01397000 SOUTH BRANCH RARITAN RIVER AT STANTON, NJ

RARITAN RIVER BASIN

LOCATION.--Lat 40°34′20″, long 74°52′05″ referenced to North American Datum of 1983, Franklin Township, Hunterdon County, NJ, Hydrologic Unit 02030105, on right bank at downstream side of bridge on Stanton Station Road at Stanton Station, 0.4 mi upstream from Prescott Brook, and 1.4 mi west of Stanton.

DRAINAGE AREA.--147 mi^2.

SURFACE-WATER RECORDS

PERIOD OF RECORD.--July 1903 to December 1906, July 1919 to current year. Monthly discharge only for some periods published in WSP 1302.

REVISED RECORDS.--WSP 561: Drainage area. WSP 1552: 1904, 1922-24(M), 1928-29(M), 1933-35(M). WDR NJ-88-1: 1982. WDR NJ-02-1: 2002(m).

GAGE.--Water-stage recorder. Datum of gage is 125.01 ft above NGVD of 1929. Prior to Aug 17, 1925, non-recording gage on downstream side of highway bridge at same site and datum.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Flow regulated by Spruce Run Reservoir since September 1963 (see 01396790). Occasional regulation at low flows by ponds above station. Water diverted by Hamden Pumping Station, 4.0 mi upstream, into Round Valley Reservoir since February 1966 (see 01396920). Water can be released (maximum rate 186 ft^3/s) from Round Valley Reservoir at Hamden Pumping Station since July 1990. Several measurements of water temperature were made during the year. Satellite telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,600 ft^3/s and (or) maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 9	1200	3,260	7.38
Jan 25	1530	2,750	6.87
Mar 14	0115	*7,830	*10.57
Mar 30	1730	3,130	7.25

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	93	300	146	464	e374	336	998	257	142	178	232	107
2	89	259	155	446	e293	441	825	251	153	188	241	140
3	94	232	868	e373	298	470	704	1,070	138	203	256	189
4	91	214	381	e331	304	492	638	635	124	211	274	233
5	85	205	297	e312	293	488	591	408	124	211	282	231
6	91	196	311	272	300	478	563	355	126	180	293	230
7	102	190	270	262	e277	497	540	296	136	127	297	234
8	86	188	239	256	e272	549	515	301	130	125	311	248
9	114	184	1,370	e244	270	582	576	288	136	124	292	242
10	131	158	957	e223	291	569	439	231	170	231	247	236
11	139	124	555	e233	287	550	402	198	132	224	247	236
12	124	120	426	e225	271	557	383	346	110	153	241	238
13	122	118	608	e216	262	1,880	366	308	216	199	229	222
14	135	121	896	e211	257	5,360	358	258	435	873	234	209
15	144	131	589	e210	255	2,080	346	253	217	347	251	169
16	174	121	535	211	257	1,390	327	207	149	149	253	213
17	128	120	469	260	238	1,050	417	193	189	113	222	217
18	115	132	413	422	216	869	322	227	133	133	203	217
19	102	130	401	285	215	755	281	325	114	215	200	224
20	102	269	393	211	223	674	244	240	129	211	207	226
21	103	193	381	189	225	619	238	206	175	203	211	235
22	97	150	369	181	209	625	231	184	161	235	206	254
23	88	139	301	177	291	1,790	220	186	118	238	184	283
24	305	146	248	171	593	911	209	186	109	253	153	245
25	526	144	243	1,310	503	679	327	176	104	257	120	237
26	196	152	738	1,270	372	640	652	167	122	241	112	241
27	251	145	1,740	524	320	571	531	166	141	211	107	225
28	716	135	704	511	290	537	365	251	150	224	101	178
29	452	124	630	451	---	1,250	302	180	192	276	95	187
30	287	129	476	449	---	1,840	256	168	176	237	93	182
31	280	---	471	434	---	1,760	---	144	---	219	90	---
Total	5,562	4,969	16,580	11,334	8,256	31,289	13,166	8,661	4,651	6,989	6,484	6,528
Mean	179	166	535	366	295	1,009	439	279	155	225	209	218
Max	716	300	1,740	1,310	593	5,360	998	1,070	435	873	311	283
Min	85	118	146	171	209	336	209	144	104	113	90	107

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2010, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	172	206	273	291	314	403	373	266	199	182	168	168
Max	641	659	1,026	1,099	807	1,057	1,137	750	967	752	793	554
(WY)	(1904)	(1952)	(1997)	(1979)	(1925)	(1936)	(1983)	(1989)	(1972)	(1975)	(1955)	(1989)
Min	34.1	46.2	58.3	55.0	61.2	61.3	58.5	80.3	60.1	40.7	30.1	31.0
(WY)	(1964)	(1965)	(1999)	(1966)	(1967)	(1981)	(1981)	(1965)	(1965)	(1955)	(1957)	(1957)

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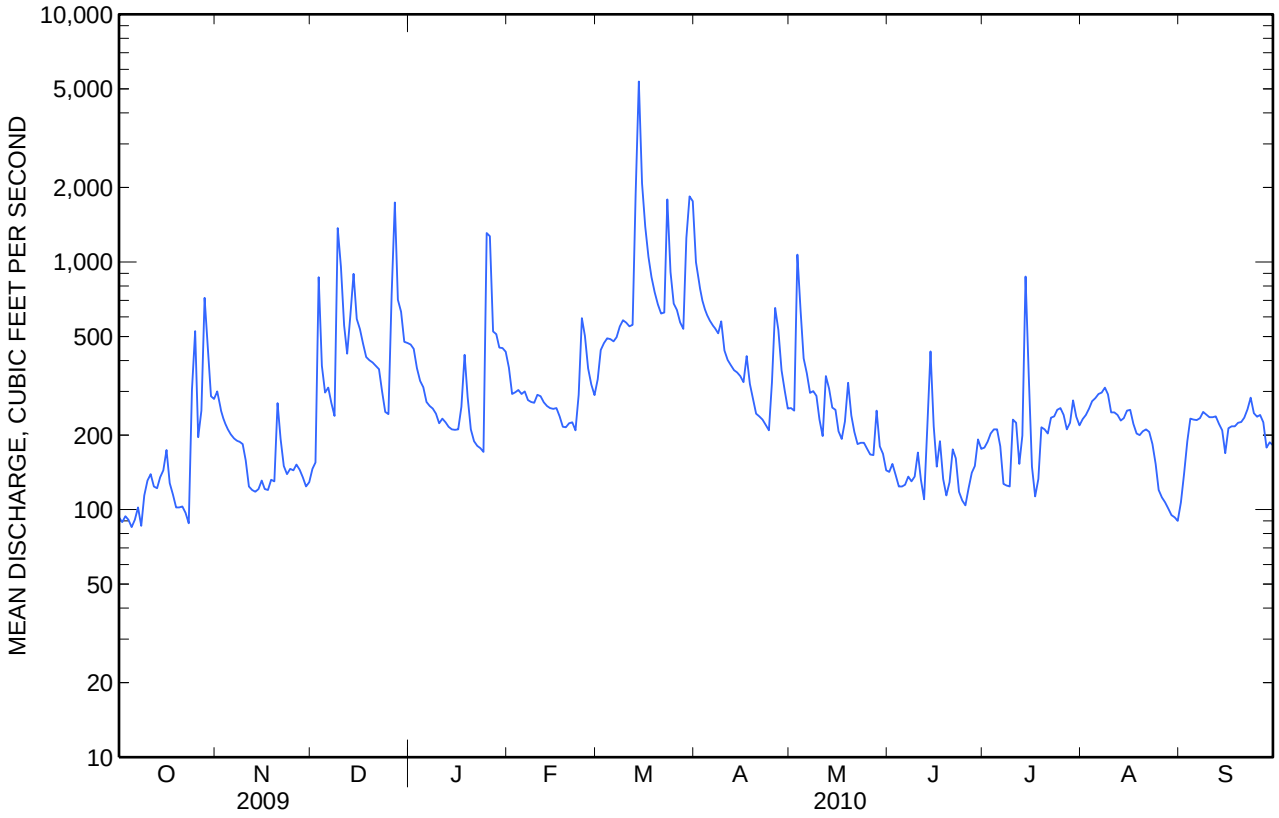
SUMMARY STATISTICS

	Calendar Year 2009		Water Year 2010		Water Years 1904 - 2010	
Annual total	90,636		124,469			
Annual mean	248		341		251	
Highest annual mean					413	1952
Lowest annual mean					95.0	1966
Highest daily mean	2,910	Aug 2	5,360	Mar 14	8,060	Aug 19, 1955
Lowest daily mean	83	Apr 29	85	Oct 5	12	Oct 18, 1963
Annual seven-day minimum	91	Oct 2	91	Oct 2	25	Sep 4, 1957
Maximum peak flow			7,830	Mar 14	[a]18,000	Aug 19, 1955
Maximum peak stage			10.57	Mar 14	15.22	Aug 19, 1955
Instantaneous low flow			78	Oct 7, 8	9.0	Nov 7, 1931
10 percent exceeds	418		612		490	
50 percent exceeds	187		238		169	
90 percent exceeds	115		123		66	

[a] From rating curve above 6,400 ft³/s on basis of computation of flow over Clinton Dam, 6.5 mi upstream, at gage height 10.72 ft, contracted opening measurement 1.7 mi downstream, and slope-area measurement 0.4 mi downstream at gage height 15.22 ft, adjusted to present site.