01379500 PASSAIC RIVER NEAR CHATHAM, NJ

PASSAIC RIVER BASIN

LOCATION.--Lat 40°43′34″, long 74°23′23″ referenced to North American Datum of 1983, Chatham Borough, Morris County, NJ, Hydrologic Unit 02030103, on left bank 150 ft downstream from bridge on Stanley Avenue in Chatham, 1.5 mi northwest of Summit Borough Hall, and 3.0 mi upstream from Canoe Brook.

DRAINAGE AREA.--100 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--February 1903 to December 1911, October 1937 to current year. Monthly discharge only for some periods, published in WSP 1302.

REVISED RECORDS.--WDR NJ-86-1: 1984 (M), WDR NJ-04-1: 2003 (M).

GAGE.--Water-stage recorder. Concrete control since Sept. 19, 1938. Datum of gage is 193.51 ft above NGVD of 1929. Prior to Dec 31, 1911, nonrecording gage at bridge 150 ft upstream at different datum.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Diversion from Osborn Pond by Commonwealth Water Company, Bernards Division, during water years 1903-79. 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 800 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 10	1400	854	5.45
Mar 2	0900	1,110	5.86
Apr 17	0200	*2,110	*7.45
Apr 27	0415	1,010	5.70
Aug 10	0900	938	5.58

01379500 PASSAIC RIVER NEAR CHATHAM, NJ—Continued

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	101	481	175	429	74	126	141	501	46	41	69	47
2	72	426	171	565	73	736	143	484	48	34	54	41
3	59	356	160	625	72	891	149	423	53	32	45	37
4	53	294	148	548	e69	917	239	345	224	31	49	34
5	242	242	138	469	e63	834	318	276	194	191	50	33
6	233	191	124	406	60	e505	311	216	136	222	43	32
7	174	149	114	332	56	e350	265	167	96	139	37	32
8	122	337	106	590	55	e250	211	143	73	81	277	30
9	93	638	97	632	53	e190	170	132	60	58	313	28
10	75	821	88	618	52	148	147	124	53	47	549	29
11	105	792	83	528	52	165	128	129	49	155	469	58
12	373	695	84	438	51	172	296	120	51	210	456	66
13	432	611	90	353	51	163	406	130	53	104	380	53
14	413	562	93	296	45	156	426	119	60	71	314	40
15	329	476	97	255	54	161	1,040	103	54	58	250	34
16	262	435	94	220	52	226	1,930	113	54	47	161	31
17	256	456	89	186	54	247	2,090	128	47	42	125	29
18	386	464	83	158	53	238	1,960	123	44	74	165	28
19	384	425	80	138	52	231	1,710	108	42	72	158	27
20	404	359	76	131	57	262	1,420	100	66	64	123	26
21	367	306	73	118	66	316	1,100	96	59	52	192	25
22	343	263	72	107	103	392	789	90	57	42	264	32
23	300	318	300	104	132	513	515	82	54	229	270	32
24	249	341	324	99	111	583	337	75	42	316	238	30
25	191	350	340	96	95	553	244	68	37	284	187	26
26	144	332	396	e85	83	475	196	62	35	180	145	24
27	118	297	395	e78	83	389	792	58	35	117	116	23
28	430	261	360	77	101	315	872	56	58	94	94	22
29	601	229	306	77	---	254	801	53	57	87	75	22
30	629	196	253	77	---	197	650	50	50	122	62	22
31	554	---	200	76	---	162	---	48	---	99	53	---
Total	8,494	12,103	5,209	8,911	1,922	11,117	19,796	4,722	1,987	3,395	5,783	993
Mean	274	403	168	287	68.6	359	660	152	66.2	110	187	33.1
Max	629	821	396	632	132	917	2,090	501	224	316	549	66
Min	53	149	72	76	45	126	128	48	35	31	37	22
Cfsm	2.74	4.03	1.68	2.87	0.69	3.59	6.60	1.52	0.66	1.10	1.87	0.33
In.	3.16	4.50	1.94	3.31	0.71	4.14	7.36	1.76	0.74	1.26	2.15	0.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 2007, BY WATER YEAR (WY)

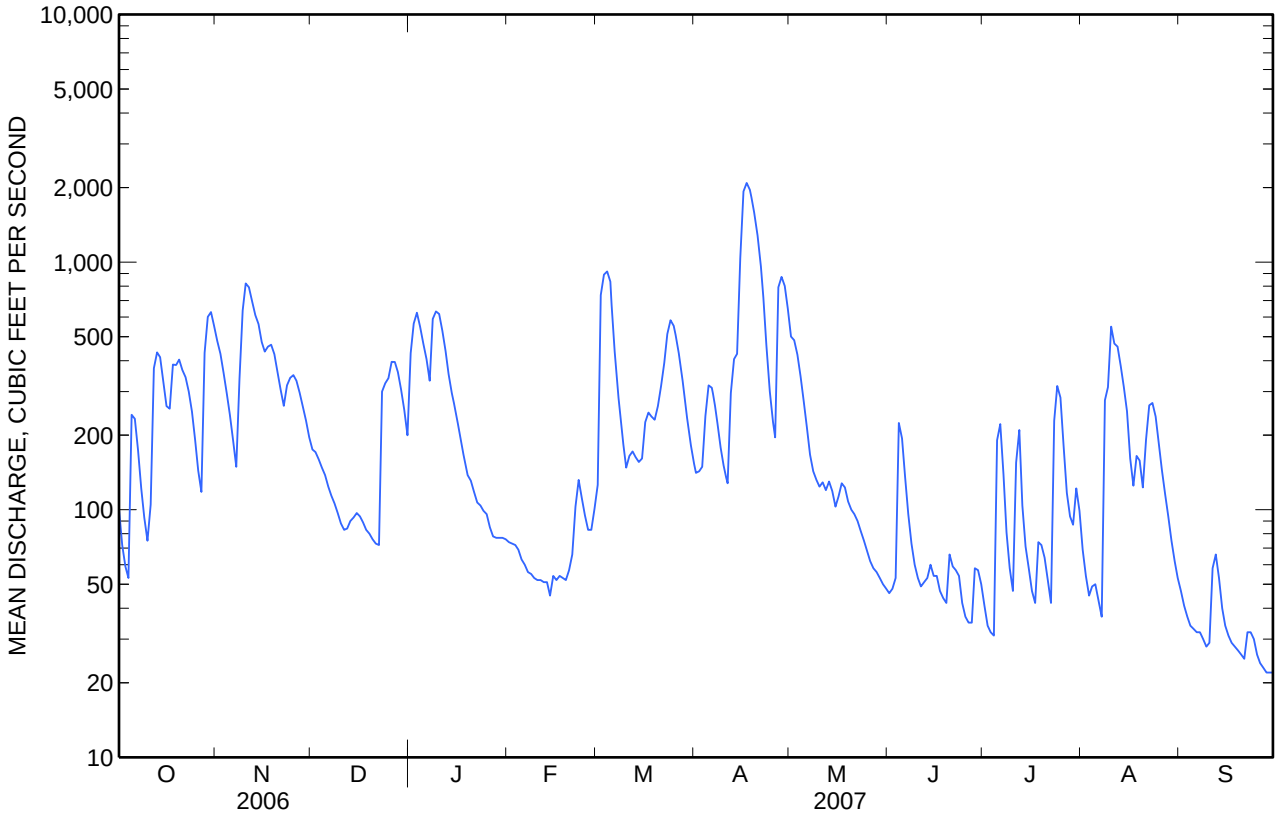
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	102	159	207	226	233	332	266	172	120	86.7	94.2	95.2
Max	576	590	655	735	493	719	711	637	550	539	664	713
(WY)	(1904)	(1973)	(1984)	(1979)	(1908)	(1994)	(1983)	(1989)	(2003)	(1975)	(1942)	(1971)
Min	8.05	13.7	27.5	21.5	44.5	74.2	54.3	7.52	13.6	7.74	7.35	4.70
(WY)	(1965)	(1950)	(1999)	(1981)	(2002)	(2006)	(1985)	(1903)	(1965)	(1966)	(1957)	(1906)

01379500 PASSAIC RIVER NEAR CHATHAM, NJ—Continued

SUMMARY STATISTICS

	Calendar Year 2006		Water Year 2007		Water Years 1903 - 2007	
Annual total	71,535		84,432			
Annual mean	196		231		173	
Highest annual mean					305	1984
Lowest annual mean					67.7	1965
Highest daily mean	821	Nov 10	2,090	Apr 17	2,990	Jan 9, 1905
Lowest daily mean	23	Aug 24	22	Sep 28-30	2.0	May 15, 1903
Annual seven-day minimum	24	Aug 19	24	Sep 24	2.0	May 15, 1903
Maximum peak flow			2,110	Apr 17	3,380	Aug 2, 1973
Maximum peak stage			7.45	Apr 17	[a]9.36	Aug 2, 1973
Instantaneous low flow			21	Sep 29	10	Aug 17, 2002
Annual runoff (cfsm)	1.96		2.31		1.73	
Annual runoff (inches)	26.61		31.41		23.54	
10 percent exceeds	433		514		452	
50 percent exceeds	131		132		85	
90 percent exceeds	46		42		18	

[a] From floodmark.



WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-97, 2001, 2004, 2007.

REMARKS.--Cooperative Network Site Descriptor: Trace Element Assessment (303d) special study site.

COOPERATION.--Physical measurements and samples for laboratory analyses were provided by personnel of the NJ Department of Environmental Protection.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 1 of 3

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

Date	Time	Instantaneous discharge, cfs (00061)	Turbdty white light, det ang 90+/-30 corrctd NTRU (63676)	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)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)
Dec													
12...	1130	81	6.1	771	11.1	82	7.4	404	8.5	3.3	110	27.7	10.6

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 3

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

Date	Arsenic water, fltrd, µg/L (01000)	Arsenic water, unfltrd µg/L (01002)	Beryllium, water, fltrd, µg/L (01010)	Beryllium, water, unfltrd recover-able, µg/L (01012)	Cadmium water, fltrd, µg/L (01025)	Cadmium water, unfltrd µg/L (01027)	Chromium, water, fltrd, µg/L (01030)	Chromium, water, unfltrd recover-able, µg/L (01034)	Copper, water, fltrd, µg/L (01040)	Copper, water, unfltrd recover-able, µg/L (01042)	Lead, water, fltrd, µg/L (01049)	Lead, water, unfltrd recover-able, µg/L (01051)	Mercury water, fltrd, µg/L (71890)
Dec													
12...	.37	.58	<.06	<.06	<.04	E.02	.15	E.43	1.4	3.5	E.08	.41	<.010

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 3

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

Date	Mercury water, unfltrd recover-able, µg/L (71900)	Nickel, water, fltrd, µg/L (01065)	Nickel, water, unfltrd recover-able, µg/L (01067)	Selenium, water, fltrd, µg/L (01145)	Selenium, water, unfltrd µg/L (01147)	Zinc, water, fltrd, µg/L (01090)	Zinc, water, unfltrd recover-able, µg/L (01092)
Dec							
12...	<.010	.82	1.15	.13	.14	8.8	9