeast of Morristown, and 9.0 mi upstream from mouth.

DRAINAGE AREA.--29.4 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--August 1921 to current year.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1922-23(M), 1924, 1925-27(M) 1928-29, 1930-32(M), 1933-34. WDR NJ-1974: 1965. WDR NJ-84-1: 1971(M).

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since July 1, 1936. Datum of gage is 260.01 ft above NGVD of 1929 (levels from New Jersey Geological Survey benchmark). Prior to July 16, 1930, nonrecording gage at same site and datum.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Flow occasionally regulated by operation of gates in Pocahontas Dam, 2.5 miles upstream of gage and Speedwell Lake 3.4 mi upstream of gage. Storm sewers entering the river in Morristown can cause sharp rises in stage. Diurnal fluctuations at low flow possibly due to upstream sewage treatment plants effluent patterns. 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 600 ft³/s and (or) maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 08	2330	*1,550	*6.67
Oct 12	1215	720	4.89
Oct 13	1230	679	4.78
Dec 16	1645	716	4.88
Jun 02	1600	657	4.72
Jun 28	0730	782	5.05
Jul 22	1945	751	4.97
Sep 03	0200	970	5.50

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2005 TO SEPTEMBER 2006
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	11	37	101	64	69	48	34	38	38	60	31	30
2	11	37	65	81	65	51	33	38	161	53	30	298
3	11	35	55	313	155	52	37	37	272	50	32	486
4	11	34	56	149	132	48	53	36	106	52	34	70
5	11	34	51	100	156	47	42	35	58	141	28	49
6	12	36	49	91	90	48	41	34	48	113	27	49
7	43	39	e46	79	78	47	35	33	110	57	27	40
8	612	36	43	74	73	46	82	33	121	48	27	36
9	865	40	47	73	70	46	70	32	61	43	26	33
10	79	51	45	68	67	48	41	32	49	60	37	31
11	46	35	44	92	66	47	36	34	43	42	70	30
12	335	38	44	179	74	53	35	292	41	98	29	29
13	409	40	40	86	70	52	34	77	39	136	26	29
14	252	41	37	128	66	47	37	51	41	53	25	66
15	121	43	36	128	71	42	41	47	47	43	53	151
16	66	72	501	82	83	40	34	125	36	41	32	73
17	51	159	181	78	118	38	32	94	34	37	26	44
18	46	51	86	298	98	37	32	53	33	48	25	37
19	41	39	75	219	65	36	31	65	33	59	25	35
20	38	36	66	115	61	35	31	57	35	36	25	33
21	36	42	59	103	60	35	30	46	32	36	24	30
22	48	147	56	93	58	35	52	42	31	178	22	30
23	83	90	54	138	59	34	252	40	30	238	22	31
24	55	57	55	131	58	34	115	38	141	54	22	32
25	160	48	78	101	53	35	68	36	198	41	23	30
26	102	42	144	88	53	37	52	36	145	40	65	29
27	55	41	78	76	49	35	46	36	84	37	85	28
28	46	40	63	76	48	34	42	34	490	40	83	28
29	43	48	82	81	---	34	40	33	159	35	69	49
30	40	412	82	91	---	33	39	32	73	33	67	30
31	38	---	66	76	---	33	---	31	---	32	36	---
Total	3,777	1,900	2,485	3,551	2,165	1,287	1,547	1,647	2,789	2,034	1,153	1,966
Mean	122	63.3	80.2	115	77.3	41.5	51.6	53.1	93.0	65.6	37.2	65.5
Max	865	412	501	313	156	53	252	292	490	238	85	486
Min	11	34	36	64	48	33	30	31	30	32	22	28
Cfsm	4.14	2.15	2.73	3.90	2.63	1.41	1.75	1.81	3.16	2.23	1.27	2.23
In.	4.78	2.40	3.14	4.49	2.74	1.63	1.96	2.08	3.53	2.57	1.46	2.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2006, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	34.0	45.8	55.6	59.8	64.4	86.2	86.6	66.0	49.0	38.9	35.2	35.3
Max	133	132	185	211	147	215	231	237	214	186	158	123
(WY)	(1997)	(1933)	(1997)	(1979)	(1973)	(1936)	(1983)	(1989)	(1972)	(1975)	(1942)	(1971)
Min	8.72	13.4	14.2	16.9	20.3	28.1	30.2	24.4	14.6	10.3	8.02	7.25
(WY)	(1931)	(1937)	(1940)	(1922)	(2002)	(1981)	(1985)	(1941)	(1965)	(1965)	(1932)	(1932)

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SUMMARY STATISTICS

	Calendar Year 2005		Water Year 2006		Water Years 1922 - 2006	
Annual total	22,869		26,301			
Annual mean	62.7		72.1		54.7	
Highest annual mean					98.5	
Lowest annual mean					23.3	
Highest daily mean	865	Oct 9	865	Oct 9	1,510	Aug 28, 1971
Lowest daily mean	10	Sep 11	11	Oct 1	4.2	Sep 10, 1932
Annual seven-day minimum	11	Sep 5	16	Oct 1	4.7	Sep 9, 1932
Maximum peak flow			1,550	Oct 8	2,800	Aug 28, 1971
Maximum peak stage			6.67	Oct 8	8.60	Aug 28, 1971
Instantaneous low flow			9.4	Oct 4	2.8	Aug 27, 1932
Annual runoff (cfs)	2.13		2.45		1.86	
Annual runoff (inches)	28.94		33.28		25.28	
10 percent exceeds	109		134		105	
50 percent exceeds	44		47		37	
90 percent exceeds	14		30		15	

